

# 10 Inspiring AEC Design Projects That Use **MICROSTATION®**



**Bentley®**



# Architects and interior designers around the world trust MicroStation

They trust MicroStation to produce high-quality drawings and 3D models for their architecture, engineering, and construction (AEC) projects. Selected from the 2023 *Year in Infrastructure* and *Going Digital Awards* event, this showcase spotlights unique customer projects that are using MicroStation to design and build creative and functional spaces across the globe.

- ◆ Hafencity Dresden
- ◆ Arte S
- ◆ Bespoke Kitchen and Living Area
- ◆ M/Y Aurelia 29
- ◆ Bar Restaurant Piero Della Francesca
- ◆ Rostagno Funeral Home
- ◆ Villa Nest
- ◆ Project PLATEAU
- ◆ Vertical Work Campus
- ◆ Re Sole





# Hafencity Dresden

IMMOGRAPH GMBH, SAXONY, GERMANY

Hafencity Dresden is an urban transformation project to turn a dilapidated area into an attractive district that features a redesigned harbor, dining areas, a promenade, and a total of 18 new buildings for commercial and residential use. Given the large project scale and various software used by the planning and engineering teams, compounded by a tight schedule, Immograph needed interoperable construction visualization technology to integrate the multisourced, voluminous data and provide a high-quality 3D representation demonstrating the interaction among the various new infrastructure.

They selected MicroStation to process the immense amount of data into accurate 3D models. The software's modular and hierarchal modeling structure allowed images and models to be conveniently linked and simplified change management, reducing the time it takes to make changes by 20%. Using Bentley's application significantly improved rendering and reduced file loading times by 40%. Through accurate visualization, they optimized planning and enhanced decision-making, shortening approval processes.

*"Bentley's MicroStation enabled us to adhere to this project's tight schedule for coordination and presentations. The unique ability to structure models hierarchically to be able to carry out and present change processes clearly and concisely was especially helpful."*

—Gerd Geisler, Managing Director, Hafencity Dresden



Images courtesy of Immograph GmbH



# Arte S

## SPARK ARCHITECTS, GEORGE TOWN, PENANG, MALAYSIA

Arte S is a residential development located near the city of George Town in Penang, Malaysia. Spark Architects was commissioned to design the building and its landscape. The MYR 250 million project consists of two condominium towers containing 460 residential units: the taller tower climbing 50 stories and reaching 180 meters, and the shorter tower rising 32 stories. Together, the buildings comprise the tallest twin tower development on the island. The design includes a complex curvilinear, layered geometry of the balcony, terraces, and pools.

Spark used MicroStation for 2D and 3D modeling to produce images, models, and documentation throughout project stages to completion. The flexibility of MicroStation enabled the team to generate the spiral-shaped building, while incorporating a structural form to naturally reduce heat gain within the building by deflecting sunlight. With column-free, beam-free apartments and a car park shrouded in planted perimeter gardens, the project represents how architectural form can be inspired by the surrounding topography.

*"The project represents how the architectural form can be inspired by the surrounding topography."*

—Mengwei Xu, PR Executive, Spark Architects



Images courtesy of SPARK Architects



# Bespoke Kitchen and Living Area

LINEA EFFE ARREDAMENTI SNC, FRANKFURT AM MAIN, HESSE, GERMANY

An architectural project in Frankfurt am Main, Germany, involved designing and building a custom kitchen and living area for a private residence. The team included in-house production staff, external suppliers, and utility installers. Therefore, it required a streamlined design that was easy to understand for all parties, including the client. Faced with coordination challenges compounded by an extremely irregular home layout, integrating customized built-in appliances, and working with out-of-plumb walls, the design team needed flexible and interoperable modeling technology.

They selected MicroStation combined with third-party software to develop and present a clear 3D rendering of the design concept. Bentley's application enabled them to provide an accurate model to the client and carpenters, minimizing the number of errors and modifications during construction and saving time and raw materials. The 3D digital solution enabled the team to fully meet the client's expectations and finish the work on time.



