

PREFARENZEN 2023

A glimpse behind the façades of modern architecture



PREFARENZEN



PREFARENZEN 2023

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Welcome to the pulse of time

In the year 2022, the PREFARENZEN team also discovered a wealth of architectural highlights on its journey through eight PREFEA countries. The projects in this book illustrate not only how our roof and façade solutions solidly fulfil their purpose, but also the aesthetic impact they release for architects and planners.

When reading the following pages, you might notice how natural it has become to use recyclable or renewable materials in architecture. PREFEA also stands for sustainability, safety and functionality. With this claim in mind, we drive our work and the development of our products.

In the spring of 2022, we presented the PREFEA solar roof panel. The world novelty is made in Austria and creates an environmentally friendly energy supply as a revolution on the roof, and soon also on the façade. I am proud of the extraordinary result that was achieved in a two-year process in the collaboration of our PREFEA team with external experts.

Raw materials such as wood and recyclable aluminium are honest materials that fascinate architects. You can discover the results for yourself on the following pages.

The buildings were all selected by experts from the fields of architecture and technology at the annual dialogue in Grafenegg, Austria.

Is your project also strong enough to become a PREFARENZEN object? Then wait no longer. Our submission portal on the respective website of each country offers us a platform to network with each other.

I hope you will find as much inspiration in this issue of the PREFARENZEN book as we do.

Your Leopold Pasquali, CEO



Gymnase de la Herdrie

Country: France

Object, location: gymnasium, Basse-Goulaine

Category: conversion

Architecture: Bohuon Bertic Architectes, Nantes

Installer: ENGIE Axima

Roof type: rhomboid roof and façade tile 44 × 44

Roof colour: metallic silver

Façade type: rhomboid roof and façade tile 44 × 44

Façade colour: metallic silver

❶ **Object-related individual solution**



Mathilde Poupart and Yannick Bohuon

»Everything in aluminium?«

With an impressive movement and apparent lightness, the gymnasium designed by the architects **Bohuon Bertic Architectes** from Nantes stands at a roundabout at the entrance to the small town of Basse-Goulaine in western France and becomes a spatially well thought-out welcome gesture. Or does it float? The building seems ufoesque. What is certain is that the architects have built a more than adequate stage for the spectacles of a competition hall with a consistently minimalist material and colour concept.



When driving by, the building with its silvery envelope made of more than 120.000 aluminium rhomboid tiles becomes a movement that magically shimmers in the changing daylight. “Almost like a ...”, but no! Architect and office co-founder Yannick Bohuon and project manager Mathilde Poupart do not use any metaphors or terms of endearment for their own projects. What is important to them, they say, is that architecture is regarded as architecture and not seen in relation to something else. For more than 15 years, Bohuon and Bertic and their team of seven to eight employees have been working on residential and sports buildings in France, many of which have a rather cool and industrial character. The architects cleverly use different metal façades, large glass surfaces and industrial products to stand out with their buildings without being kitschy. Their style is both soft and clear, “We like it monochrome,” Bohuon notes. This is also expressed in the sports hall of the leisure centre La Herdrie in Basse-Goulaine, which **Bohuon Bertic Architectes** completed in 2022.



A highlight on the edge of town

In 2018, the office won the competition for the 2300 m² dual gymnasium for ball sports, which is ideally suited for competitions with its 9,25 m high ceiling, club rooms, an open foyer and its functional infrastructure. Yannick Bohuon suspects that “two things were decisive at the time. Firstly, the unusual curve, the movement of the envelope, which mediates between the height of the canopy and the height of the hall. Secondly, the connections between the building and its environment.”

The building envelope, which flaunts an aluminium look, dominates the surrounding area and is a visual attraction and highlight on the edge of town. With the envelope, the architects react both formally and functionally to the existing spatial situation characterised by the roundabout and roads leading into town. The architects avoid a front and rear side, as they found the impression of continuity particularly important. In addition, they made the building visible and accessible from different sides. With a lot of glass on the ground floor, for instance, they open the hall on one of the long sides, which results in a clear view of the playing field. The idea here is to become immersed in the atmosphere and be inspired to do sport.

A geometric surprise

The focus is on the game and the playing field. The serving rooms such as dressing rooms, technical facilities and storage rooms are arranged around the sports area according to functional aspects. Thus, an unspectacular, regular rectangle – the playing field – receives a slightly meandering second spatial layer with rounded corners that extends in different directions. Gymnasiums almost always have the same structure. While this makes the programme become a routine, what is special can lie in the building’s shape and material. “We wanted to send a signal and give a new expression to

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a rather ordinary typology with this interesting form,” states project manager Mathilde Poupart. How did this form come into being? The functional rooms are all single-storey. What makes the gymnasium itself stand out is its height. A flowing transition and soft valleys mediate between these two heights in the building envelope. The architecture of the envelope thus becomes a finely thought-out geometric surprise.

Rhombuses in the curve

A special form requires a suitable material. The 44 × 44 rhomboid roof and façade tiles by PREFA and occasional special designs by the tinsmith were laid seamlessly over the valleys, curves and edges of the building envelope, emulating the style of a traditional slate covering. That was one of the reasons why PREFA was used. It was possible to create an equivalent design of the roof and façade and obtain a multiply curved surface with a homogenous appearance. Underneath the rhomboid skin lies a substructure of plywood and sealing foil that is mounted on trusses, which are attached to the central hall via cantilevered steel girders. Thus, the curved surfaces could be formed with the same





construction principle on all sides, although radii and angles change. The drainage of the curved façade is on the inside, along the lower outer edge. The metallic silver rhomboid tiles contribute to the homogeneity of the large façade surface. Their surface reflects the sky and the changing daylight, which always makes the building appear different. A simple trick with a great effect.

Light grey inside?

In addition to the floor, which is entirely light grey, the monochrome silver and light grey interiors and furniture exaggerate the aluminium colour of the outer skin. According to Bohuon and Poupart, this makes the building stand in an even stronger contrast to its busy environment and offers a neutral-coloured stage for sport. The intention was not to put the architecture above sport, but to enable it and make it interesting. The large-scale glazing with its aluminium frame underlines this cool, elegant appearance.

Looking for other forms

Based on the materials, you could count *Bohuon Bertic Architectes* among the French neorealists, who have been attracting attention across Europe for years. But fortunately, their building forms are more playful, stripping realism of its harshness. “We are always looking for different forms for the same typologies and programmes!”, the architects explain. They say that the secret behind the strong character of their buildings mainly lies in the attitude and intensity with which they work on their projects. “A lot of work, a lot of thinking ahead! We understand architecture as a craft that can be trained and developed every day. For us, it is about building itself. For example, we wouldn’t submit designs to competitions if we didn’t already know one hundred percent how and with which materials they can be realised. At the same time,” Bohuon adds, “we stand by our ideas. Always. And accompany the realisation until completion. Hopefully, we’ll be able to keep doing this for at least another 15 years.”







Dynamic like a piece of stretch

Is it a roof or are they façades? A finely curved façade covers the local gymnasium in Basse-Goulaine on the outskirts of Nantes in western France. It oscillates in the daylight and countless rhomboid tiles cover the towering form. The building seems to have a hat, a skin, a roof, a continuous comprehensive façade. With more than a hundred thousand rhomboid tiles, the envelope not only looks dynamic like a piece of stretch but was also the right job for tinsmith Olivier Collet and his team.

“As a roofer, this sports hall was a great project with challenges in both planning and craftsmanship.” Olivier Collet pauses briefly before explaining that what was technically exciting were the five rounded corners that slightly taper conically towards the top, not the concave curve of the roof. Collet works for the company **ENGIE Axima**. With a team of six roofers, he oversaw the realisation of the seamless-looking envelope of the gymnasium, which is getting more and more attention from architecture enthusiasts and neighbours. During a period of six months, they planned rhombus after rhombus and employed special formats where necessary. They created the concave bend with the standard rhomboid tiles. “That’s one of the strengths of the PREFA rhomboid tiles, their flexibility,” says Collet. At the beginning, he and the architects of Bohuon Bertic Architectes planned the façade with 3D programmes, prototypes and models down to the last detail.



Olivier Collet

At the construction site, however, his employees’ skills made it clear that it is best to fit rhombus after rhombus together by hand.

The result is a continuous and gapless surface that rests on a formwork of pre-bent wooden slats – processed in a similar way as a wooden ship’s hull. When combined, the substructure and metal surface give the originally rectangular gymnasium a multiply curved form. A few details make the difference as to whether and to what extent this idea of a soft skin is visually convincing. The rhomboid tiles are mounted over the edges of the building that are closest to the human eye, while the roof end at a height of more than nine metres was formed with a sharp profile piece to mark a kind of beginning of the flowing direction of the rhomboid tiles.

Collet adds that the method of installation was identical to an old slate technique he knew from his apprenticeship years at Les Compagnons du Devoir. He began his training as a roofer in 1990, joined Les Compagnons in 1992 – *la famille* – and is still active with the *compagnons* today. “Passing on knowledge from generation to generation is extremely important in the craft, and if theory and practice are taught and learned together and you learn from other disciplines, it can create the power to implement changes and further developments.” Collet is in the middle of these processes, which he likes to help drive.





Filling station Petronal

Country: Czech Republic

Object, location: filling station, Prague

Category: new construction

Architecture: Ing. arch. Daniel Zerzán, Liberec

Installer: Jakub Miček

Roof type: PREFABOND aluminium composite panel

Roof colour: black grey, pure white



Daniel Zerzán

»The wow effect«

To relax, architect *Daniel Zerzán* gets on his motorbike and drives to the race track: He can clear his head at 300 km/h. Speed and the parameters of dynamics are topics he thinks about a lot and intensively. His precise knowledge about motorised mobility and its requirements has grown from this experience. The contract for the construction of a filling station southeast of Prague finally gave him the opportunity to translate the forces' effect into spatial decisions.

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Controlling movement

Zerzán had never planned a filling station before. Nevertheless, his client gave him free reign. As he owns several filling stations, it does not come as a surprise that he wanted to modernise a location in a heavily frequented industrial area not far from Prague and sell more petrol. The idea was to create something strong, something visionary and symbolic for the place, something that is very different from a small corrugated iron hut. The client and architect basically agreed that a decisive part of such a project had to be the architecture of the filling station itself. Both were equally fascinated by the expression of dynamics and the possibility to steer the flow of movement through architectural design. They wondered how the laws of dynamics could be given a static form.

A sharp-edged form

The architect decided to plan his filling station around the movements on site. It should be possible to understand all processes intuitively through spatial elements, their geometry and through the form of the terrain. Zerzán explains that every surface was designed from the place itself and its functional requirements. For instance, a ramp toward the street guides vehicles in a curve to the exit and the steeply sloping roof clearly regulates which vehicle size can access which petrol pump. Based on these and similarly concrete parameters, he developed a sharp-edged form with several sloping surfaces. The trapezoid and triangular surfaces made of PREFABOND aluminium composite panels on a substructure made of steel and cross-laminated timber enable accurate edges during processing. This way, the material emphasises the unique form.

Constructive

The geometrically demanding form entailed interesting constructive details. A steel ribbed supporting structure rests on a body consisting of digitally pre-milled cross-laminated timber plates, which accommodates the shop and service. Clamped over tubular steel supports that are visible in the interior, it also rests on two supports in the tank column area. They are well concealed as part of a golden group of supports, where the ventilation of the underground tanks and the roof drainage are organised.





He had a similarly creative approach when it came to the task of making it possible for the petrol station staff to have a far-reaching view of what is going on. With a glass pane length of up to six metres and an inclination of more than 40°, he pushed the production and processing limits for a circumferential window strip.

Expression and control

Zerzán gives the petrol station a pronounced wow effect with his approach to dealing with technical requirements. With his design approach, he wants to provide “clear offers” to those using his architecture. To him, architecture is as much an expression as it is control. It would be a dream, for example, if space worked without signage as far as possible. He tries to be precise about this. For instance, it bothers him “if the technical, functional and formal levels do not fit together”. That sounds elaborate, but in the case of the filling station in Prague, it was effective. The neighbourhood talks a lot about the place, and more and more photos of the filling station are appearing online. “If people are talking about what has been created, it has paid off,” says Zerzán. He believes that one of the tasks of architecture is “to create something extraordinary and, at the same time, not leave anything to chance”.

Partners in action

According to Daniel Zerzán, “every project – including the filling station in Prague – has to be a special event for the client”. And the grand gesture did not even cost more than a regular filling station. To realise his ambitions, he needs partners who think similarly. The fact that he found the right tinsmith and roofer in Jakub Miček when he was looking for a craftsman for the cross-laminated timber construction proved to be a stroke of good luck. The architect reveals: “We are already planning the next daring project together.”









