

COMPANY

Van Wijnen

LOCATION

Baarn, The Netherlands

PRODUCT

Autodesk® Navisworks® Manage
Autodesk® BIM 360™ Field

In 50% of the time for 15% less

Van Wijnen uses BIM in the office and in the field to gain a competitive advantage

We're gaining a competitive edge from doing things better, faster, and at a lower cost. A house that once took 120 days to build now can be built in 60. This is with normal materials and a typical team.

— **Peter Hutten**
General Manager
Van Wijnen



Image courtesy of Van Wijnen

Introduction

With about 1,400 employees and 23 offices across the Netherlands, Van Wijnen provides construction services on a variety of project types, including healthcare facilities, schools, and single and multifamily residences. The company attributes its success to its commitment to working closely with clients and delivering high-quality construction for a reasonable price.

As an increasing number of its projects were being designed using a Building Information Modeling (BIM) process, Van Wijnen saw the potential for BIM in construction. BIM is a process that involves creating and using intelligent 3D models to inform and communicate project decisions. The company decided to adopt a BIM process that relied on Autodesk® Navisworks® Manage software for model-based scheduling and coordination. The successful results of BIM in the office inspired the company to expand BIM usage into the field with support from Autodesk® BIM 360™ Field software.

According to Peter Hutten, a general manager at Van Wijnen, BIM has helped the company increase the pace of construction while improving quality—and more. He says, “If you build something as a model, you can see and fix many issues before the first day of construction. Fewer problems have meant lower costs and faster construction. Taking BIM to the job site made perfect sense, especially given that our goal is to keep getting better and faster.”

The challenge

Cost is an important consideration when it comes to choosing a contractor to build a project. That's true whether the project is a residential development or a new medical center. Van Wijnen perceived that cost considerations would only increase in importance in the future, and it wanted to gain a competitive edge. With a specific goal of completing projects in half the time and for 15 percent lower costs, the company decided to commit to boosting its speed and cost-effectiveness over the long term by using BIM and lean construction practices, such as prefabrication.

Van Wijnen cuts costs and saves time by taking BIM into the field.

“Working more effectively makes us more competitive,” says Hutten. “We chose an ambitious target, and when we get there, we’ll try for 50 percent of 50 percent. BIM is a significant part of our program. We use models to understand what we and our subcontractors are going to do as early in the process as possible. The idea is to reduce errors, find ways to do things better, and plan very precisely.”

The solution

Van Wijnen began using BIM with Autodesk Navisworks Manage software. The firm’s current process begins when project architects and engineers provide their design models to Van Wijnen and the company’s subcontractors. Van Wijnen aggregates the models in Navisworks, and uses the software to help identify clashes for the design team to address. A large hospital project might involve dozens of models, and a small residential project may require just a few. No matter the project size, Van Wijnen follows a similar BIM coordination process.

As the project moves forward, Van Wijnen’s subcontractors develop detailed models of their portions of the building. The team again uses Navisworks to help spot and resolve clashes. Beyond assisting with coordination, the models let the entire construction team visualize the elements of the building in 3D—even the portions of the building assigned to another subcontractor. By linking scheduling to the model, Van Wijnen helps provide a way for subcontractors to see what they need to build and when they need to do it.

According to Harmen Bijlstra, BIM manager for Van Wijnen, “We are understanding, preparing, and improving projects. BIM lets us rely more

on faster and lower-cost lean construction techniques, like prefabrication and just-in-time delivery of material. It’s like we’ve built the whole project several times with Navisworks in advance. We’re able to fit the pieces together at the right time in the field.”

Going paperless—in the field

Inspired by the time and cost savings that Navisworks helps enable, Van Wijnen wanted to take BIM to job sites. The company began by piloting the Autodesk® BIM 360™ Field construction field management solution on a 13-home residential development. Combining mobile technology and cloud-based collaboration and reporting, BIM 360 Field provided a way for the construction management team to create checklists and more at the point of construction on Apple® iPad® mobile devices. The goal of the pilot: a paperless field office.

“The site manager on the project could refer to the building models on his iPad from almost anywhere on the job site,” says Bijlstra. “If he spotted an issue, he added it to the quality checklist. He could even take a photo. There’s a big time and clarity advantage compared to writing things down on paper and then entering information into a computer later. We get more data that we can analyze about the performance of subcontractors. We can see who does the best work the fastest.”

Clearer, faster issue resolution

Van Wijnen is currently developing a process that uses Autodesk BIM 360 Field to help speed up the post-construction maintenance issue resolution process. Building users as well as maintenance people will be able to use a mobile app to associate an issue with a specific area of a building model. The company anticipates that this will minimize the delays and miscommunication so common with a telephone and paper-based reporting process in the utilization of the building.

“Say someone reports a leak,” says Hutten. “The old way of fixing it might require a visit from the subcontractor just to see where the leak really is. In BIM 360 Field, they see the leak on the model, and the subcontractor has more advance knowledge of what the problem could be. Depending on the issue, using a model as part of the reporting process could help save days or weeks.”

We are understanding, preparing, and improving projects. BIM lets us rely more on faster and lower-cost lean construction techniques, like prefabrication and just-in-time delivery of material.

— **Harmen Bijlstra**
BIM Manager
Van Wijnen

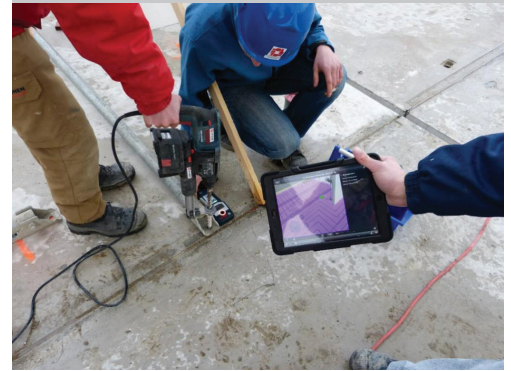


Image courtesy of Van Wijnen

The result

Since turning to BIM, Van Wijnen reports that its team is well on the way to realizing its goals. “We’re gaining a competitive edge from doing things better, faster, and at a lower cost,” says Hutten. “A house that once took 120 days to build now can be built in 60. This is with normal materials and a typical team. What’s different is BIM and lean construction. Navisworks helps us to understand and coordinate a project before it’s built. BIM 360 Field takes what we know to the job site.”

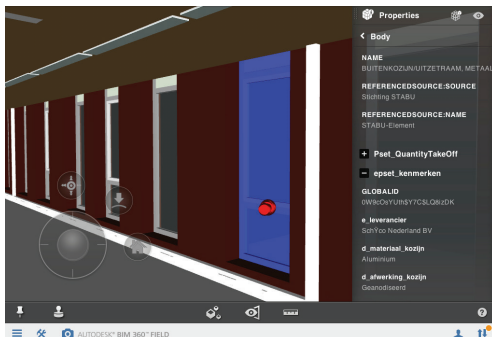


Image courtesy of Van Wijnen