*"3D rendering helped us progress more quickly through production and allowed us to incorporate bespoke appliances with nonstandard measurements, ensuring we met the client's highest standards."*

—Mara Minella, Administrator at Bespoke



Images courtesy of Linea Effe Arredamenti snc

# M/Y Aurelia 29

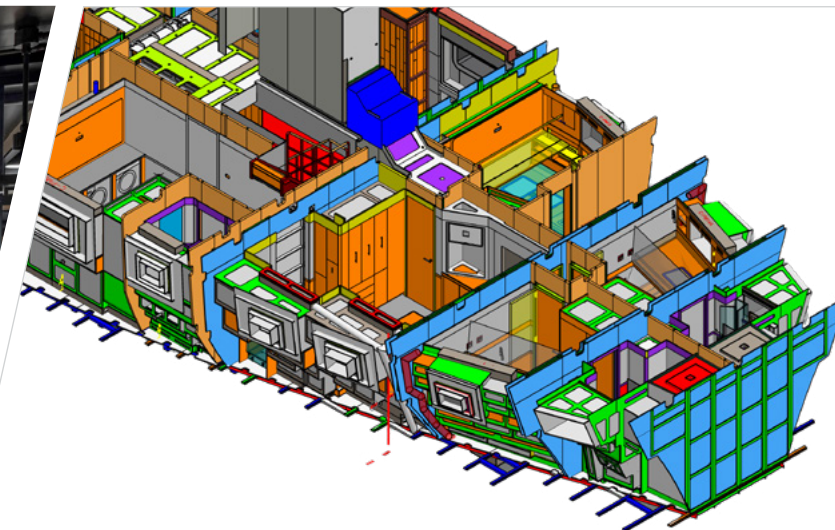
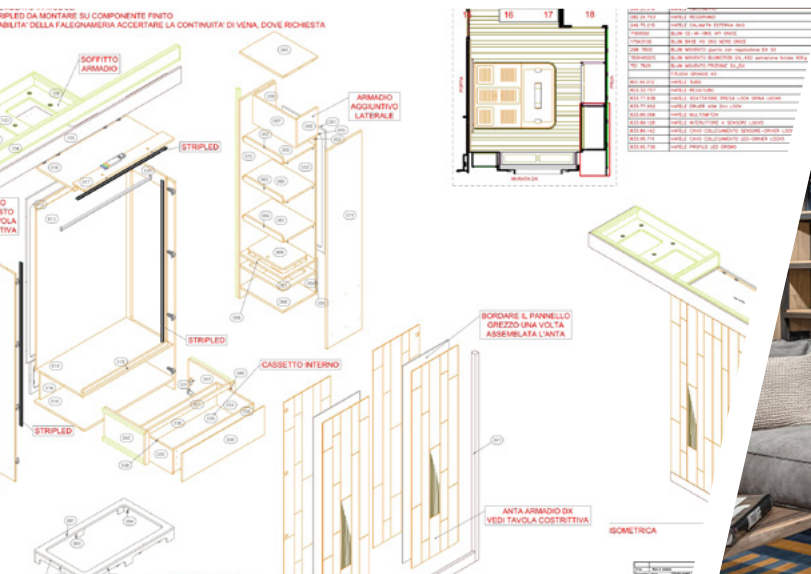
## PAD PROJECT FOR CANTIERE DELLE MARCHE, FANO, PESARO AND URBINO, ITALY

M/Y Aurelia 29 is a 39.23-meter-long yacht with a waterline length of 38.23 meters, featuring a steel and aluminum displacement hull and three decks. Pad Project was hired to perform 3D design engineering of the furnishings but faced an unconventional industrial architectural style where modernity meets vintage, uncommon in the nautical field. The boat's interior required them to design approximately 46,000 components and manage more than 300 square meters of furniture surface to be engineered. To accommodate the unique architectural guidelines, numerous modifications, and many files, they needed flexible 3D modeling technology.