Jakub Miček

A little baroque

“It could have hardly been any more challenging,” is what comes to **Jakub Miček**’s mind when asked about working on the filling station designed by the architect Daniel Zerzán. The striking form and resulting demands on his craftsmanship spoke in favour of the project in the southeast of Prague and had made him want to work with the architect right from the start. He is also a carpenter, but he certainly would not want to build average wooden houses for the rest of his life.

Jakub Miček is not a “lifelong” type. His colourful career path has shaped him – you can tell after talking to him for only a few minutes that he is captivated by further development. As a trained toolmaker with a subsequent traineeship as a bricklayer and carpenter, he has vast experience in the building industry. But he has also worked as a barman, piano restorer, truck driver and electrician.

According to Miček, the most important quality in the things he does has always been the ability to think three-dimensionally. He needed this understanding in most of his jobs. You need to have spatial imagination in construction – particularly on construction sites like the one in Prague. As the boss of four employees, Miček was practically always on site. With its triangular and trapezoid surfaces, the complex geometry of the building envelope required precision craftsmanship and an

understanding of the third dimension. All surface inclinations were laced before they were assembled piece by piece. “After all, the fact that the project is digitally modeled in 3D beforehand doesn’t mean that it doesn’t have to be fixed by hand at the construction site,” as he puts it.

In Prague, there were special technical details and adjustments, for instance in the slanted supports, the eaves and the tapering panel joints. Daniel Zerzán relied on Miček’s broad knowledge during their cooperation, and together, they made the right choices. They maintained control over the substructure, steel frame, cross-laminated timber panels, façade foil and 469 m² of PREFABOND aluminium composite panels. It took the tinsmith’s team three months to finish the assembly on site, until a modest intersection became an eye-catching filling station.

Miček and Zerzán are planning further projects together. But when asked about a reversal of roles between master builder and architect, they are quick to refuse: Miček cannot imagine not working on construction sites with his hands. He says that everything is good the way it is and that everyone brings their skills to the job. It would be ideal if things continued like in Prague. “Similar to baroque construction, a lot would also have to come together today and you need the right investor to realise something like this filling station,” the two conclude.





Bivacco Claudio Brédy

Country: Italy

Object, location: refuge, Avise

Category: new construction

Architecture: BCW Collective, Switzerland, Norway and Italy

Installer: Chenevier spa

Roof type: Prefalz

Roof colour: P.10 anthracite

Façade type: Prefalz

Façade colour: P.10 anthracite

● **Object-related individual solution**

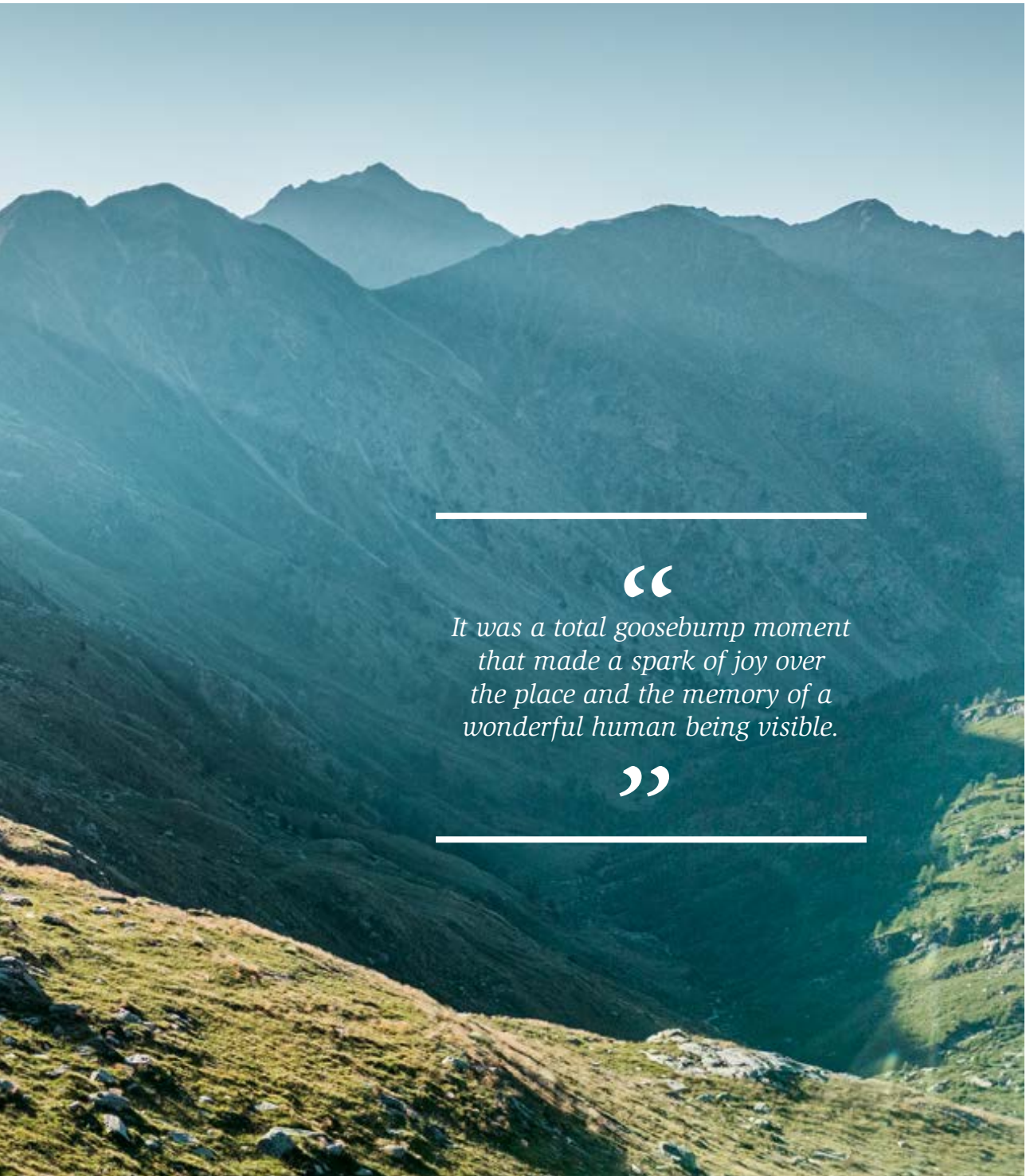


f.l.t.r.: Facundo Arboit, Chiara Tessarollo and Skye Sturm

»Sustainability at extreme heights«

Since 2021, you can find the small Brédy bivouac in the Vertosan Valley on the edge of the Alps, between the Matterhorn, the Mont Blanc and the National Park Gran Paradiso. Built in memory of the alpinist Claudio Brédy who passed away in 2017, architects Chiara Tessarollo, Skye Sturm and Facundo Arboit came together as **BCW Collective** to design an empathetic architecture that protects hikers, spares nature and brings people from the nearest mountain villages together from time to time. But one of the most important achievements of this extraordinary sleeping place lies in the balance between resistance and lightness in the material.





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*It was a total goosebump moment
that made a spark of joy over
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Like a telescope, the Brédy bivouac reaches out into the landscape and directs the view to snowy mountain peaks that hold dangers and awaken longings. It is a small, anthracite-coated architecture located at 2530 metres above sea level on the edge of a natural depression that offers a final resting place before the summit of the Tête de Sereina. After a three- to four-hour hike or longer, depending on the starting point in the valley, it appears before hikers as a dark spot in a vast, rocky landscape. With every step you take towards the bivouac, however, it becomes more and more clear: The building is not only practical if you need to take a break or spend the night, it also has a message. Facundo Arboit of *BCW Collective* sums up this feeling when describing how they worked on the design and the building process. “Don’t overdo it, don’t do too much, stay clear and simple in the concept and execution,” a thought that accompanied everything from beginning to end.

Material on the mountain

But how do you “not overdo it” if architecture is exposed to extremes and needs to respond to difficult topographical demands? At the heights of the southern Alps, you are confronted with the toughest meteorological conditions. As it is completely exposed to changing weather conditions, the Brédy bivouac needs to constantly defy them all year round and serve human needs in the remoteness of a sometimes threatening, but unbelievably beautiful landscape. In winter, the building needs to withstand heavy snow loads and hurricane-like storms with wind speeds of more than 100 km/h can sweep over this place. Thunderstorms, heavy rain and erosion are further extreme events that need to be mastered with architecture and material. The architects emphasise that it soon became clear they would use Prefalz for the outer skin. The PREFALZ material offers the necessary resistance, requires little maintenance, has a long-term guarantee on its durability and could be processed both at a workshop in the valley and up on the mountain right on site without having to use costly machinery. “It is remarkable that in the rough vastness, this remoteness and the impressive unpredictability of the alpine landscape, we humans are even capable of realising architecture,” says Chiara Tessarollo, co-founder of *BCW Collective*.







On six feet

The small hut is no ordinary mountain hut, but a “metallic, dark gem”, as Tessarollo explains. It is a bridge between the breathtaking and rugged nature and hikers. The architects aimed to spare nature as much as possible, so they only anchored the bivouac at six foot points in the rock. In seven helicopter flights, a steel frame, several prefabricated parts of the structure and supplementary parts of the interior as well as the building envelope were brought to the alpine construction site. Two days later, the bivouac was set up and ready to be used.



New, sustainable minimalism

What do you really need when spending a night in the mountains, and what can nature withstand if we humans do not want to do without all our protection and comfort? According to the architects, working on the Brédy bivouac was a balancing act between the needs of nature and humans, and each decision had an impact on the feasibility and quality of the small project. What you need to spend nights in the mountains is a roof over your head. But it is not until a building makes the advantages of its surroundings readable and tells a story that architecture comes into being.



Thus, the bivouac looks like a signpost from afar, and its shape and the large front window direct the hikers' gaze to the 4000-metre summits that Claudio Brédy was climbing before his death. If you visit the bivouac, you are always in touch with nature. Two additional windows create views to the east, toward the sunrise, and to the west, toward the sunset. In addition to six sleeping places, the bivouac offers an eating and reading area, a storage space and electricity from solar panels. Clad with untreated wood on the inside, the hut conveys a sense of security and surprises with its high-quality material. For the three architects who have been realising projects together under the name **BCW Collective** since building the bivouac, this is "a minimalism of a site-specific sustainability and of a functionality that is reduced to the bare essentials". They built the bivouac so it can be dismantled and leave the place up in the mountains without leaving any permanent traces.

With a spark of joy

It was also this sustainable minimalism that brought them together in 2019. A few years back, they were all at a point in their careers where they were looking for new opportunities and challenges. The Argentinian living in Norway, the Italian residing in Switzerland and the US-American from Alaska living in Italy met at the YACademy, a summer school for young architects in Bologna that focused on the topic of architecture and landscape. At the time, none of them suspected that what lied ahead would change their lives in the long run. The architects explain that it was never about an egoistic design strategy but always about a collective process. No wonder that Brédy's family and friends were involved in the building process as clients. For the inauguration of the bivouac in October 2021, many people from the area expressed their attachment to Brédy and the project. "It was a total goosebump moment that made a spark of joy over the place and the memory of a wonderful human being visible," **BCW Collective** agree. One thing is certain: They will definitely come back from time to time.







240 kg at 2530 m above zero

The company **Chevenier** from Charvensod in the Italian Aosta Valley normally builds large and small wooden buildings, houses, hotels, sports facilities and rear-ventilated façades. Shelters in the high mountains are not part of their everyday business, but they were still able to specialise in this type of alpine building. With the Brédy bivouac in the Vertosan Valley, they combined specific experiences to a small, fine and emotionally touching project.

The order for the Brédy bivouac was of great value, explains Luca Frutaz, head of the carpentry and tinsmith company Chevenier. “We were able to show that our business can carry out very complex work under difficult conditions and within a very tight time frame.” Furthermore, he had the feeling that he got to know the inspiring person Claudio Brédy, as the bivouac was so important to the client family and the architects of BCW Collective and many memories are attached to it.

Bivouacs in the high mountains are small but very complex jobs that demand extraordinary organisational efforts. Without CNC machines, highly qualified workers and their in-house technical department, Chevenier would have hardly been able to tackle the job. But, as Frutaz says, they almost always find a way to deal with challenges. For instance, the entire prefabrication of the Brédy bivouac took place in the factory and they disassembled it into eight parts that could be transported by helicopter. This is how 240 kg of aluminium found their way up to 2530 metres in the mountains. The parts were transported and built together on site in one day. One day later, the final touch and missing connecting pieces in the outer shell were added with Prefalz.



