

# Case Study | Plaxis

Unique made-in-Holland knowledge - Highly secure and licensed

## The Challenge

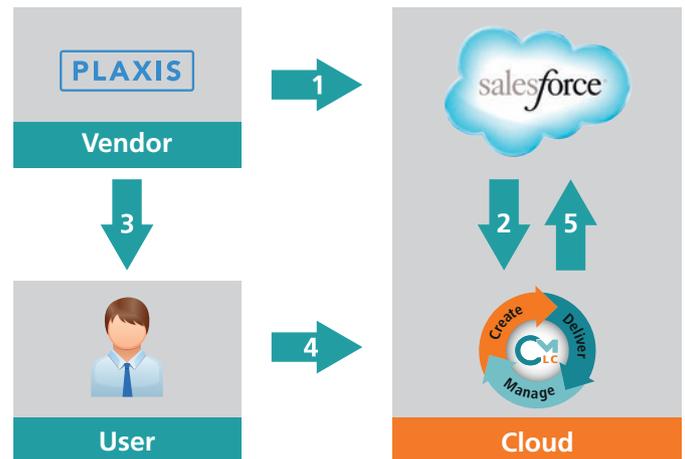
Plaxis' software represents a unique knowledge of material models and geo-mechanical characteristics. There are nevertheless illegal copies of previous versions of system still in circulation in certain countries. In Asia in particular, the firm has faced competition from local rivals offering cheaper solutions, though with less functionality.

## The Solution

The Dutch headquarters of Plaxis is well aware of what customers actually do with the vast majority of its program code. However, parties whose applications threaten to exceed the boundaries of the licensing conditions now encounter a security system, which is implemented using Wibu-Systems products, including its Protection Suite, CodeMeter API and CodeMeter dongle.

## The Success

One can only earn income on digitally recorded knowledge if distribution of its content has been cast in a financially exploitable model. Digital security is one thing, but appealing to the content users' sense of responsibility is a different matter altogether. Safely concealed behind a customer-friendly solution for license management, where the integration of CodeMeter License Central with Salesforce offers a consistent and streamlined user interface, Plaxis' complex geotechnical analysis software is capable of executing globally appealing infrastructure projects.



## Erwin Beernink, Marketing & Sales Manager

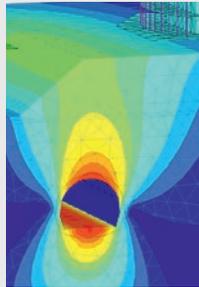
We do our utmost to persuade our users to purchase licensed versions, so that they too can benefit from the very latest functionality. However, digital IP is at great risk. Since we opted to secure the software using Wibu-Systems technology, we have seen very little sign of software piracy. Furthermore, our marketing operations are closely geared to creating a "sense of community", largely by organizing user meetings in the various regions.



## The Company

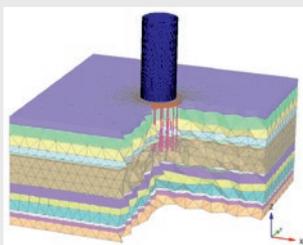
Founded over twenty years ago as a spin-off of Delft University of Technology, Netherlands, Plaxis is a firm which has succeeded creating software which comprises a combination of theoretical knowledge of geophysics and finite element calculation formulas. This provided geotechnical professionals with the tools required to examine the behavior of strata, carry out calculations and develop appropriate models. While the Delft-based firm operates in a niche market, it has accumulated a steadily expanding customer base in the mining, oil and gas industries and in the field of offshore power generation. Furthermore, its knowledge and software are utilized on large-scale infrastructure projects, such as the recent extensions of both the Suez and Panama canals and the construction of tunnels linking Hong Kong and the Chinese mainland. Chinese mainland.

The majority of children view sand as the ideal medium in which to create their own playing environment. Governed solely by the dimensions of the sand pit of the space available to play on the beach, they proceed to build castles, bridges, roads and tunnels. The process of mixing sand and water provides additional stimulus to their creativity. And countless Dutch citizens make their first playful acquaintance with the properties of the land on which they live by getting up to their elbows in the rich soil structure created by this very process. The foundations for many a successful career were also laid. Roadbuilders, hydraulic engineers, dredgers and other experts in the field of civil engineering have gained the Netherlands worldwide fame when it comes to the drainage and reclamation of wetland areas, the erection of dykes and bridges and the construction of harbors, waterways and roads; in short, the creation of custom-built infrastructure. Such feats would never have been accomplished, however, were it not for the elementary knowledge of the geophysical characteristics (the behavior of soil both on land and below the sea bed) which serves as the basis for scientifically evaluated models.



### The analysis and modelling of strata for construction projects

Regardless of whether the surface to be built upon comprises soft soil, solid rock or the seabed: the Plaxis modules enable one to produce both project designs and the underpinning calculations. Countless mineshafts, tunnels, dyke bodies, roads, quay walls, bridge spans, building foundations and offshore structures for the oil and gas exploration, including their power generation systems thank their existence to this software developed in Delft, Netherlands.



Given its Dutch background, Plaxis' clientele were initially largely based in areas with soft soil, such as sand and clay. And it is therefore the undisputed market leader in this segment. Its market potential has nevertheless increased considerably, thanks to the addition of material models for solid

rocky soils and the sea bed to its range. The more internationally oriented civil construction companies increasingly opt for Plaxis; even in China, where price is often considered a more vital issue than quality.

### Rights of use firmly embedded in a watertight security system

While Plaxis does indeed do a great deal in the field of knowledge transfer worldwide, its main aim as a commercial organization is to capitalize on its intellectual resources.

Plaxis' product range comprises a basic package and a series of functional extensions. Companies that opt for Plaxis VIP acquire the right to use the very latest versions.

The integration of Wibu-Systems' CodeMeter Protection Suite enables the encryption of a complete set of program code and integrated license registration (CodeMeter License Central). Its use in combination with the CodeMeter API enables specific functionality allocation. The encryption extends to the level of the executable code, so as to prevent reverse engineering (tracing code back to function steps). The Plaxis software can only be started if the user is authorized by means of a key, or rather the CodeMeter dongle, which has to be inserted in one of the USB ports on the Windows computer running Plaxis. Customers who wish to have several GEO experts use the software simultaneously are allocated a key which permits concurrent users by means a network or a virtual server.

All dongles are activated at the Plaxis office in Delft, by means of a process related to the license rights. Michael Andriessen, who bears responsibility for the firm's sales administration, explains that **CodeMeter License Central has an API connection to Salesforce**, the CRM system which contains all of Plaxis' customers. 'Existing customers who require greater functionality and therefore wish to extend their rights, simply submit a specific request by email, whereupon we return an applicable quotation. Once payment has been effected, a ticket is generated which the customer downloads from Plaxis Connect. The ticket contains a file comprising the update information for the customer's Wibu-Systems dongle(s). The dongle(s) will then permit use of the additional functionality that the customer has purchased.'

## About Wibu-Systems:

WIBU-SYSTEMS AG (WIBU®), a privately held company founded by Oliver Winzenried and Marcellus Buchheit in 1989, is an innovative security technology leader in the global software licensing market. Wibu-Systems' comprehensive and award winning solutions offer

unique and internationally patented processes for protection, licensing and security of digital assets and know-how to software publishers and industrial manufacturers who distribute their applications through PC-, embedded-, mobile- and cloud-based models.