They selected MicroStation to integrate 3D point clouds and create a cross-referenced information flow with third-party software, managing thousands of files without slowing down the design. MicroStation enabled the team to work simultaneously in a single environment in real time and modify the architectural elements timely and cost effectively. The digital solution decreased production times and reduced modifications by the on-board fitters by 50%.

*"The advantages were appreciated across the team, including on-board fitters who reduced modifications and remaking of parts on board by 50%, saving time and increasing profit margins."*

—Rino Zaccaro, CEO, PAD Project



Images courtesy of Pad Project for Cantiere delle Marche



# Bar Restaurant Piero Della Francesca

RENDARK, SAN SEPOLCRO, AREZZO, ITALY

This architectural project involved furnishing a bar restaurant to create a modern yet welcoming space in San Sepolcro, a well-known historical Italian market town. Rendark were the designers and faced challenges given the intricacy of the décor and individuality of its elements, compounded by managing the numerous client changes. To optimize the space and shape of the room, they realized that they needed flexible modeling technology to present a conceptual design and rendering that met the client's expectations.

They selected MicroStation to model the space, providing a flexible environment to quickly modify design elements, saving considerable time making client changes. The digital rendering that they created won them the design contract and provided an accurate 3D preview for the client to clearly indicate changes. The software's automated features eliminated time spent updating traditional design boards. Working within Bentley's comprehensive modeling platform reduced errors and delivery time, resulting in complete client satisfaction.

*"MicroStation was fundamental to the success of the project. Having a single platform to manage the entire order allowed us to speed up procedures, minimize errors and fully satisfy the customers' wishes."*

—Alessandro Martini, Owner, Rendark



Images courtesy of HPP Architekten GmbH

# Rostagno Funeral Home

STUDIO ARCHITETTO PORTA, CAMBIANO, TURIN, ITALY

Conceived when death rates rose during the early acute stages of the pandemic, the Rostagno Funeral Home project aimed to design a funeral home based on the concept of architecture for emotions. The scope of the project required regenerating a former 600-square-meter warehouse space. Transforming the industrial space into a multifunctional, scaled building, featuring public areas and private rooms with stringent hygienic regulations, presented technical challenges compounded by a tight schedule during the pandemic lockdown.

The architectural design team determined that MicroStation provided a collaborative 3D digital modeling environment capable of accommodating the multiple design changes, eliminating scaling issues, and reducing errors. Bentley's platform provided the team with full control over the project, saving time and enabling timely completion. The MicroStation renderings were irreplaceable in helping the client fully understand the design proposals. The project has been nominated for the Architecture Rivelate 2020/2021 prize awarded by the Turin Association of Architects.

*"MicroStation brings the architecture of emotions to life with digital generation and supervision."*