Luca Frutaz

“It is very light and therefore hardly has an effect on the weight that needs to be transported,” Luca Frutaz describes the advantages of Prefalz. “It is very easy to process, even on complex construction sites like in the high mountains, where temperatures are always low. The aluminium does not break when you bend it despite temperatures close to zero degrees.”

The Brédy bivouac was not the first alpine construction site Frutaz and his team at Chevenier had worked on. Over the past 20 years, they built approx. 30 buildings at an altitude of more than 2500 metres. If you have places you cannot reach by truck, an impeccable organisation is necessary and the installers must have excellent skills, since neither CNC machines nor other processing machinery can be used like in the factory. Describing further challenges on the mountain, Frutaz says that “aluminium is light, but it could be damaged when transported by helicopter. We had to be very careful during transportation in order to protect the material and not risk any additional helicopter flights.”

He is first and foremost a technician, Frutaz admits, an engineer. He likes beautiful things just as much as efficient, functional and durable things. It fills him with pride that the bivouac is mentioned at conferences and in magazines, but it is just as important to him that hikers and climbers like it, as this means that it perfectly responds to its users’ needs. “That’s why I find it essential to work with good architects. They have to be able to look beyond the aesthetic aspect. If they do so, a project can become perfect, just like with Claudio Brédy’s bivouac.”





La Dubinière

Country: France

Object, location: medical centre, Marly-le-Roi

Category: new construction

Architecture: 2AD Architecture, Vanves

Installer: Raimond SAS

Façade type: custom-made rhomboid tile

Façade colours: bespoke colours grey-green, reseda green, mint green

❶ **Object-related individual solution**



Martin Armingeat

»Of utopia and participation«

In the small town of Marly-le-Roi southwest of Paris, a building by *2AD Architecture* has several surprising stories to explain itself. They involve snakes and Asclepius, gardens which have been redecorated with artful pavilions and an old castle that does not exist anymore. The biggest surprise, however, lies behind an aluminium façade of meticulously laid rhomboid tiles that glows in different shades of green.

King Louis the 14th of France, the Sun King, sought a retreat in the small town of Marly, not even 15 km away from the Paris court, and had a summer residence built there in 1679. Extensive parks with elaborate trick fountains and dramatic sculptures arrived in the king's luggage, as did a baroque architectural style that was spreading across Europe at the time. Marly became Marly-le-Roi. While the castle fell into disrepair over the 300 years that followed, large parts of the parks have been preserved to this day.

Colour and heritage

The residents of Marly-le-Roi are fascinated with gardens, castles and parks to such an extent that the baroque models still shape the town, which has become a well-off suburb of Paris and experienced growing numbers of residents. The municipality issued a historically inspired colour and material canon for façades, front doors and window shutters as part of the building regulations for renovations and new buildings. The idea behind this is to make the historically founded visual cohesion of the place visible and prevent extroverted outliers in the city centre. Accordingly, light sand tones should be used for plaster façades of new buildings, while various nuances of the colour green are recommended for doors, windows and architecturally important highlights.

The ellipse and the snakeskin

2AD Architecture play with the city's traditional colour canon in an unusual way. They cover the newly built medical therapy centre in a skin of PREFACE aluminium rhomboid tiles in three different shades of green and realise architecture that works well for its residents: "Contemporary, but familiar!" The three colours – bespoke colours grey green, reseda green and mint green – are almost evenly distributed. Not only does this respect the city's regulations regarding colours and types, but the building also appears to have a kind of snakeskin, as a reference to Asclepius, that points to its function. Moreover, the architects managed that the building visually integrates itself into the project's own gardens due to its façade. With its green colours and a mixed arrangement of rhomboid tiles, it tries to enter a dialogue with its faunal surroundings.

Two separate structures

The idea of a pavilion-like building in a neat park or garden is at the centre of **2AD Architecture's** project for the building site in Marly-le-Roi, which is situated between an impressive church from the 1960s,

several prefab-style residential point blocks from approximately the same time and a contemporary school building. The project was tendered as an invited developer competition and comprises an additional 3500 m² of living space and a childcare facility beyond the "green nest". Martin Armingeat and his team were able to convince with a few clear design decisions. They divided the desired programme into two separate structures based on the required functions. The architects realised a building volume that offers 60 apartments and a childcare facility that they placed in a compact manner on the northern edge of the site. And a second one slightly off to the south side of the garden, a standalone building that is shaped like an ellipse and houses the medical therapy centre.

All tidy

The green nest is organised in a "tidy, clear and unpretentious way," just like all their projects, says Martin Armingeat. Barrier-free and accessible right from the car park, the centre can be used by all inhabitants of Marly-le-Roi. Its various practice rooms are arranged in a circle around a waiting zone on 330 m² to keep the connecting circulation areas inside as small as possible. As it does not have a clear front or back due to its elliptical form, the aluminium façade also had to be designed in a continuous manner. Doors and windows sit in deep reveals, they hint at the geometric complexity of the curved façade and its substructure. The radii, which also play a role when assembling the rhomboid tiles, continuously change depending on the position of the individual rhomboid tile on the elliptical surface. In this case, PREFACE France was able to provide the architects with the right façade builder.





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PREFA products can follow architectural ideas and visions, and aluminium is also a sustainable and recyclable material.
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From material to sustainability

According to Armingeat, hardly any other material would have been able to meet the demands of their architecture better. “PREFA products can follow architectural ideas and visions, and aluminium is also a sustainable and recyclable material.” Over time, this aspect has become extremely important to the office, which was founded in 1974. Since 2006, Armingeat has been the boss, creative mind and team leader in the office with twelve employees. They try to increasingly work on renovations in addition to new commissions in the real estate sector. **2AD Architecture** also believe that the focus will rather be on rebuilding than on building anew in Europe’s conurbations in the near future. That is why they focus on technical concepts that can be used to make the water, energy and power requirements of buildings more ecological. “We also don’t have quite as many international projects as we used to,” Martin Armingeat mentions, who built in China, India, Algeria and on La Réunion until just recently. “Having construction sites all over the world is no longer sustainable,” he concludes.







Stephan Ruck

“You can’t read about how building projects work in books.”

Raimond SAS has been in the business for a while. Since 1972, the French company has been manufacturing roofs and façades at its sites in Saint-Julien-de-Concelles between Angers and Nantes and Soulaire-et-Bourg, oftentimes with bright colours or artful perforations or forms. They process and can process nearly every kind of metal. But they use Falzonal and rhomboid tiles by PREFA particularly often due to their colour palette and resistance. In Marly-le-Roi, they were even able to fit something square on something curved.

Raimond SAS processes every kind of material that can be worked in a metal workshop, from A for aluminium to Z for zinc. “We have a lot of experience and in-house engineering competence in addition to production and installation know-how,” Stephan Ruck explains the advantages of his large team. He has been a partner in the company for three years, used to work for Raimond SAS for a long time and shares responsibility with two other managing directors today.

Ruck is originally from Alsace. After a few detours, he landed in Angers. He is a *compagnon* and intensified his own training to become a *couvreur* in various courses and through his practical experience all over France as part of *Les Compagnons du Devoir et du Tour de France* – the legendary master craftsmen in France who stand for excellent theoretical and practical training in various trades. “Today, I incorporate much of what I learned during my time with the *compagnons* into my own work and the training of our apprentices,” he tells us. The *compagnons* represent a specific work ethic and artistry and also a versatility in their craftsmanship, since you sometimes learn together with other trades in an interdisciplinary way. This is why Ruck also mentions that he is always open for technical and digital innovations, provided that they do not call into question the roofing trade. “Innovations should make work easier, improve processes, but not replace humans and craftsmen.”

At Raimond SAS, Ruck usually manages more than 20 jobs of various sizes at the same time. “I’m hardly on the roof anymore, I spend far more time at my desk, but I still regularly go to the workshop to initiate and accompany new productions,” says Ruck. Order volumes at Raimond SAS average between 500.000 and 1 million euros for roofing or façade construction services alone. “We even had 9 million once,” he remembers. But, as he continues, the financial order volume alone is not what is decisive.



Challenges arise particularly on the technical level. Can you develop something new in your own workshop? Do architecture projects include problems that are difficult to solve? How much can he involve his employees – engineers and metal workers – in the orders? He says that these questions are just as important when taking on a commission.

“We accepted the order for the green façade of the medical centre in Marly-le-Roi because of its interesting form and the resulting learning potentials for our company.” But in this case, they had to forget nearly all geometrically reasonable rules to be able to clad the multiply curved façade with the rhomboid tiles which they made themselves. How exactly they managed to make the building look like it is covered by a green, matt snakeskin remains Stephan Ruck’s secret this time. “You can’t read about how building projects work in books,” he says with a laugh, “and also not in the *PREFARENZEN*.” There you have it, a real *compagnon* when it comes to his own discipline.





Apartment building in Dachau

Country: Germany

Object, location: apartment building, Dachau

Category: new construction

Architecture: lynx architecture, Munich

Installer: Engel Spenglerei

Roof type: Prefalz

Roof colour: bronze

Façade type: Prefalz

Façade colour: bronze

● **Object-related individual solution**



f.l.t.r.: Susanne Muhr, Volker Petereit and Dirk Härle

»Perforated and versatile«

On the outskirts of Dachau, Munich's catchment area, *lynx architecture* have built at an intersection in a deliberately archaic manner. The result is a building that surprises with its simplicity and precise proportions. The architects operate out of a former shop in Munich's Maxvorstadt as a small, well-published and award-winning team with a concentrated and familial approach for years. Always by their side: their dog Emma.

The architects Susanne Muhr and Volker Petereit, who found each other in 1995, have been realising projects together under the name *lynx architecture* since 2001. Dirk Härle, architect and photographer, has been complementing the two for many years and is responsible for the project management of the residential construction in Dachau. They are mainly approached by private clients or project developers, which leads to building tasks for single-family houses, villas, roof extensions, conversions, working worlds and multi-storey residential buildings. An oftentimes high standard gives them greater architectural leeway. *lynx architecture* do not want to make any concessions in design, nor do they want to have to work against their own understanding of building culture. To them, Petereit adds, it is about building better: Proportions, lighting, material sensitivity, visual references and good floor plans are not a question of money.

With a double gable

The residential building is located at a crossing on the outskirts of the small Bavarian town of Dachau and embodies this attitude. It offers six two-room apartments with a terrace or balcony, an underground car park, a bicycle shed and access to a garden plot. Towards the street, the building with the double gable presents itself in a closed and quiet way, while it opens up towards the garden. Its structure, which only appears to be unexcited at first glance, turns out to have a differentiated design. With two roof ridges with varying heights and two building-high recesses on the garden side, the architects break up the strict image of a normal house with some humour and preserve site-specific, spatial qualities. The asymmetrical doubling of the ridges adapts the dimensions of the building volume, which is not exactly small, to those of the surrounding single-family housing developments. You could call it “classically modern with a local touch,” according to Härle. The design’s formal basic idea reminds of a landscape painting by the Munich painter Franz Marc, which shows a moor hut in the *Dachauer Moos* (Dachau swamp) as a small barn in a rural setting. “There are rural aspects in Dachau, it was one of the most important artist colonies in Germany at one point. Our architecture draws from these pictures,” all three of them point to the atmospheric similarity between picture and residential building.

Compact, not static

More pragmatic framework conditions also left their traces on the building design. Potential noise from the





street is dampened by a windowless façade made of perforated aluminium sheeting, the apartments themselves are oriented towards the garden and are accessible via an access balcony. On the garden side, the recesses enlarge the façade area and bring light into the depth of the floor plan. It also helps to protect terraces and balconies from inquisitive views. The building should have a clear and calm effect, which is why **lynx architecture** had the roof and façades made of one and the same material. A compact impression was particularly important to them, but it should not appear static. “Rather archaic,” Muhr and Petereit repeat. They both associate calmness and elegance with this term. Corresponding images of what this impression can look like are understood as a visual repertoire that they have acquired over time. A kind of individual Pinterest in their mind, replenished by their daily image and architectural work.

