



Quinto Vicentino School, Italy

GPA Architecture Firm

A School Designed with Imagination

Demanding projects require powerful software. Compliance with the strict school building regulations, and earthquake and fire safety were top of the priority list in the planning process for the Quinto Vicentino primary school in Italy. Accessibility for people of all physical abilities and low-cost energy consumption were also central requirements. To do justice to this complex project brief, the designers called on Allplan.

The construction of a primary school in Quinto Vicentino is one of the latest project implementations of the GPA architecture firm. The building has received particular acclaim both from local institutions and, most importantly, the children. GPA was founded in 1990 and today consists of two architects, an engineer and a surveyor. Most of their planning work is for private and public buildings, with a focus on kindergartens, schools, sports halls, conference centers and swimming pools. "State-of-the-art hardware and software are basic prerequisites at GPA. That's why for ten years now, we have been using Nemetschek Allplan planning and design software, including Allplan Architecture, CINEMA 4D and On-Site Photo," explains Gianluca Perottoni, who was responsible for the planning of the school.

The project in Quinto Vicentino consisted of the construction of a new building for the town primary school to be located beside the existing, free-standing sports hall. The school contains ten classrooms, five special-subject rooms and three group-work rooms. The building also has a large multi-function room that forms the heart of the school, and a school cafeteria. The complex is surrounded by a green recreational area, and a covered corridor connects the school to the adjoining sports hall.

Meeting the Challenge

The main focal points of the project were technical safety, compliance with the strict school building regulations, and earthquake and fire safety. Accessibility for people of all physical abilities was also important, as were the specific construction technology used and the need for low-cost energy consumption. To meet the challenge of these complex project requirements, the planners called on the multi-faceted functionality of Allplan. "Using Allplan for visualizations means that I can demonstrate my ideas to all the project members quickly and simply," says Gianluca Perottoni.

In order to do justice to the requirements and needs of the building client, the final design of the Quinto Vicentino school was arrived at only after several preparatory sketches and plans that incorporated the suggestions of the various parties involved in the project. These alternatives were discussed regularly with the building committee, the town council, the schools inspector and the school board of management. Ultimately, the decision was made for a modern, functional architectural approach.

"We created the concept for the school building so as to allow sufficient space for cross-subject group projects and a large play area. The pupils spend a large part of their time in this building, so it has to offer them a lot of space to develop freely and just be themselves," says Gianluca Perottoni. For this reason, surfaces consisting of simple, flowing lines and an imaginative façade with a deliberately chaotic structure are important elements of the new school complex.

The project planning team had ten members who collaborated on the design of the creative structure. One particular challenge that arose was the need to convince the town council of the advantages of a modern architectural style. The council's members initially preferred a traditional architectural approach with "Barchessa-style" components that are typical of the Venice region. Thanks to the impressive visualizations created with Allplan and CINEMA 4D, GPA ultimately succeeded in winning the client's approval for an innovative project. GPA's project concept showed a realistic model with views, plans and schedules for creating the final structure. Integrating the architecture into the environment and fulfilling the competition brief were also central considerations in the modeling process.

Optimized Work Processes with Workgroup Manager

The entire project in Quinto Vicentino was based on collaboration with all the experts involved. "Workgroup Manager enabled everyone to access the same project data, to add new information or change existing data," says Gianluca Perotoni. Thanks to this enhanced collaboration and the consistent, always up-to-date data basis, Workgroup Manager greatly speeded up the progress of the project. After completion, the plans could then be checked by the engineers and building technicians from the construction viewpoint. For this to be possible, the various parties had to be able to exchange data in various formats. "This was hassle-free to do using the 2D and 3D formats, as everyone,

including the private building client, can open and understand these formats at the click of a mouse," explains the Italian architect. "Thanks to its incredible accuracy and precision in the planning process, Allplan has become an absolutely indispensable tool for me. I also use it to train new and less experienced staff. The professional visualizations also enable me to make a favorable impression on my client long before building work starts. The views are so realistic that when you see the finished building, it's almost like a déjà-vu experience." Construction work on the school project began in 2006 and was completed at the beginning of 2008, and the total investment amounted to € 2.25 million.



Origami: Paulo Mullerinho, München

*What are the main challenges in construction planning today?*

To surprise people with the simplicity of your design, to create fundamental but harmonious lines, to keep everything in proportion and to instill a sense of softly-flowing volume – I would see these aspects as important. And of course, keeping a tight rein on costs and building solid, long-lasting structures are central issues, too.

What do you think are the future trends in the planning industry?

Unfortunately, we are currently in a very difficult economic situation. So we have to make sure that we keep energy consumption in mind right from the start and that we create projects that require a minimal level of maintenance. Therefore, we have to create architecture using innovative materials that are reusable and cost-effective.

What was your experience of collaborating with the other planners and the building client? And how did Allplan support you with the coordination process?

For several years, I have worked together with colleagues from different architectural firms located throughout Italy in planning a wide

variety of projects. The PDF format enables me to exchange project data with my planning partners at a moment's notice, and to show them the entire project clearly and in detail. This is a huge benefit in joint processes and greatly simplifies collaborative work.

What additional information does the building model give you, besides basic planning data such as plans, views and sections?

It gives us all the information we need. Besides plans, views and sections, it gives us a wide range of data on surfaces, volumes and construction costs planning for individual building components. And this information is available at each individual stage of the construction, not just at the end of the project.

How important are professional visualizations and animations for you?

As planners, we already have an overview of the project, and so visualizations serve as an extra checking function for us. For our building clients, the displays and the 3D effects – both static and in animated form – are particularly useful for helping them to get a really clear idea of the project, getting them excited about and committed to the project, and visually it is a pleasant surprise for them too!