—Pier Luca Porta, Architetto Libero Professionista, Studio Architetto Porta



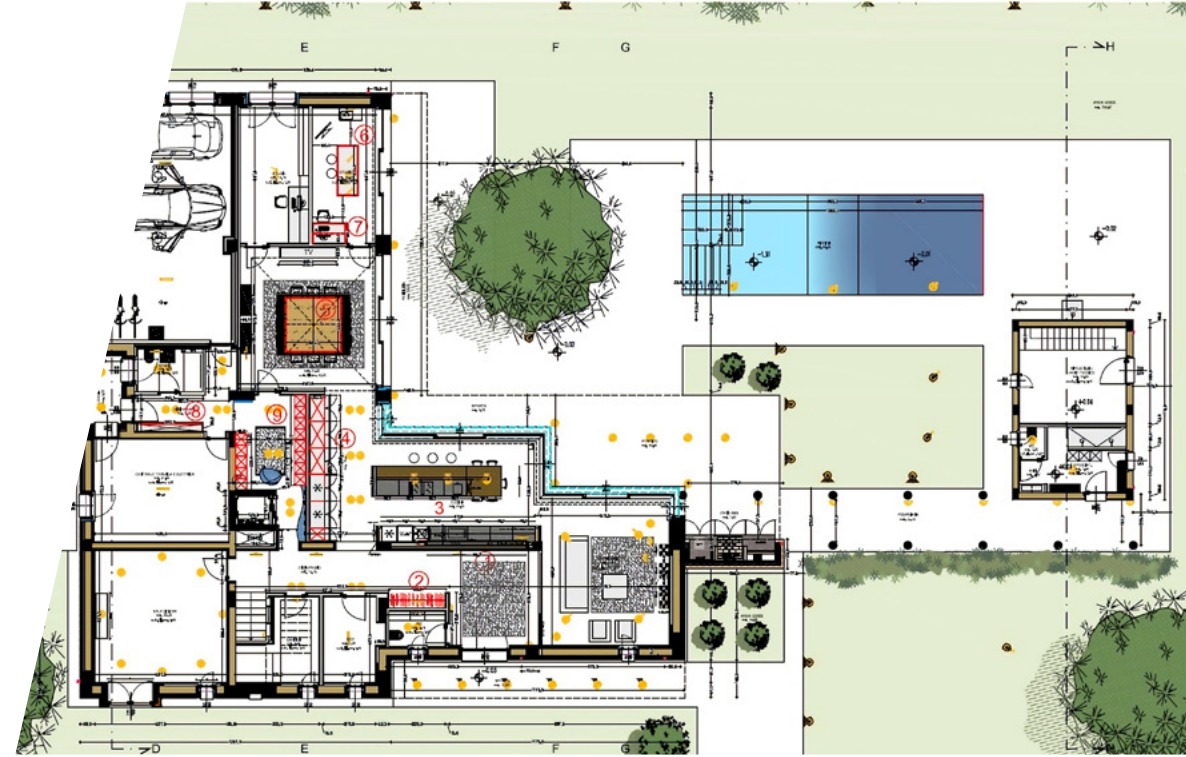


# Villa Nest

MOBILI IMBOTTITI DAL POS ANGELO SRL, ODERZO, TREVISO, ITALY

Villa Nest is a private residence in the small town of Oderzo in the Veneto region of Italy. Mobili Imbottiti Dal Pos Angelo was hired to design the interior furnishings, with special attention to the kitchen where the client wanted a moving back panel on the rear of the wall units and a retractable mechanism for the television, among other highly customized features. Faced with a tight timeline, Mobili needed to accelerate the design process to quickly move into production.

To address these challenges, Mobili decided to use MicroStation to digitally model the furnishings and design the various components quickly. Working in a digital environment enabled them to make changes in progress, accelerating the design process and minimizing errors to keep the project on schedule.



*"We call ourselves visionary artisans. With futuristic partners like MicroStation, you can achieve your goal."*

—Luca Dal Pos, Owner, Mobil Imbottiti Dal Pos Angelo



Images courtesy of Mobili Imbottiti Dal Pos Angelo S.r.l.



# Project PLATEAU

KOKUSAI KOGYO CO., LTD.  
NUMAZU, SHIZUOKA, AND KAGA, ISHIKAWA, JAPAN

Project PLATEAU aims to develop Japan's largest-scale 3D city models for 56 cities and promote their use by releasing them as open platform data for urban activities and smart-city management. Kokusai Kogyo conducted 3D modeling for the project and implemented initiatives to achieve more detail. However, they faced challenges incorporating intricate spaces and complex features, such as underground passages and traffic infrastructure into their models.

Kokusai Kogyo selected MicroStation, enabling them to create 3D models with an unprecedented level of detail for 17 cities nationwide. Bentley's software improved workflow efficiencies, reducing resource hours by approximately 50%, and provided a platform to comfortably model the enormous point cloud data. The technology delivered highly detailed 3D models, achieving simulations that are closer to reality than previously possible, promoting smart city management throughout Japan.