A skin like a curtain

The façades made of perforated aluminium sheets









largely determine the character of the house. Their bronze and, depending on the position of the sun, also dark brown or greenish tonality brings the building to life. The painting by Franz Marc also served as an inspiration here. The sheets were made according to the architect's specifications and interpret the appearance of a natural material. From a fire protection point of view, a realisation of the façades in wood – an initial concept – was not permissible. But PREFALUM aluminum was able to meet all of the requirements. "The choice of material was a trial and error. In the end, we settled for the irregularly folded, perforated aluminium sheets." Through a simple turning of the sheets along the length of the façade, the varying profile section produces a structure that is reminiscent of a wooden façade. Its verticals extend to the roof edges, across the roof surfaces and over windows and doors. By day, the residential building appears entirely monolithic from the outside. From the inside and at dusk, it looks fine and permeable. "Almost textile, like a curtain," says Muhr. The contrast of these two views, or rather spatial feelings, is appealing and unusual for the town's rather traditional building landscape. Despite their enthusiasm for the effects they achieved, the architects refuse to use the exact same principle in other projects.

"We are cautious when it comes to routines and standardisations, we like to break them," Muhr and Peterreit mention.

A damn good feeling

The architects are euphoric when they share how the tinsmith work was executed. The roof finish without overhangs, without visible drainage, is remarkably thin. Clear edges were created here that define the compact, emblematic image of the building. "High design standards can only be achieved with this level of craftsmanship." A feeling for which companies can handle *lynx*'s requirements relating to building culture and architecture sets in relatively quickly, explains Dirk Härle. The rest is joint work on the building result. As always, the path that leads you to architecture is what is exciting and motivating in everyday practice. "It's a damn good feeling when you've mastered the architectural challenges," Volker Peterreit adds. Is that already the final word? Wait: *lynx architecture*, what does your name mean? It stands for being quick, perceptive and clever – like a lynx.



90° – 60° – 70°

Six and a half tons of PREFA aluminium sheet, 2000 metres cut from the roll into plates, perforated, multiply edged in two directions and different angles and screwed to the roof and façade on the Weiherweg in Dachau. Time needed from the order placement until completion: nine months. Summarised like this, the short description is suitable for a book of records, but it does not show that **Engel Spenglerei** has far more to offer than perfect technical know-how. The company actively seeks challenges in both craftsmanship and architecture.

Matthias Engel and his employees actually processed 6500 kg of material for the residential building on the Weiherweg in Dachau. In several work steps, they formed the bronze-coloured aluminium sheet by PREFA according to the architects' wishes. The order was preceded by a recommendation. Since not every tinsmith company can realise the architects' idea of edging the sheets in several directions in one work step and at such different angles as 90°, 60° and 70°, Engel, who certainly specialises in custom-made solutions, was approached. He received two different profile cuts from the architects Susanne Muhr, Volker Petereit and Dirk Härle. In total, this resulted in four assembly variants that created the façade's deliberately irregular look.

Several of the sheets assembled on the Weiherweg have a length of 5 m. The joint pattern, planned by the architects across the entire façade, determined their cut. Other sections had to be adapted to the verge and gable on site in a slanted manner. Due to the sheets' individually formed cut profile, they contracted from a cut width of 120 cm to a visible width of 60 cm. It is impressive how thin sheet can fully unfold its character when processed this way. The sheets on the roof are mounted on a waterproof sub-roof, which allowed leeway in the fine execution of the ridge. They are not perforated, but they follow the same edging as the façade sheets.



Matthias Engel

“PREFA convinces with its light weight and the wide range of colours, among other things,” Matthias Engel mentions, who uses the material for renovation jobs and for architects' demands that are becoming more and more individual. “It is always exciting when you have to work out chimneys, pipe culverts and roof connections,” he adds, continuing that these are sheetings that must always be manufactured in an object-specific manner and for which a serial production will not be possible in the future. Assembly and the planning phase are becoming increasingly important in construction-related metal processing.

Matthias Engel seized the opportunity of the job in Dachau to acquire a new bending machine, which enables him to offer precise and specific metal processing. There was also a capacity for a new machine because the team was in the process of moving to a larger company site last year and the workshops, office and storage rooms were being reorganised from scratch.

But his core business remains the same for him: “A flat sheet of metal is turned into something three-dimensional in planning and realisation.” Matthias Engel himself began his apprenticeship at the business of his father Thomas. Six years later, he took over with a master craftsman's title as equal managing director. Renovations and repairs as well as major projects such as the restoration of the roof of Schloss Elmau have already been on the order list of the training company Engel Spenglerei. The project “Weiherweg” is just as valuable for the company, Matthias Engel adds. “We've learned a lot in technical, design and craftsmanship terms through our cooperation with the architects and by working with the new machine.”





Holiday home Boroteka

Country: Poland

Object, location: holiday home, Jamborek

Category: new construction

Technical engineer: Rafał Stramski, Gdańsk

Installer: L.CH Roofs Sp.z o. o.

Roof type: Prefalz

Roof colour: P.10 black

Façade type: Prefalz

Façade colour: P.10 black

❶ **Object-related individual solution**



Rafał Stramski

»Architecture between pines«

What he loves most about this house built in 2021? **Rafał Stramski**, owner of a wooded area in the middle of Poland and builder of a holiday home, does not hesitate to answer. It is the feeling of finally seeing this place that originated in his mind in reality, despite all the problems that needed to be solved during construction. “For my family, for myself and for others”, he adds, hinting that he likes to share the house in the woods with other people.



A framed graphic of the starry sky hangs on one of the inside walls, and outside, when evening comes, the moon passes over the little house that appears to disappear between the trees of a pine wood by then, at the latest. What seems kitschy at first is atmospherically convincing. We are talking about a place where the soil is still soft as cotton wool and full of pine needles and blueberries, where the air is filled with the aromatic smell of fir cones and resin and people come to relax both in the shadow and the flickering light. “Beautiful!” cries the heart when you find the hidden driveway after some searching and the clearly formed little black house comes into view.

Roof ridge determines building structure

At this place, the Boroteka, the moon and stars play the same important role as the countless tall pines. When you are approaching it, the woods seem to triple in the façade-high window panes on the south side – an impression that is framed and reinforced by a black-lacquered wooden façade and a black aluminium roof. According to the building regulations, you are not allowed to seal more than 35m² of ground area. So you have to score points with quality and special features instead of with surface. Running diagonally, the roof ridge makes the

building interesting despite its square ground plan. This creates a roof with rising eaves heights on both sides. Its roofing reacts with uniform aluminium trays and a hidden roof drainage. The roof turns out to be an important character feature of the building.

Taking things into your own hands

To Rafał Stramski, it was important that the house embodies an architectural language that is both restrained and sophisticated. In the Kolonia, the estate in the woods the property and house are located in, such contemporary buildings are scarce. The neighbours tend to build in a rather traditional style and with any kind of material that is cheaply available in Poland. Stramski looked for the highest quality in form, materials and execution instead. For instance, he had the wooden construction made of Swiss building wood milled in Switzerland and used Prefalz in P.10 black because a domestic alternative did not seem good enough to him. Together with his father, he took care of most of the assembly on site – except for the roof, which he wanted to leave in more experienced hands. Underestimated at first, the solved problems and created result make him proud today. “Taking the project into my own hands was worth it,” he affirms.

Interior design

While he solved the constructional challenges as an engineer himself, he hired an interior designer from Łódź for the interior architecture. The design created by Jan Sekuła of Zaręsy Studio makes you think that Scandinavia is not far away. Inspired by social media and Nordic design models, he created a mix of restraint, comfort and coziness in the house. You could say that it is *hyggelig* inside.

A Brda, not a Brda

The Boroteka is also reminiscent of a *Brda*. In Poland, *Brdas* are small, self-built huts people use for recreation. Most of them basically only consist of a steep roof, which stands somewhat sporadically sealed in a dense forest or on a clearing. They are simple houses with a clear design language, built in a compact way and used effectively in terms of space. Nevertheless, a *Brda* almost gives you everything you need for a good life. What is most important about it is the place where it stands anyway. Rafał Stramski sees his Boroteka in a similar light: “Our house in the woods is not only a window into another world. You can find everything you need here.” You can also read this on the homepage through which he rents out the house.

Online inspiration

What is meant to inspire others is actually inspired by social media. On the internet, you can find blog entries and magazine articles about the Boroteka. “All good things are wild and free” is written on a cup held up to the camera on a photo in an online magazine. In the background, the warmly lit interior of the small holiday home shimmers through the tree trunks.



Rafał Stramski mentioned from the outset that country and holiday homes he came across online inspired him to build his own house in wood construction and a rather Scandinavian style. So you could say that his contemporary version of a “cabin in the woods” with a fireplace, an inviting terrace and a jacuzzi is a thoroughly contemporary result with different sources of ideas. You can replicate a style and form, but the technical details of his house could not be reproduced without him, says Stramski, who is aware that the difference between inspiration and imitation is sometimes small. In the end, the Boroteka achieves what it promises: Woods, architecture and people can have a really good time together.







Roofs in the woods

Lech Chrzanowski, a roofer from Łódź, is well acquainted with the preparations you must make when constructing a building in the woods. For example, it is necessary to coordinate transport sizes, many materials have a very different effect in the city, and even if the project is as small as the holiday home, the location of the trees dictates what you can store and build where in the woods.

Mr. Chrzanowski already gained his experience with homes in the woods many years ago, when he renovated or newly roofed most of the roofs in Konstancin-Jeziorna, a well-known “town in the woods” in Poland. With its decorative villas, the spa town in the pine woods is one of the best residential areas in Poland today. The roof of the Boroteka is a little more hidden and considerably less pretentious than the villas of Jeziorna, but no less elegant. Instead of flaunting showiness, the idea was that the roof and house are submerged in the pine woods and thereby protect their visitors from prying eyes. Chrzanowski is obviously enthusiastic about this aspect of the house as well as its construction and architectural language. “I wanted to underline the special character of the house with the roof, the Prefalz in P.10 black and the type of roofing in every way,” he says, adding that a traditional tiled roof would not have been an option for him in this case. “Better special than boring!” – a vision he shares with the client.

Together with five of his co-workers, he completed the Prefalz roof of the small, diagonally cut wooden



Lech Chrzanowski

cube within only four days until late October 2021. The geometry of the roof hardly had anything special to offer during the process. Nevertheless, the roof trays and standing seams had to visually consider the dominant wooden boards at the transitions of the façade. As the roof area was small but the detail requirements were high, a corresponding diligence was necessary to achieve the technically flawless connections. In the lower tip of the roof surface, the lowest point, the transition to the rainwater downpipe hidden behind the wooden façade needed to be realised on only a few centimetres. The tinsmiths’ work was extremely accurate, which is also connected to the fact that there is a good view of the roof surface and the client’s architectural visions were so clear. The result immediately convinced the owner. He developed a logo with the roof and house that pops up as an unmistakable sign on the Boroteka homepage.

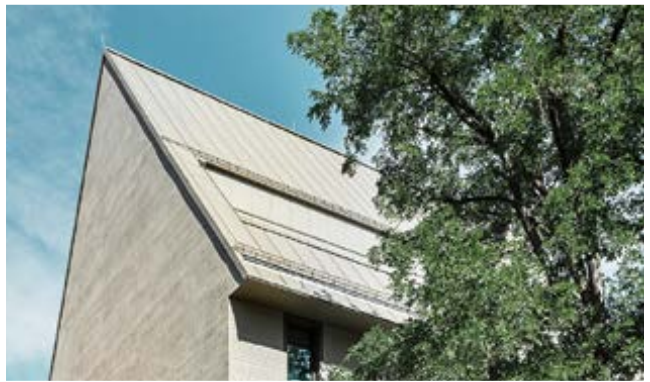
Lech Chrzanowski’s share in this successful coexistence of architecture, material and nature is mainly due to his expertise as a craftsman. In Poland, he is known as one of the few roofers who have mastered standing seam technology and its challenges in many variants, working himself from project to project since 1989: “I’ve never had to advertise, I’ve always been recommended by others,” he tells us calmly. This landed him both on a 65-metre-high church tower and on a 8000 m² roof of a gymnasium and gives him the ease to associate even the unexcited roof of the Boroteka with the memory of particularly valuable work.





PREFERENZEN 2023







Art museum Göttingen

Country: Germany

Object, location: art museum Göttingen

Category: new construction

Architecture: Atelier ST, Leipzig

Installer: Dach- und Fassadenbau Jens-Norbert Schmidt

Roof type: Prefalz, PREFABOND aluminium composite panel, box gutter

Roof colour: Bronze

❶ **Object-related individual solution**



Silvia Schellenberg-Thaut and Sebastian Thaut

»Building something that touches«

Architects Silvia Schellenberg-Thaut and Sebastian Thaut have been active in Leipzig with their studio *Atelier ST* since 2005. Their architectural focus lies on art and cultural buildings, urban renewal topics and housing. According to them, re-use and conversion are one of the most important tasks of our time. With the art museum Göttingen, they were able to master a sensational building task in both a historical and international context.

