

Sítios & Formas, Coimbra, Portugal

Customer Success Story

Autodesk Infrastructure Solutions
Autodesk® Civil 3D®



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Flavio Branco,
Civil Engineer,
Sítios & Formas

Fast Engineers Succeed with Autodesk

Faster and smarter, civil engineering firms use software to succeed

Project Summary

Located along the wide Rio Mondego, the city of Coimbra is one of Portugal's greatest treasures and boasts one of the world's oldest extant universities. King Dinis founded the University of Coimbra in 1290 and the institution still overlooks the thriving center of Portugal today. Nestled at the foot of the University along the river's bank, a young, successful and growing civil engineering firm, Sítios & Formas, is helping to direct and foster economic growth while preserving the region's rich heritage. Sítios & Formas (“Places and Shapes”) has just completed two site development projects that included landscape, road, traffic circle, and infrastructure design. By using Autodesk Civil 3D, Sítios and Formas is:

- Now completing design changes in hours, not weeks
- Preserving the city's historic and treasured landmarks
- More easily integrating civil engineering with site development, urban planning and more
- Growing faster than its competitors

The Challenge

Existing and inflexible software limits intelligent design

In addition to civil engineering, Sítios & Formas offers a wide range of urban planning, architectural design, and environmental consulting services. Apart from its dynamic and nimble team of professionals, one of the firm's greatest strengths is its level of integration it offers for every stage of a project.

Sítios & Formas staff develop smart and refined urban plans for the nation's cities, including Coimbra. They later draw from this work to support subsequent design, environmental, and GIS tasks.

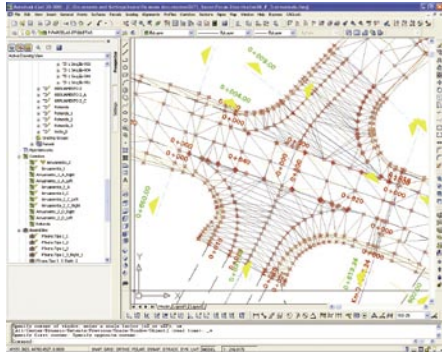
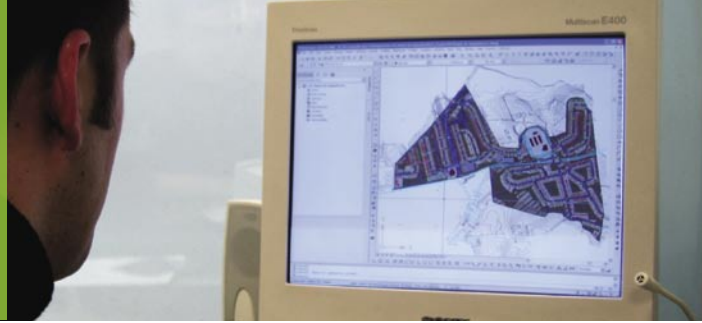
To achieve the successful multi-task integration that is the company's hallmark, the firm relies on a team of very bright and technically savvy engineers that know how to connect the plans, designs, maps, and models. Yet, even this fast and accomplished team sometimes struggled to integrate all the moving parts that form smart site development and urban planning. The firm's customers commonly requested small changes, as they do everywhere, and the team worked hard to integrate changes throughout their design and, indeed, their entire development project. These changes slowed progress and reduced the profitability of each project. Although already profitable and growing, the firm's management discovered a new technology to help the firm increase its already impressive success.

“We employ state-of-the-art technology,” says José Oliveira, the firm's founder and CEO. “Our success derives from the dedicated and intelligent people on our team that use that technology, but both are critical. Without the best people or technology, we would not achieve our growth. And we have been using Autodesk Civil 3D since the spring of 2005 and, in the capable, trained hands of our employees, it delivers a fantastic return on investment.”

Autodesk®

Weitere Infos und Preise:

<http://www.weyer-edv.de/modules.php?name=Newsx&file=article&sid=218&t=Autodesk-Civil-3D-2007>



The dynamic nature of Autodesk Civil 3D helps engineers develop multiple design options quickly when a customer requests changes.



“For me, Civil 3D’s biggest advantage is to connect the database with the design,” explains Carina Pais, an urban planner and GIS analyst with Sítios & Formas. “For large projects, this represents an important time savings.”

The Solution

Civil 3D Promises Speed

For Sítios & Formas, when work stops on one project, another starts. The team must adapt quickly for new tasks. When switching projects and joining a project underway, even the best engineer takes time to acclimate. “I must move quickly from job to job, task to task. I want a single design and drafting tool that supports roads, roundabouts, parcels, pipes, material volumes - everything,” notes Bruno Alves, a civil engineer. “And older software requires tedious, manual edits. Joining a project underway, I was preoccupied with checking the numbers and ensuring that I wasn’t introducing errors. I needed an automated tool that removed the tedious, error-prone tasks. I joined this profession to be a creative design engineer, not a quality control robot.”

In early 2005, after one week of training, the team was ready to work on real projects. “We had two important projects,” remembers Oliveira. “A residential development with everything: roads, infrastructure, and landscaping. And an industrial zone near Coimbra. Both projects required grading and volume calculations, parcel design, road design, hydrology, and more. We needed a tool that connected easily to our other architectural and GIS software.”

Autodesk Civil 3D: Promises Kept

The promise of the software was quickly established and the engineers warmed to the speed and versatility at their disposal. “The utility of Civil 3D made this design process much faster,” explains Flavio Branco, another civil engineer. “We must adhere to specific restrictions within the urban plan for Miranda do Corvo, a city near Coimbra. With Civil 3D we constructed terrain models and extracted profiles. We compared more alternatives than before for earth moving and hydrology networks. Because of this, our work was more thorough, not just faster. You usually lose thoroughness with speed, but not with Civil 3D.”

Bruno Alves echoes these feelings. “With Civil 3D, we create the three dimensional models. Later, we can create and analyze several scenarios,” Alves says. “We must achieve the optimal balance with earth moving, for example, to minimize wasted material. With Civil 3D we can calculate volumes easily and precisely. We want to avoid trucking large volumes of earth in or out. That’s expensive and unsound environmental policy. This new approach helps us review multiple alternatives and constantly make changes. Normally, the changes slow the project, but Civil 3D automates that task. It made us faster and helped us to consider more designs. The final product was much better, much smarter than before.”

The Result

Changes in Hours, Not Weeks

The cycle starts with saved minutes. Saved minutes multiplied over hours, then days, weeks. Faster changes offer more alternative designs. More alternatives mean smarter choices and better work. Better work brings bigger projects and more customers. More customers means Sítios & Formas must work smarter and faster. The cycle continues, but it all began with those almost immeasurable minutes. Without those saved minutes, other companies fail.

“This software is changing the nature of civil design,” Alves remarks, standing over the large plot of an urban redevelopment project. “If we wanted to make a change, with Civil 3D we could do this in a few hours. Before, this task could take more than one month. Hard to believe, but true. It required training and some work up front, but the payoff is incredible. And we’ve only had the software less than one year. The potential for growth is exciting.”

For more information

To learn more about how Autodesk Civil 3D accelerates the pace of projects, visit us on the web at www.autodesk.com/civil3D