



Oranjewoud Beats the Learning Curve with Autodesk Civil 3D

Major Netherlands civil engineering firm increases productivity after straightforward adoption

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Richard de Nier, Oranjewoud.

Project summary

“We were thrown in at the deep end with Autodesk Civil 3D,” says Richard de Nier at Oranjewoud, the large, Netherlands-based civil engineering consultants. “Having just invested in the new software solution, we won a series of large highways design contracts and had to learn how to use it faster than we expected.”

De Nier explains that Oranjewoud had originally intended to begin using Civil 3D gradually, namely for volume calculations. However, events took over and they were soon putting the solution’s full highways design functionality to use on projects such as the development of a complex new section of the N34 road from Gieten to Ees in the Dutch province of Drenthe.

Thankfully, this move is paying off. “One of Civil 3D’s main benefits is that it is very straightforward to learn and use,” he confirms. “To illustrate, previously we were using a competitive solution for highways design, but this had a steep learning curve for new engineers. I would say we’ve picked up Civil 3D as much as ten times faster and consequently have been able to progress the project and keep to timescales.”

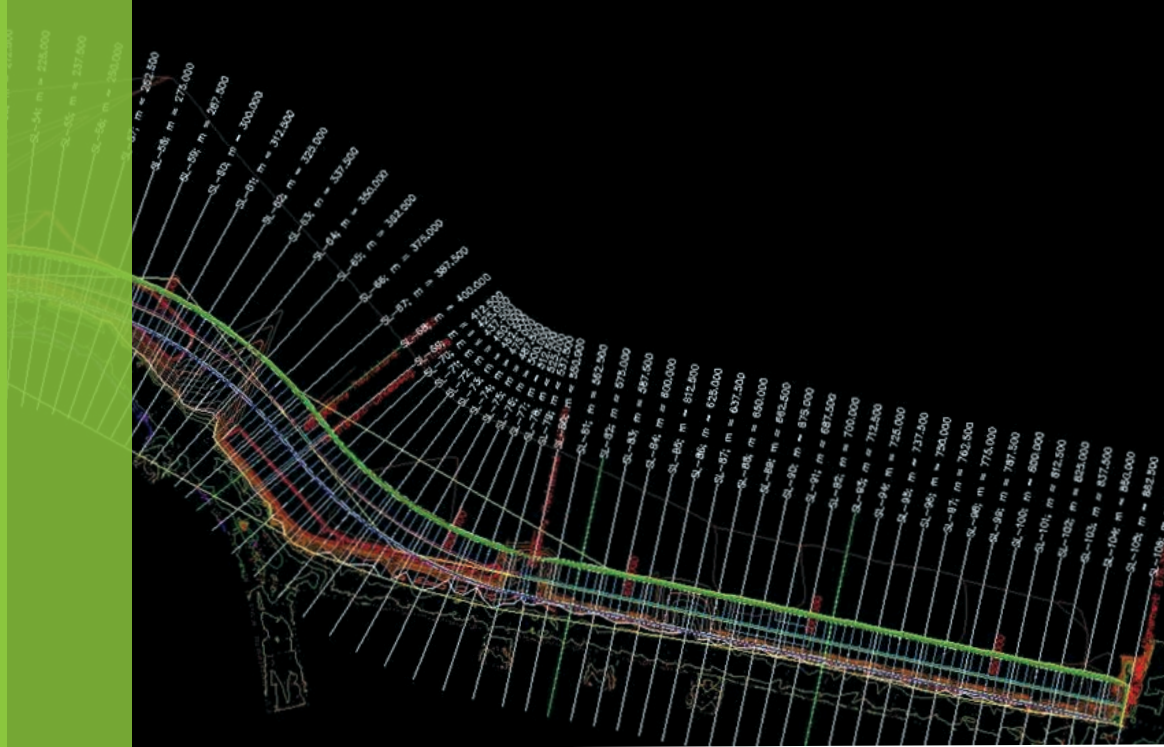
Addressing skills shortages

Oranjewoud has been a well-known name in the Netherlands for over 50 years as a supplier of high quality services over a wide reach of sectors including infrastructure, urban development, construction, nature and landscaping, environment, safety, real estate issues and sports and leisure facility development. With offices all over the country, one of its key areas of focus is the upkeep and renewal of road networks and its consultants work with Dutch municipalities giving advice on policy, traffic, environmental concerns, design and construction.