Beuys, Goldin, Grass, Flusser, Kapoor: names like smoke and mirrors. It is hardly possible to remain undiscovered internationally if you are realising an art book, pardon, an art museum in exchange with the publisher Gerhard Steidl. For the commission in the medieval city of Göttingen, the architectural office *Atelier ST* was able to assert itself against 19 other contributions in an invited competition in 2016. Why their design convinced the publisher and the city representatives? They already built on their experience with historical contexts and relied on their own sense for design during the design phase. “We knew very early on that the roof was going to be decisive for the entire house. This thought arose directly from observing the surroundings, from the city,” Silvia Schellenberg-Thaut mentions.

Roof-city-covering

The property’s capacities were to be exploited to the maximum. The art museum building responds to this requirement with a large gable roof executed with load-bearing reinforced concrete gable walls and timber purlins. Together with three storeys that project outward storey by storey, it creates generous and high exhibition, office and workshop spaces. An event room right under the roof ridge adds to the house’s programme and gives visitors the opportunity to look at the city from a large roof terrace. Bronze-coloured Prefalz was used for the roof covering because the architects wanted the building’s colour and materials to have a restrained appearance. With PREFALZ, it was possible to create all the details of the roof in the same colour to match the beige-coloured façade and bronze-shimmering window frames. Its significance and presence in the urban fabric enabled the light-coloured roof with its contemporary aluminium covering to stand out from the rust-red tile roofing of its historic neighbouring houses. Cleverly used tray lengths compensate for the aluminium’s expansion properties.

Localisation in the local

Both monochrome and monolithic, the new art museum appears as the city centre’s visual resting point. There was no doubt that a modern building would attract attention in the old town alleys dating back to the 13th and 14th century. Therefore, the architects of *Atelier ST* opted for an unexcited exterior. What is striking is the apparent solidity of the house. Realised in comb plaster on insulation and reinforced concrete, the façade retains the calm character of an enduring storehouse. Its colour and type of plaster are based on historical models.

The fact that some residents of Göttingen may not be taken by the barely perforated façade was certainly something the client and architects were aware of. But it seems that this difference to residential houses, cafés or restaurants was chosen deliberately. This art museum in particular is about what is being presented and its protection, not about an extroverted gesture. Silvia Schellenberg-Thaut says that the goal was “not an elitist building, but a simple house where art can be excellently communicated”. The building was not supposed to have any windows at first. With some effort, the architects were able to convince the client that isolated views into the city would be important for the art museum itself and for city residents and visitors. The result: surprising escapes from the introversion of a graphics and photography cabinet that locate the interiors and the works on display in the so-called Steidl cosmos and in the old town.

In an international context

The Steidl cosmos is the quarter around the St. Nikolai church where the publishing headquarters and the printing press for book production are located. High-quality art books are produced here, and works by Nobel Prize winner Günter Grass, among others, are published. It is where the art museum closes one of the last building gaps in the medieval urban fabric. Publisher Gerhard Steidl already initiated the creation of such a house 50 years ago, with a programme that was to be dedicated entirely to the topic of paper. The ambition was also to put the house on the international map between London and Paris with its contents and architecture – not more and not less. The architects responded with a compact room layout, a high level of air-conditioning and lighting technology, a reduced architectural language and an elegant colour palette.

Architecture with an effect

The federal government contributed four and a half million euros for the construction of the art museum in Göttingen, and another million were provided by a patron of the arts. The premise: The new building should also stabilise the historic inner-city quarter in the long run and develop its cultural potentials. Gerhard Steidl made the piece of property available to the city. With their focus on cultural buildings, *Atelier ST* brought with them the competence to be able to mediate between a pragmatic and an artistic environment.









What you want

“Many architects solely focus on function and building aspects. We try to go beyond that and give buildings an atmosphere and an aura, so they can become a spatial experience for people.” Sebastian Thaut uses the term ‘building art’ to describe this added value of architecture. For *Atelier ST*, this rules out a copy and paste of other design languages, even if searching for one’s own can sometimes be a rocky road. References to existing structures and their abstraction are still used to a degree they find acceptable. This also explains why the art museum in Göttingen follows a historical building form without superficially imitating it: The overhanging upper storeys are typical of medieval buildings. They form a time-specific alley space.

Working specifically

Silvia Schellenberg-Thaut explains that they talk a lot whenever they begin a design: “We use our pencils relatively late in the process. Before we reach for the sketch roll, we have to compare and superimpose both of our images.” Afterwards, they use the model to test scale for scale before developing down to the last detail in their own model workshop. Their “Atelier ST breakfast” takes place regularly every Wednesday

with smaller presentations and conversation that currently focus on how architecture can become simpler again, how an architectural practice with few, sustainable materials and a reduction of technology enables resource-friendly building. Continuity and regionality are addressed, and problems in current processes are worked out together. They cultivate a special design culture. As an architect, says Silvia Schellenberg-Thaut, you must be well versed in all the process steps of planning and implementation. She calls that “having a big stomach at the end of the day and keeping at it”. *So you have to be able to put up with a lot if you want to create added value in architectural practice.* The constant goal: to build buildings that touch!



Architecture enthusiasts

In 1985, the company *Dach- und Fassadenbau Jens-Norbert Schmidt*, which is now based in Nessa in Central Germany, only existed as a one-man show. After the fall of the Berlin wall, they continuously expanded their office portfolio, so that 40 employees work at their workshop and office today. In addition to classic roofing work, scaffolding work and chimney construction, Jens-Norbert Schmidt offers roof plumbing work, façades, drywall construction and technology in the area of solar heat and photovoltaics. His catchment area goes far beyond Saxony-Anhalt – Munich, Berlin, Zingst up to the German Embassy in The Hague.

There are two things he is passionate about: solar energy and the renovation of beautiful, partly representative residential houses. On the one hand, he has a “thing for energy”, as you can read about him on the Internet, on the other, Jens-Norbert Schmidt mobilises local forces for monument protection and saves old-town building jewels from demolition or ruin. His son is an architect, an acquaintance is a paint expert and plaster façade specialist, he himself is a master roofer and a creative mind. Together, they focus on building details and gentle revitalisation. Numerous façade studies and construction site photographs hang in Schmidt’s office. No wonder that he was fascinated by the architecture created by Atelier ST in the old town of Göttingen. His son had established the contact and they got into detail planning together at an early stage. In a second call for tenders for the tinsmith and roof work of the city, he received the commission that comprised far more than 60 individual positions. It was not only the sensitive handling of the neighbouring half-timber buildings during the laying work and roof construction that was challenging. The roofing of the art museum Göttingen itself also was not an everyday affair.

Schmidt and his co-workers were responsible for approx. 388 m² of grey to bronze shimmering roof surface in Göttingen.



Jens-Norbert Schmidt

“It was a rather complicated matter,” he mentions, “because the extreme expansion of the material on the enormous length of the rafters needed to be considered.” Schmidt solved the problem with staggered expansion joints in the trays, which are barely noticeable on the monochrome roof after its realisation. With Prefalz, this could be easily managed. In addition, all of the connecting elements and edgings had to be realised in the same colour. “Bronze,” he recalls. It had been the architect’s desired colour and the colour that each detail needed to have. In the roof, which reaches down quite far, this included a large cut-out for a roof loggia and several roof windows as well pointed eaves.

Jens-Norbert Schmidt brings a lot of knowledge about materials and historical roofing to his craft. He is increasingly paying attention to whether materials are reusable. Aluminium, he mentions as an example, is a traditional roof material. He would also like to recycle aluminium roofs in the future. Until now, he has only been able to realise that with plain tile roofing, and the responsible authority had looked at him somewhat in disbelief once when he wanted to use “saved” roof tiles. But now would be a good time to recycle material: He recalls that the material crisis today sometimes resembles the one back in the GDR. You have to be able to wait and buy materials in larger quantities when it is available, even if you are not going to use it right away. He also sees the current situation on the raw materials market and regarding building materials as an opportunity and is not very worried about it. After all, he learned the necessary amount of patience through his craft and by playing the piano.





Primary school with after-school care centre Otterswiller

Country: France

Object, location: primary school with after-school care centre, Otterswiller

Category: conversion, extension

Architecture: Urbane Kultur, Strasbourg

Installer: Charpentes MOOG

Façade type: rhomboid façade tile 44 × 44

Façade colour: P.10 PREFA white



Dominique Cornaert

»Form evolves with time«

Dominique Cornaert and Philippe Dahan, the architects behind the primary school with after-school care in Otterswiller, Alsace, already founded their office **Urbane Kultur** back in the 1990s. Located in a district of Strasbourg for a long time, it appears to be a last obstinate island of design, surrounded by low industrial and commercial halls. They go about their work in a calm and pragmatic manner. For them, it is not about improving the whole world, but about offering functioning and durable solutions with their own architecture.



Function comes from functioning

In Otterswiller, an existing school building was to receive an after-school care centre and additional movement spaces. The existing structure – across from it a meadow with fruit trees, a wooded area, single-family houses from various building construction periods, a typical end of a town – was awkwardly placed on sloping terrain. Cornaert explains that they already solved this topographical “dysfunction” with the idea of a continuous plinth in their competition contribution. The architects arranged the required functional additions at the same level as the first storey of the old school building. This explains why it seems as if old and new were pushing into the terrain, which slopes up to six metres. A simple but nevertheless unusual house on a plinth was created, and the material choice also follows this idea. Anthracite-coloured ceramic tiles cover the plinth, while the steep roof and ground floor areas are clad with white 44 × 44 PREFA rhomboid façade tiles in prominent places.



An inner logic

The municipality wanted to be able to access the primary school and the after-school care centre independently from one another, but they should still form a unity. Therefore, the architects placed the primary school's main entrance in the plinth area and connected its schoolyard to the plinth. The after-school care centre can be accessed via a separate entrance which is located between the centre and the school and connects them internally.

A well-sorted structural division of space into servant and served spaces keeps the overall volume compact. The design clearly differentiates between the interior spaces with their ceiling heights and emphasises frequently used circulation areas with skylights. In the school and the after-school care centre, these recurring architectural elements make it possible for more than 200 children to intuitively experience how they can use the building for themselves.

Differentiating buildings

Urbane Kultur skilfully use the functional division to form individual buildings. The large building volume appears small-scale and agile. It thus adapts to the scale of the surrounding single-family houses and invites you to explore: No two views are alike. Materials play an important role here. The individual buildings were clearly differentiated with different façades despite the monochrome colour scheme: Rhomboid façade tiles in P.10 PREFACE white adorn the building of the after-school care centre, while plain white tiles were used for the school. The exterior and intermediate spaces are given specific qualities with this two-faced materiality. The office won the Prix de Facades2build with this concept in 2021. *Bien fait!*

Le jardin periscolaire

The architects of **Urbane Kultur** use an interesting place to put thoughts into designs. Not even five minutes away from the motorway and less than ten minutes by bike from the city centre of Strasbourg, they work in what used to be a company's headquarters from the 1970s. Orange-coloured awnings in front of the windows and brown carpeted flooring on the walls tell of other times. A wild island of plants in the courtyard reminds Cornaert of Gilles Clément's concept of the *jardin planétaire* that repeatedly guides him in his work. "You could see the world as a garden and people as their gardeners."

But, as Cornaert continues, that is his topic, other generations have to focus on other ones. He rather sees himself at the end of a journey than in the role of making a big change in the world.

The relationship with abstraction

Cornaert confesses that he likes to look at the world in two-dimensional images. He even takes frontal photos most of the time, without any spatial depth. When planning, he gives precedence to floor plans and multi-view projections as well as sections. He likes the idea of representing architecture in comprehensible layers and abstracting it in the process. For him, a beautiful plan offers an opportunity for good architecture, as without beautiful plans, you would not have an opportunity at all. And yet, the architects focus on resilience, durability and simplicity in the realisation process.

Mission design

"As architects, it is our task to give a form, which evolves with time. It comes into being when a process ends, not when it begins." When Dominique Cornaert says something like that, he means just that: You should find the functional solutions and work on the level of use first before you focus on the form. For the latter is the sum of the answers to programmatic challenges. Is he referring to the famous *form follows function*? That would be too simple. His architecture does not follow a pure functionalism. "Avoid the supermarket look," Cornaert sometimes says to his employees with a wink. Instead, he believes that architecture makes functional processes spatially visible and subtly communicates what it has to offer for its users. Form, materials and building structure always express this underlying functional order.









Simon Moog

30 years, 30 projects

Simon Moog has a carpentry workshop in Hoerdtsheim, Alsace, and was responsible for the construction of the façade and the roof covering – *la couverture* – of the primary school and after-school care centre in Otterswiller. The white school building in the small town is special because its well-balanced mix of materials and resulting sophisticated details were not only a challenge for the architects. Moog was also able to shine as a craftsman.