*"Our precise 3D city models, created using MicroStation, are state-of-the-art reality modeling technology recognized by the Ministry of Land, Infrastructure, Transport, and Tourism."*

—Tatsuya Muraki, Engineer at Kokusai Kogyo





# Vertical Work Campus – Eclipse Düsseldorf

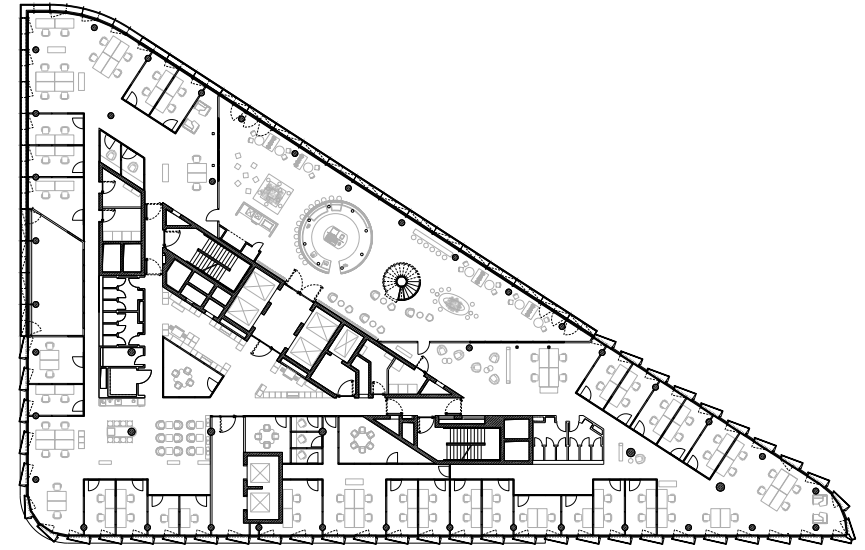
HPP ARCHITEKTEN GMBH  
DÜSSELDORF, NORTH RHINE-WESTPHALIA, GERMANY

Forming the northern gateway to Düsseldorf, the 16-story Eclipse office tower is a modern, sustainable, vertical campus based on the concept of being healthy, ecological, and future-oriented. HPP Architects is responsible for the project design and planning implementation. The team faced challenges maximizing outdoor recreation areas and managing a multidiscipline team that was using varying CAD-based platforms. They wanted to incorporate the recreation areas within the building's architectural concept and implement intelligent processes, requiring an innovative design and integrated digital approach.

To optimize space, ensure energy-saving, eco-friendly operations, and manage various disciplines and multiple CAD formats, they selected MicroStation to automate and standardize workflows among the team and keep the project on schedule. The interoperability of Bentley's application with third-party technology enabled HPP to optimize technical operations and realize their smart, sustainable building concept, saving 200 tons of carbon dioxide annually, and allowing up to 15% of the rental space to be completely carbon neutral.

*"The use of automated processes and standardized interfaces enabled the team to complete the project on schedule. The use of the HPP MicroStation standards also made a significant contribution to the success of the planning stage."*

—Rebekka Pottgüter, Head of Communications, HPP Architects



Images courtesy of HPP Architekten GmbH



# Re Sole

DAL POS ANGELO SRL, SAN BIAGIO DI CALLALTA, TREVISO, ITALY

Dal Pos Angelo had to create detailed, custom-made elements to ensure historic integrity when expanding and renovating Re Sole, a historic Italian venue, into an espresso bar. They wanted to present a made-to-measure design with custom flooring and suspended benches, all while using natural materials. They also had to design and manufacture custom-made refrigerated display cases, and they were asked to update the plan many times while the work was in progress.

MicroStation was the preferred CAD software to hasten layout arrangements and deliver designs to the production departments. Dal Pos Angelo modernized the antique flooring from the 1900s with metal molds and colored concrete castings. They used MicroStation for integrated renderings and 3D modeling, which allowed them to make final drawings faster. Dal Pos Angelo streamlined construction of the refrigeration displays by simplifying supply orders through the software.

*"We refer to ourselves as visionary creatives of a kind of art, but we can only bring our ideas to life using the right tools.  
It is why MicroStation is the right software for us."*

—Luca Dal Pos, Artigiani Visionari



Images courtesy of Mobili Imbottiti Dal Pos Angelo S.r.l.



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