As such, Oranjewoud is an extensive user of Autodesk products including Autodesk Map and AutoCAD. It has also previously used Autodesk Land Desktop, a legacy solution, for infrastructure work, together with a competitive product for highways design.

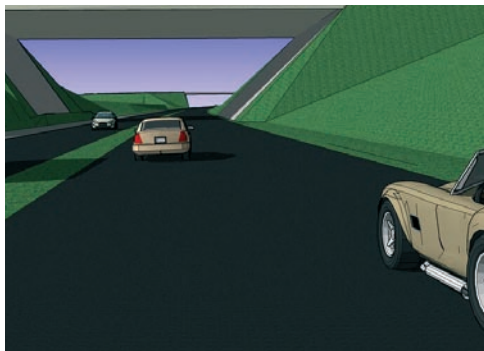
Because of provincial government cuts in road development over the past few years, engineers and draughtsmen skilled in the use of this competitive highways design software had gradually left the company. However, the directorate general of public works has recently started spending again on the road network. But Oranjewoud was left with a skills vacuum which it had to fill in order to maximise the opportunities presented by this renewed investment.

“We needed to update our software and move onto a more advanced and sophisticated solution. At the time, Autodesk Civil 3D had just been released on the market and it seemed to answer our problems.



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“While there are shortages of draughtsmen who can use the more niche software products, we knew it would be easier to find those who could use AutoCAD and that this would help them get up to speed quickly with Civil 3D,” says de Nier. The decision was made and Oranjewoud invested in 16 licences of Civil 3D, together with training and consultancy from GIS and CAD specialist and Autodesk reseller partner NedGraphics.

“The first driver for buying Civil 3D was to improve our development of slopes and profiles. We were particularly impressed by how it totally transformed the process of calculating volumes, eliminating the need for lengthy, complex work,” he says.

Civil 3D is not the only solution to calculate material volumes, but as it does so automatically, using a 3D dynamic model, it is certainly one of the fastest and most accurate. According to early adopters of the software, this feature alone can help raise productivity by a significant percentage.

The key to this major benefit is the creation of a dynamic 3D model representing the project. This creates relationships between objects so that design changes update without further intervention. In other words, a change to one part of the design (or model) propagates throughout the entire project.

However, when Oranjewoud began to win contracts for this newly released highways work, Civil 3D – and its users – were really put to the test. As de Nier explains, a current project, typical of this work, is the design of a new stretch of the N34 – and although this stretch of road is not a major highway, the project is large and far from straightforward with three interchanges, flyovers and other features.

Fortunately, Civil 3D is coming through with flying colours. “It is really much easier to learn and to use than previous software and not just for AutoCAD experts. The interface is simple and the workflow is streamlined – and because of this we can work far more productively.

“Also, its change management technology goes a long way in ensuring accuracy and eliminates time-consuming checking and manual calculations,” says de Nier.

The N34 project is now nearing completion and progress has been good. “Our engineers and draughtsmen like using it – which is proof that it has been working well,” he adds. “The learning curve has been around one tenth of what it would have been with other products on the market.”

Oranjewoud is now well-placed to win further similar work from other provinces - helped by its association with the NedGraphics team who have developed a library of sub-assemblies localised to comply with the Dutch road design standards with a complete set of presentation styles and subassemblies used by almost all the provinces,” says Theo Wiering of NedGraphics. “This has resulted in even further productivity gains for Oranjewoud.”

“We’ve now completed a list of projects using Civil 3D and the process has been surprisingly simple and straightforward,” concludes de Nier.

For more information

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