Things have always been good between him and Urbane Kultur, “*We usually build a project together every year,*” Moog mentions. As they plan many of the necessary details themselves, work them out and provide them as a drawing, he values the cooperation with the architects. They always exchange information about construction methods and building details in an uncomplicated way. “It could be,” says Moog, “that Dominique Cornaert and Philippe Dahan are the only architects who still produce stacks of detailed drawings and know exactly what the execution should look like.” This, he adds, is a decisive advantage for work on the construction site.

Moog is strong and friendly. He arrives on his Harley Davidson, his vehicle for special occasions. You can tell that he enjoys his job and especially efficient work processes. “Construction site work is assembly – and assembly only!”, at least in his projects. He adds that on construction sites, you cannot waste too much time thinking about what could work how. Detail work belongs in the planning office and in the workshop.

This was the case in Otterswiller, where his employees had to process several façade materials. The old existing structure of the school was clad with white glazed plain tiles, while the new construction for the after-school care centre received a lightweight façade made of 44×44 rhomboid façade tiles in P.10 PREFA white. 300 m² of the aluminium rhomboid tiles had to be laid. In French, they are called *losanges*. They are characterised by a calm and elegant appearance, which also stems from the concealed fastening that PREFA offers for its products. The advantages of the light rhomboid façade tiles become particularly apparent on large surfaces.

Simon Moog’s people are familiar with the challenges that accompany these dimensions. Once they have started, the pattern must be mounted perpendicularly and evenly in a horizontal direction. Even slight deviations would be visible in the end. As they also carried out the façade substructure – carefully applied insulation, load-bearing battens and planking –, they had the basis for the precision work that is necessary for the rhomboid tiles in their own hands. Three tinsmiths only needed a few weeks to complete the assembly on site. Moog wants to shape the future of his company towards prefabricating entire wooden façade elements. Not because he does not want to work with aluminium anymore or does not believe that the material has a future, he simply lacks the people who can work with the soft, flexible material at a convincing level. *L’époque des losanges ne vient-elle pas de commencer?*





Single-family house Rijksweg Zuid

Country: The Netherlands

Object, location: single-family house, Elst

Category: new construction

Architecture: Studio Kees Marcelis, WS Oosterbeek

Installer: Duinkerke Dak en Zink

Roof type: Falzonal

Roof colour: savannah beige

Façade type: Prefalz and Falzonal

Façade colour: savannah beige, P.10 anthracite

● **Object-related individual solution**

*Kees Marcelis*

»Starting inside«

The residents of the small town of Elst near Arnhem in the Netherlands have named the house, which **Kees Marcelis** has just built at the edge of town, “Het Gouden Huis”. It shimmers in the bespoke colour savannah beige and stands out with its strong standing seams, which run over the roof and façade as straight lines. The aluminium façade is a fine shell, almost like gold leaf, and gives the single-family house a noble touch. However, as is typical of Marcelis, the story of the house began with the interiors.

“**W**hy should you design a residential building with a view from the outside? We spend 80% of our time indoors. I always start with the inside,” Kees Marcelis describes his design process. With this view from inside, he developed a house which is coherent in itself and people like to talk about in the small town of Elst. The house is located on one of the local arterial roads across from a filling station on a plot that extends into a maize field. One of the first decisions was to direct the view out of the rooms into the distance and away from the road. Thus, there is a rather closed façade towards the street, while Marcelis opened the house towards the garden and maize field with large, dark glass panes and sliding glass doors.

Modern models

His style has models but is still very much his own. Similar to Frank Lloyd Wright’s “Nine Point Manifesto”, Marcelis has recurring principles which he inscribes in his designs. The more than 300m² house in Elst also primarily adheres to these spatial rules. For example, it has a free floor plan in which functional servant spaces such as the bathroom, WC and wardrobe are positioned as boxes. The necessary storage space was firmly integrated into the house in the form of wall cupboards, so the focus of attention remains on a few high-quality furniture objects in the room. The transitions between the inside and outside are smooth and without thresholds, wherever this makes sense. Furthermore, the amount of used materials was reduced to bring a calmness into the building volumes.

Aluminium pilaster strips

Kees Marcelis exhibits a finely tuned materiality in his designs. In Elst, he chose dark, noble-looking materials as well as large-scale wallpaper inside. That is why it was all the more important to him to design the building shell light and bright as a contrast. He used Prefalz in the highly reflective bespoke colour savannah beige and had aluminium pilaster strips installed across the roof and façades. They structure and emphasise both the material’s high quality and the compact form of the house without roof overhangs. To make the gable ends more interesting, he had 70 mm high standing seams realised instead of the usual 25 mm that give the building a regular rhythm. This rhythm is sporadically interrupted by lights integrated into the façade that are also encased in aluminium. Depending on the position of the sun, an interesting interplay between light and shadows is created with the high seams.







Material concepts

Today, as Marcelis admits, he is increasingly interested in reduced, resource-friendly and sustainable material concepts. A few weeks ago, he let the standard materials disappear into the drawers at his office – sustainable materials made their way onto the table in the studio’s own showroom. “I want to work with them in the future,” he tells us about one of the small paradigm shifts that occasionally make their way into his designs.

Long, straight lines

Kees Marcelis has always been fascinated by lines: long, straight lines, spatially in the form of wide vistas through corridors, apartments and houses, or rather graphically – like the pilaster strips in Elst – as three-dimensional reliefs on façades and pieces of furniture. He says that the eye follows these lines and discovers an elegant generosity in them and is fascinated by the fluidity inherent in these lines. That is why his buildings, apartments and designs are often characterised by a strong horizontal expression through flat, cantilevered roofs of low construction heights. In Elst, an elongated low flat building similar to a bungalow pushes into a structure with a pitched roof, which resembles a typical single-family house from the 1970s in its size and form.

How does something come into being?

The first five to six hours are usually important in his commissions. For in these hours, Marcelis has design workshops with his clients at a large, round table – “that way, no one is the boss”. He explains that this creates a kind of democratic eye level and everyone in the room is called upon to contribute to the project in that moment. In Elst, his clients had encouraged him right at the beginning that he needed an architectural calling card in his hometown. “I like to be inspired when I work with a challenging and critical counterpart,” he answers when asked why he likes working as a designer and architect. Entirely immersing yourself in a project is great, but not always possible. He takes the time to do just that as often as he can and travel to his clients. This led to projects in Luxembourg, Austria, Syria, France, Canada and South Africa. At his studio, two product designers and architects each support him in realising projects. Starting 30 years ago, Marcelis is now one of the best interior architects in the Netherlands and has also made a name for himself as an architect of elegantly designed villas, restaurants, conversions and showrooms.







From doorstep shop to online shop

Duinkerke Dak en Zink has experienced a steep development in the past 15 years. The head of the company relied on the right niche with roofs for single-family houses and would like to expand his company to an online shop. But right now, the secret behind a particularly high standing seam he realised together with his employees for architect and designer Kees Marcelis in Elst is more interesting.

Johan Duinkerke is quick and has been in the business for a long time as a craftsman with his own business. In 2006, at the age of nineteen, he started driving from house to house through the towns of the southern Netherlands and offering repairs, pipes and profiles as an installer. In these first years, he also noticed that most house owners needed someone who could re-roof, repair chimney connections and do other kind of metal work on houses. As an autodidact, he has been successful in almost exclusively installing metal roofs and façades of single-family houses with the help of trained co-workers since 2021. A one-man doorstep business has become a company with more than 20 employees and an optimistic outlook for the future.

Duinkerke's passion for metal processing and the various kinds of metal, which, as he says, "all have their own character", stems from these early days. Among them aluminium, which he calmly compares to a sheet of paper, as it is so flexible in processing and so lightweight. These qualities also spoke in favour of using Prefalz for the single-family house in Elst. The façade and roof are executed in a back-ventilated manner and form the final layer of the multi-layered building envelope. Architect Kees Marcelis' wish to realise the standing seams on the gable ends higher than usual was



Johan Duinkerke

challenging. Special tools were produced for the 70 mm seams, which is also something that was only possible with excellent craftsmanship. All the other façades and the roof were executed with the 25 mm high standard standing seams. "It's fascinating how the seams have a varying three-dimensional effect," Duinkerke mentions.

Johan Duinkerke sees different advantages in both systems: The standard systems can be installed quickly and can be easily explained to employees, while individual solutions visibly challenge and excite employees more. They are simply more surprising, he says, even if they are not always economically efficient.

Duinkerke knows the industry in his country quite well. "PREFA has been active in the Netherlands for a few years now, and by now, most of my customers want a roof of PREFA aluminium products," he adds. What is particularly in demand? "Prefalz in the colours patina grey and black, standard standing seam 25 mm, laid as seamlessly as possible over façade, roof and gable. It should be compact, but it should still be possible to use it in a versatile way for buildings." He does not have to think long when it comes to the extra features of aluminium. According to Duinkerke, they are without a doubt the possible variable lengths and the excellent concave or convex curves you can create with the material.





Buggi 52

Country: Germany

Object, location: commercial and residential building, Freiburg

Category: new construction

Architecture: Weissenrieder Architekten BDA, Freiburg im Breisgau

Installer: Holzbau Bruno Kaiser GmbH

Façade type: ripple profile

Façade colour: black grey



Jochen Weissenrieder

»Redensification in material-saving mode«

The architects and planners around *Jochen Weissenrieder* showed good sportsmanship in the constructionally challenging redensification task Buggingerstraße 52 in the large-scale residential area Freiburg-Weingarten: They proved that they have nerves of “metal” when planning and realising the innovative new construction. With ideas of recycling, a careful handling of minerals and design standards despite efficiency, the pioneers made it into the media in Germany and into the hearts of the residents of Freiburg.



Buggi 52 is sun-tanned, well-built and slender – not too tall, not too short, a friendly and social nature, child-friendly, uncomplicated and, since it is almost exclusively made of wood, extremely sustainable. The eight-storey residential building with a kindergarten on the roof of a supermarket is as likeable as one of those nice neighbours you would like to invite to dinner sometime. Besides Buggi 52, high-rise buildings and social housing characterise the Freiburg district of Weingarten. Planned on a greenfield site in the mid 1960s, the area is still defined by wide streets for car traffic and missing urban spaces, but it has lush, albeit unused public green spaces to offer. With good local amenities within walking distance and perfect local transport connections, Weingarten has interesting features that explain why in view of Freiburg’s growing population – 5% of its inhabitants live in Weingarten – there is a desire to build more densely in the residential area. The city is actively becoming involved in transforming the former hotspot district with a targeted upgrading of the neighbourhood.

Added value is worth more

For this purpose, Jochen Weissenrieder conducted urban planning studies and, together with the city, focused on land reuse instead of new sealing. This is how the idea was born to preserve the residential area’s green oases and add more storeys to existing buildings or replace them.

Buggi 52 replaces an older supermarket and creates better spaces for new local supply, using their roof as a playing area for a kindergarten. 30 apartments in the compatible price segment, which also includes assisted living, brings a social added value for residents and the surrounding area. It is rare that a building like the residential and hybrid house that was just completed manages to generate more value in so many aspects. For instance, Buggi 52 is Germany’s first entirely FSC certified residential house, meaning that it was built exclusively with timber from sustainable forestry, which originates regionally from the Black Forest and was processed there.



Efficiency

By applying the frame construction method, it was possible to save a great amount of material: There is 40% less wood in the upper storeys than would have been the case with massive wood construction. The amount of concrete could also be kept low, even if the ground floor and basement are not made of wood for static reasons. The construction of seven standard storeys with load-bearing external walls took eight weeks on site. The modular construction enabled shorter building times and a weather-independent assembly. Supported by a digital twin for integrative planning with the use of BIM, various expert planners were included.

If you read about Buggi 52 in the media, you might get the impression that everything primarily revolved around efficiency. Jochen Weissenrieder therefore deliberately emphasises the design strengths of his building. The fire bars on the more than 20-metre-high façade, for instance, are both: efficient with respect to their fire protection function and interesting because they rhythmise the large surface as a recurring architectural element in a matching colour. What was also efficient was the decision to set the clear room heights of the apartments to 2,42 m. Admittedly, this ceiling height is not very generous. But light wooden ceilings and floor-to-ceiling windows still convey plenty of interior quality.

Unicoloured and incredible

A change in material adds a visible rhythm to the façade on the eastern side. It was necessary to use a non-combustible material to meet the high fire safety requirements of the municipal fire brigade. In terms of design, the architect was seeking a standing structure that continues the look of the wooden façade without copying it. “Incredibly beautiful, incredibly thin, incredibly robust,” Jochen Weissenrieder recalls about PREFEA’s ripple profile and indicates two millimetres with his thumb and index finger. He says that he immediately agreed after sampling one of the wall prototypes at the timber construction company. In order for the building to have a unified appearance, it should have a single colour across all materials – “that way, it doesn’t fall apart, doesn’t break”. The PREFEA colour palette offered what matched the pre-greied silver firwood façade. Apart from that, the profile’s long, maintenance-free service life spoke for itself.

A brief minute of shock: building freeze after groundbreaking ceremony

It had been a “difficult process,” according to Weissenrieder, “with a convincing result”. This included organising appointments and sitting down together until

it was possible to reach a common denominator. Persistence and conviction were constant companions of the architects and engineers when Buggi 52 was being developed. After an interim building freeze ordered by the authorities immediately after the groundbreaking ceremony, a fire protection expert from Munich was brought on board, expert opinions were prepared and they were able to convince with a well thought-out material concept that suggested the mix of aluminium and wood. “On the one hand, you have to work out and develop something at a high level, on the other, you have to bring architecture back to the human level,” is how Weissenrieder describes his work ethic, “after all, someone has to execute it, approve it and assemble it on the spot.”

A man of conviction

80% of *Weissenrieder Architekten BDA*’s work is for public clients, relatively little of it for the industry. They chiefly realise multi-storey residential buildings and school buildings in timber construction. “If they don’t already exist, single-family houses are outdated,” the architect says. He directs the focus to the topic of usability, demands more development with a special longevity instead of approaches that hardly ever change. Buggi 52 is also this consistent, implanting diverse uses and generating important, innovative know-how.

Model and pilot project

Saving 40% of valuable material compared to other construction methods is great. The fact that in the case of Buggi 52, resource-intensive concrete was also saved, simply because it was not even used in the first place, is an added bonus. Could this become the standard? As a role model in many areas of sustainability and design, projects like Buggi 52 are important. Unfortunately, the city of Freiburg has not been able to decide on a second Buggi 52. It would be good if this still happened. Jochen Weissenrieder and his partners are certainly not waiting for it to happen. They continue to plan, looking for new architectural and technical solutions that are suitable for a more conscious and resource-saving future. Weissenrieder believes that it is possible to save up to 60% of emissions in the building industry. He continues that this is not only a responsibility, but also a position of power that planners and executors could assume and should not be underestimated. According to the German Timber Construction Industry (DHWR), timber construction could easily account for 50% of the building mass in Germany by 2050. Jochen Weissenrieder and his colleagues have decided to seize this opportunity.







Herbert Duttlinger

You see the difference?

At their location in Bernau in the Black Forest, **Holzbau Bruno Kaiser GmbH** plans and realises building projects with a resource-saving timber frame construction. With their foundation in 1986, they already made a point to construct buildings entirely in wood and to use ecological insulating materials in the process. As the company became larger, the focus shifted to multi-storey residential projects and more technically sophisticated pioneering timber buildings. Since 2014, production has been taking place in a new hall, and two years ago, they invested in modern CNC-supported production equipment for large-scale wall production that should expand the capacities in timber system construction. But what does all of this have to do with the PREFEFA ripple profile?

“In timber construction, you work with millimetre accuracy today.” Herbert Duttlinger, head of more than 130 employees at Holzbau Bruno Kaiser GmbH, points demonstratively at the eight-storey building called “Buggi 52” on Buggingerstraße in Freiburg. He explains that minimal height tolerances of merely plus/minus two millimetres were measured for the upper storey ceiling. For every storey, an erection time of only one week was needed, which was possible mainly due to the high degree of prefabrication in the production

shop in Bernau. The civil engineer and contractor was responsible for the production and erection of the timber construction with the tripartite timber façades and surprisingly also for the assembly of the extruded ripple profile on the east side of the privately financed residential and hybrid building.

You have to get closer to perceive the difference in material between the aluminium and the wooden façades made of pre-greyed Black Forest silver fir. That is how it should be. Together with the architect Jochen Weissenrieder, Duttlinger faced the challenge of adapting the east façade to the special fire protection requirements. It was important that the building does not lose its clear form in the process, let alone suggest that wood as a whole is not a suitable building material. The project should rather show how technically flexible and efficient wood is as a building material. Therefore, the announcement by the local fire brigade that the east side could not be clad with wood because it was not possible to approach it with turntable ladder vehicles was extremely inconvenient for everyone involved in the building process. Herbert Duttlinger is all the more satisfied with the result. The ripple profile in a warm black grey is a perfect solution in terms of fire protection. It seamlessly blends in with the profile boards of the other façades without seeming to copy them. And it could also be laid across the corners of the prefabricated system walls on site.

Duttlinger met the private client at a trade fair for buildings and energy in Freiburg. At the time, an architect’s preliminary draft was already on the table, but the final dimensioning was still missing. The project seemed



to demand some pioneering achievements in terms of statics, building law and construction: staircases made of solid wood, seven storeys of timber frame construction on a ground floor made of reinforced concrete, an FSC certification for the entire building. During the first work meetings, the feeling quickly arose that they were able to master the construction challenges as a team. They even act as a project team to this day. Without this foundation, it would not have been possible to develop Buggi 52, which is prototypical in many respects and in its individual fire protection solution. They eagerly awaited the Wood Construction Award Baden-Württemberg, which the project received in 2022.





Interpretacijski Center Ig

Country: Slovenia

Object, location: museum, Ig

Category: new construction

Architecture: Atelje Ostan Pavlin, Ljubljana

Installer: Grič-ar d.o.o.

Roof type: Prefalz

Roof colour: P.10 dark grey

❶ **Object-related individual solution**



Aleksander Saša Ostan and Natascha Pavlin

»We live a total artwork attitude.«

The UNESCO World Heritage project Interpretacijski Center in the Slovenian town of Ig aims to convey different aspects of living in a pile dwelling settlement and its natural surroundings in the Ljubljana Marsh during the Bronze and Neolithic Ages. *Atelje Ostan Pavlin* from Ljubljana was responsible for the construction of the small museum and for the footbridge through the marsh as well as some replica pile dwellings. The architects have already built tree houses, chapels and bridges. They have a classical work approach – with a total artwork attitude.

Suddenly UNESCO World Heritage

The story of the information and visitor centre in the marsh of Ljubljana has to begin with the mayor of Ig – with a phone call he received more than ten years ago. At the time, Slovenia's Minister of Culture called on behalf of the UNESCO and told him they wanted to invest several million. Ig had been selected as one of ten locations to tell the story of the ancient pile dwellings in the marsh. Numerous archeological remains as well as the world's oldest wooden wheel were found there. Of more than 100 sites of Neolithic pile dwelling villages in Germany, France, Italy, Austria, Switzerland and Slovenia, Ig should be highlighted as a tourist and cultural centre. The realisation of the project, which was not only going to add a new building to the village but also promise attention, has been pursued from then on. 55% of the construction sum was provided by the EU, the community had to raise the rest. It will run the small, museum-like centre itself. Apart from its 3000 inhabitants, Ig only has a large factory for car licence plates, a women's prison in an old castle and a quiet church square with a guesthouse, town hall, library, ice cream parlour and pharmacy.

Asserting yourself

Considering the large changes over the past few years, Ig came up with its own urban development plans under the direction of architect Natalia Skok, whom *Atelje Ostan Pavlin* brought to Ig six years ago. It was necessary to find the right place and the right strategy for the construction of the Interpretacijski Center. The marsh itself is a breathtaking landscape that is constantly changing. But the historic pile dwellings were swallowed, disappeared in the marsh. How do you make what has disappeared become visible and alive in a building? Natascha Pavlin and Aleksander Saša Ostan had to assert themselves against two other architectural offices in a competition. They were able to do so with their design of an excellently placed building from a spatial perspective. In terms of form, they were guided by the simplicity of the pile dwellings and the small-scale nature of rural structures. They sought to refer to what had vanished with materials, colours and details in their architecture.

New centre

Together with a revitalised barn, the new construction creates a new town centre that will become a magnet for international visitors. From the outside, it rather resembles an agricultural building with its wooden lamella façade and dark aluminium roof.

The rooms inside appear spacious. Interested visitors are led through a multiply glazed, open ground floor and a well-positioned opening in the ceiling to a spacious exhibition room on the upper floor. The room abstractly conveys the feeling of a continuous large-pile building – many things happen here under a protective roof. The material wood predominates as façade slats, peeled tree trunks and birch multi-layer panels in the interior.

Prefalz as a contrast

One surprise of the design, what immediately strikes you as astonishing, is the form of the roof and building body with eaves that extend upwards. They result from the different roof pitch angles and the horizontal ridge. This way, the building escapes a false austerity and a spatial differentiation is achieved. The meandering roof acts as an expressive contrast with its Prefalz covering in P.10 dark grey. Is it reminiscent of the earthy tone of the peat in the marsh? Or is it rather like the dark fur of a sleeping animal, like a beautiful, warm back? The architects decided to use the straight ridge as the reference for the laying direction – not the individual valleys, which would have technically also been an option. The eaves seams are a success, as all of their ends were finished the same way.

Building culture and cultural heritage

Slovenia, green hills, small towns with church steeples and extensive agriculture. The capital gentrified and touristy – with an architecture shaped less by Yugoslav socialism than by an Austro-Italian historicism. There is a present and well-developed architectural scene in the capital and its surroundings. Building culture has a high standing. That is why it is all the more important to have projects that represent cultural or natural assets or serve to educate about them. With the building in Ig, whose *raison d'être* is a millennia-old cultural heritage, the topic of contemporary building culture is also in focus. Pavlin and Ostan are aware of this dimension. Both of them accompany the building processes of their projects from the design to the building site up to their completion. "We don't do outsourcing!", says Ostan. "Especially with details, we don't want to have someone else take control." Pavlin adds that they live a "total artwork attitude". They regard architectural practice as artistic rather than purely organisational or technical work. Their architectural language is characterised by a strikingly strong connection with nature and a sensitive relationship with the environment.





Sketched imprecision

Saša Ostan scribbles incessantly while he speaks. Words and lines complement each other. He has made a habit of this because he has to constantly explain to all kinds of people – co-workers, students, clients, construction workers, community representatives – what their projects are about. “You inevitably have to breathe the soul of the project into the craftsmen.” At their office, they work a lot with 3D visualisations but are always careful not to lose sight of the real scale and context. Ostan himself works rather classically with his hand and a pencil, “it’s how we analyse the surroundings, the terrain”. What is most important, however, is that the sketches allow and even demand imprecision during the design process. Instead of thinking and answering everything precisely from the first moment onward, the architects proceed step by step, scale jump by scale jump in their projects. “Scale is just a shell. It depends on what you make of it,” Ostan explains their attitude.

“

*You inevitably have to breathe
the soul of the project into the
craftsmen.*

”



With water and frogs

He notes many details about the history and the development of the area in the sketches for his projects. Not far from Ig, for example, three rivers flow together. 5000 before Christ, there was an enormous lake here that became smaller and smaller over the course of 2000 years. The pile dwellings the museum in Ig is dedicated to traveled along with the shore, changing their positions. Today, people believe they know all of this. "But some have been mistaken," says Saša Ostan with a wink. The *Ljubljansko Barje*, the Ljubljana Marsh, continues to sink 0,5 mm every year. No matter whether new building or old, a wooden construction or a concrete one, the marsh will win in the end. But in Ig, no one is afraid of disappearing. Especially since a waterproof roof and high rubber boots are the best way to cope with water and frogs in the marsh.





Blaž Kovič

From roof to toe

With a bit of skill, few words and the right offer despite a coronavirus crisis atmosphere, **Blaž Kovič** and his two employees completed the roofing, roof truss and parts of the interior of the Interpretacijski Center in Ig within only three months. The visitor centre is a little less than 30 km away from Kresnice, the town where Kovič has his tinsmith's workshop – a perfect location right in his catchment area not far from Mount Triglav.

Blaž Kovič points at the roof in Ig and says: “A simple roof.” He grins, adjusts his baseball cap and starts to explain why they still faced a challenge or two. In the end, he was glad that PREFEA stood by him at the construction site. The geometry of the roof surface not only had to be feasible with the material, it also needed to be discussed in close consultation with the architects. Blaž Kovič grins again. “Things went back and forth a bit until we agreed that the continuous, straight roof ridge should be the main reference for laying the trays.” If you take a closer look, you can see that the roof form is more complex than it seems, as the ridge and eaves are not parallel to each other. In addition, neither roof overhangs on the front sides nor a roof overhang on the show sides were to be formed.

What you cannot see is that the roof was originally going to be made of wooden slats, just like the façades. If it had not been for the mayor of the town of Ig, that

might have happened. But he was clearly in favour of the aluminium roof. “The best decision,” says Kovič today. Since his company also took on the commissions for the roof truss and the interior wall cladding made of birch multi-layer panels, he practically accompanied the building from head to toe, or rather: from roof to interior fittings.

There is that grin again. Kovič explains that to him, the roof is more important than the building's foundation: “It's the finish and the most important weather protection. You should do a really good job right from the beginning. It's either one hundred percent waterproof or not at all.” Kovič only attended the training courses at PREFEA Slovenia last year, and Ig was his first building site with that specific material and in that dimension. He has been working with the products more often ever since. In Slovenia, there are generally not many tinsmiths anymore that you can hire for larger construction sites. According to Kovič, “even well-trained specialists for construction sites have become difficult to find”. Yet, there is an extreme demand for aluminium for roofs and façades at the moment – so it would be a perfect time to pursue a crisis-proof profession or to get to know the material better. Blaž Kovič adjusts his baseball cap with the company logo again. You can buy it, by the way – but you cannot buy his grin.





THE ROCK Radisson RED Vienna

Country: Austria

Object, location: hotel, Vienna

Category: new construction

Architecture: INNOCAD architecture, Graz

Installer: Klaus Zidek GmbH

Roof type: rhomboid roof tile 44 × 44

Roof colour: P.10 pure white

Façade type: rhomboid façade tile 44 × 44

Façade colour: P.10 pure white

● **Object-related individual solution**



Oliver Kupfner

»We call it additive planning.«

179 rooms on Vienna's Danube Canal, 8500 m² of gross floor area, a sky bar on a platform, a hundred thousand construction site photos and 9000 rhomboid tiles: A hotel is not a trifling matter and **INNOCAD architecture** is no ordinary office. Early on, the Austrian architects began to understand themselves as a company on a market that does not block them but unleashes their creativity. For more than 20 years, they have been successful with powerful, sometimes radical architecture.



The company

Fashion, branding, product, identity, corporate and so on ... The architectural office *INNOCAD architecture* from Graz has never had any problems with the terms of the new economy and already formulated early on that it understands itself as a company and considers the market as creative potential. The team works in a building in the centre of Graz that was transformed in 2005. They caused quite a stir at the time with their in-fill development and a hybrid-functional programme that reactivated parts of an existing structure. As a company centre, residential address and creative workshop, the place can essentially be understood as the statement of a functional and spatial sustainability. It is both the nucleus and a manifest embodiment of the *INNOCAD* system. Martin Lesjak, one of the founders, is the creative motor behind the company and celebrates a multi-track design strategy. For the realisation of their more complex and in the meantime also international projects, they have built partners that also master the craftsmanship and management of construction sites. Oliver Kupfner, for instance, has been responsible for large building projects for years, including the hotel THE ROCK Radisson RED Vienna.

Forming – form development

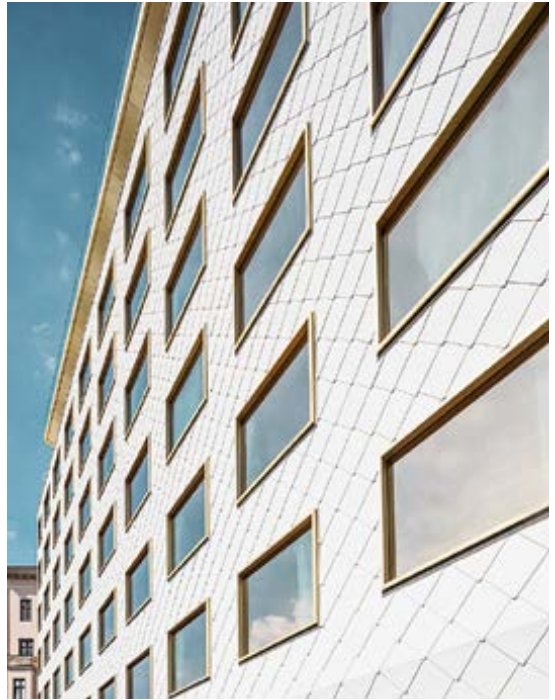
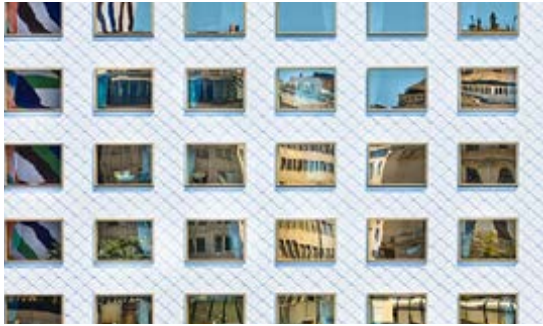
The specifications in the development plan and the Viennese building regulations offered relatively little leeway, which *INNOCAD architecture* tried to exploit with the building geometry as far as possible. To the investor, it was important to get as much usable area out of the plot as possible. Oliver Kupfner affirms that the design also pursues architectural qualities that decisively contributed to the building permit from the City of Vienna. Until then, the property had lain fallow for a long time and the constraints of building regulations made the building site complicated. The City of Vienna rejected design studies focused on creating a high-rise as an urban landmark at the site on the Danube Canal. Therefore, the building volume remained within the framework of the development plan as a classic block perimeter development and they decided to achieve the necessary attention at this prominent location through the design and façade. For the architecture, the challenge arose to designate and design surface scopes and spatial capacities in a particularly consistent manner. With building class IV, a maximum approved eaves height of 16,27 metres towards one street and 21 metres towards the other one and several other site-specific specifications, the architects formed a rather mon-

olithic and sharp-edged building cubature. As they saved building volume in some places, the idea of a separate bar on the roof could be realised. The number and size of the rooms were optimised by adding depth to the façade with usable window reveals.

Less drawing, less wrong building

Mr. Kupfner is a little more restrained when it comes to the subject of details. Not because they are not excellent, but because many of the detailed solutions were further developed and specialised with the façade builder on site. Their prototypical character shaped *INNOCAD architecture*'s way of working, as the architecture itself is site-specific and hardly standardised. What was also a factor was the quite complex roof-scape geometry, final decisions regarding its execution could only be discussed and made with the craftsmen on site. For instance, the façade's rhomboid tiles were worked across the outer corner of the building without creating pocket profiles that form the finish. This is how the monolithic appearance of the building, which is essential for the overall concept, was achieved. The 44×44 rhomboid tiles by PREFEA made it possible.





In the sidelight

“It’s fascinating how the patina shows in the sidelight,” Mr. Kupfner explains. Despite aluminium and prefabrication, he speaks of a soft façade envelope that contrasts with the hard window grid. In addition, the mirror glazing of the more than 100 windows brings the movement of the city and the sky into the façade. The building and the city thus enter a vivid dialogue.

From exterior to interior to accessories

In the case of THE ROCK Radisson RED, the architects’ services amount to no less than master planning and urban design, the exterior and interior architecture, the space design aspects of the interior architecture and light design – general planning and interior as a whole. The levels, forms and materials the designers work with at various scales intertwine. **INNOCAD architecture** has been developing its expertise in designing contemporary work environments ever since a commission for the Vienna headquarters of Microsoft – new museum spaces, exhibitions, furniture and lamps are created together with the spin-off 13&9 Design. Carpets, acoustic elements, ceiling lights and jewelry inspired by architecture are created on par with buildings. In the past, such a design approach used to be called Bauhaus or omnipotent. But the architects prefer to describe it as New Holism. In other words: The will to design goes from the roof to the façade and the room décor, and to the shower and houseplants. Whether the cocktail glasses in the sky bar were also ...? Even if this is not the case, a generalist aspiration is visibly inscribed in the Viennese hotel project.

Hands-on

Nevertheless, there is no cramped perfectionism in the planning processes at **INNOCAD architecture**. This does not mean that they deal with things carelessly, but quite the contrary, that they act in a very focused and efficient manner in the respective process. “We call it additive planning,” is how Kupfner describes this mentality, which underlies the buildings by **INNOCAD architecture**. An impartiality in design can be found in the Grazers’ architecture, with which they apparently set dynamics free, even right at the construction site and in building negotiations. Kupfner tells us that he himself is responsible for putting projects on the ground. In a dialogue with Martin Lesjak as the creative brain, their architecture has made it to the Czech Republic, Hungary, Romania, Italy and Saudi Arabia, among other countries. Not to forget that as the originators of the designs and companions of the building

processes, they are the only ones who have a resilient idea of the result right from the beginning. For this reason, Oliver Kupfner pleads for “more time in planning” per se. Not in the sense of a bureaucratic or hedging planning, but in the sense of an agile planning that also honors corrections to achieve excellent architectural solutions. *They work with their brains ... and act with their hearts!*





Klaus Zidek

“Unfortunately, you can’t see ...”

Klaus Zidek has been running a large family business in Straden in southern Styria, Austria, for years. Despite challenges and change, he is convinced of the future viability of his craft.

“There is a trend toward aluminium large-format panels,” is Klaus Zidek’s first sentence. He is direct and speaks briskly, is friendly and determined. He is leaning in front of a wall with large PREFABOND samples at his office in Straden in southern Styria. Several 44 × 44 rhomboid tiles are mounted on another wall. In Vienna, in the project THE ROCK Radisson RED Vienna he worked on together with INNOCAD, this size was used in pure white. “Not everything can be solved equally well with every material,” says Zidek. He claims that it is an important expertise of roofers and façade builders to consult with architects about format and material.

Klaus Zidek estimates that the proportions in the executed solution for the Vienna hotel project are about 60% to 40%, tinsmith to architect. They were in contact with the architects relatively early on for first planning ideas. There had been no standard details for the façade with its different transitions into the strongly varying incline of the roofscape. “Those are the moments of a good tinsmith! Unfortunately, you can’t see everything that was made by hand here.” Many concealed drainage systems, intersections and window

connections needed to be tackled on the large façade right by Vienna’s Danube Canal. Since the company offered to construct the façade as well, they were also responsible for the substructure and its many special details.

In the project, more than 9000 rhomboid tiles were laid on the façade facing the street, the roof and the courtyard façade – the last one under applause together with architect Oliver Kupfner. They had carried out the roofing in two parts from March to December 2021. As the project was to receive a continuous skin – a rhomboid pattern that runs across both the façade and the roof –, the only option was to work from one corner in two directions. The architect and tinsmith fought for the aluminium façade together, as the client almost went for a plaster façade for time and money reasons. In the end, the noble appearance also convinced the hotel operator.

Zidek’s workshop is on the outskirts of a small village in southern Styria. Today, he has 70 employees, among them five master tinsmiths. He tells us that there are always two levels on construction sites: the practical component and the economic one. Both of them have to work. Challenges at the practical level ensure that employees stay, that they feel challenged and valued, says Zidek. In Vienna, where they were able to compensate for the lack of storage area in the narrow streets and on the relatively small building plot through good planning, they mastered even the biggest problems.



Furthermore, industrial climbers were hired for the extreme roof inclinations of up to 80°. With a drainage slope of around 50°, additional thought had to be given to how the pressure of the flowing water should be dealt with. Retaining elements and concealed gutters made of composite sheeting ultimately slow down the flow of water. On this part of the building, it was only possible to work without scaffolding. “So if you think about it,” says Zidek, “my craft really is a great job!”

Klaus Zidek raves about the optimal internal coordination among the executing companies and with the architects in the Viennese project. “The luck of the trade?” On the construction site, most of the work is still done by hand. Until now, heavy machinery, CNC milling machines and robots have only been used at the workshop in his trade. That could change, of course, right? “Certainly not,” Zidek is certain.







In dialogue with diversity

Like every year, the genesis of the PREFARENZEN book begins with a special dialogue in Grafenegg. In a varied, collegial process, the PREFARENZEN team and a group of experts selected the most convincing twelve projects. Prior to this, architects and object consultants from all PREFA countries had announced more than 200 submissions via the PREFARENZEN online platform.

With this current selection, we are proud to present an interesting mix of buildings in 2023. The book shows an architectural diversity at a high level: from a museum to a single-family house, a kindergarten, a school, a gymnasium up to a filling station.

If you are also interested in having your projects documented professionally in the next PREFARENZEN book, then take advantage of the opportunity to submit them via our online portal.

Your PREFARENZEN team

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*For reasons of legibility, no gender-specific terms are used.
Any personal references that are only in the masculine form refer to men and women equally.*



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