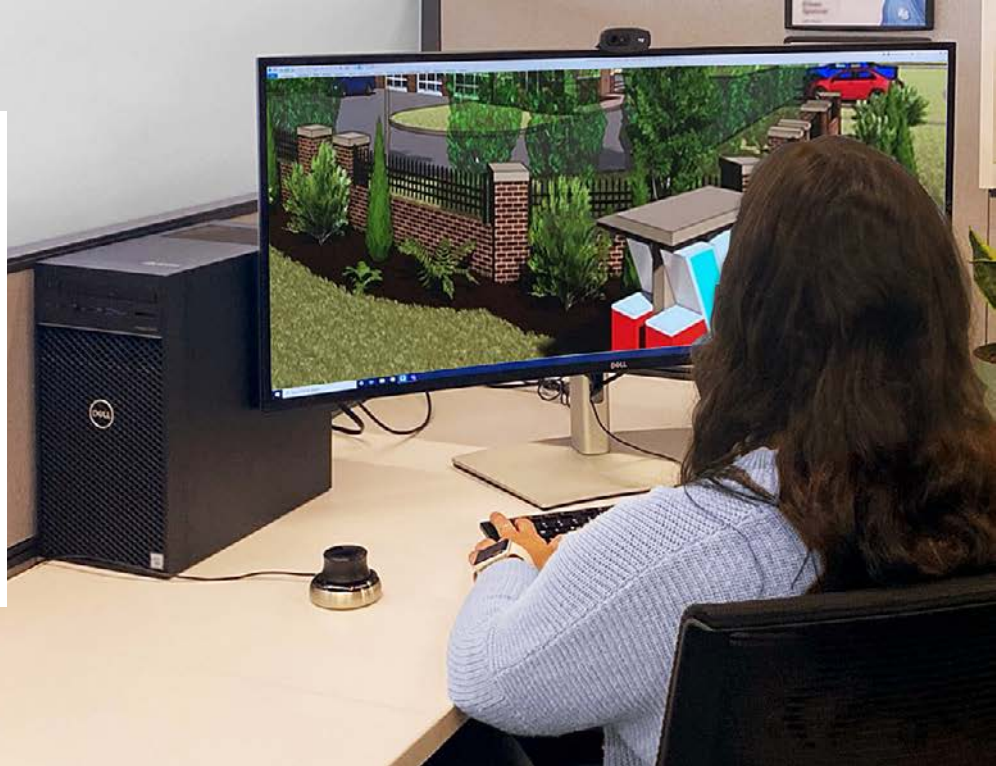


CESO powers its client-first vision with AMD and Dell Technologies

Dell Precision 3640 Tower workstation with an AMD Radeon™ PRO W5700 GPU bring architecture and engineering visualization to life across multiple demanding applications.



CUSTOMER



INDUSTRY

Architecture and Engineering Services

CHALLENGES

Multitask in graphics-intensive, deadline-critical workflows

SOLUTION

A new shared resource built around Dell 3640 Tower workstation with an AMD Radeon PRO W5700 GPU

RESULTS

Supports increased live engagement with clients; execute more high-quality work in the available time

AMD TECHNOLOGY AT A GLANCE

AMD Radeon PRO W5700 GPU

SOFTWARE APPLICATIONS

Adobe® Creative Cloud®
Autodesk® 3ds Max®
Autodesk® AutoCAD®
Autodesk® BIM 360®
Autodesk® Civil 3D®
Autodesk® Construction Cloud™
Autodesk® InfraWorks®
Autodesk® ReCap™
Autodesk® Revit®
Bluebeam® Revu®
Enscape™
SketchUp®

TECHNOLOGY PARTNER



From its start in 1987 as a single office in Dayton, Ohio, CESO has grown into an architectural and engineering services powerhouse with a nationwide presence spread across ten regional offices. More than 275 staff provide a wide range of services to a diverse clientele that spans the retail, distribution, hospitality, residential, mixed-use, healthcare, and energy markets.

Director of Architecture, Bernie Lappe, attributes the popularity of CESO and the organic growth in its range of services to “our very service-oriented approach. We don’t try to impose our architectural vision. Instead, we find purpose in serving others. So, at every step of the way, we add services, offices, and staff when and where they meet the needs of our clients.”

That client-first perspective extends to technology acquisitions, as well. “Delivering exceptional service to clients requires having the right technology. So as projects get larger, more sophisticated, and timetables faster, we’re going to make sure that we upgrade our technology to meet the needs and the demands.”

A new solution for challenging times

Among CESO’s most recent additions is a Dell Precision 3640 Tower workstation featuring an AMD Radeon™ PRO W5700 GPU, provided as a complimentary system from Dell Technologies and AMD. “With its AMD Radeon graphics, we decided to set up the Dell system as a dedicated workstation to handle the larger graphic-intensive programs and enable our staff members to multitask efficiently across multiple demanding applications. Then, we loaded all the programs that anybody would need on it and said, okay, let’s see what it can do.” That list of programs was imposing. Adobe® Photoshop®, Bluebeam®

Revu®, Enscape™, SketchUp®, and multiple Autodesk® software titles including 3ds Max®, AutoCAD®, Civil 3D®, InfraWorks®, and Revit® were just some of the applications that might have been required to run simultaneously and in different combinations depending on the project. The Radeon PRO W5700 GPU, the world’s first 7nm professional PC workstation graphics card, provides the compute performance to take on all these challenges.

Power and productivity for heavy graphics multitasking

Explaining how the CESO team knew the Dell Precision workstation was a good fit, Lappe said, “If you don’t have the right technology, people will quickly get frustrated, and productivity will go down.” He continued, “The AutoCAD file for a million square foot warehouse can be 100MB just for line work before you consider precision details like equipment. You can’t even open it on some machines, let alone move the model. We opened it up on the new AMD graphics-powered workstation from

Dell, and the AMD GPU let us zip around the model with ease.”

That one case is just the tip of the iceberg when it comes to a typical demanding workflow at CESO. “A large point cloud generated when we do LIDAR scans for reality capture, which includes both the points and the photos associated with the 360 views, can be an extremely large file size,” said Lappe. “At the same time, a user will have both Autodesk Revit and ReCap™ open, and those Revit models are similarly large. Additionally, cloud-based collaboration using Autodesk BIM 360® or Construction Cloud™ is nearly always active, along with Bluebeam Revu for marking up massive collaborative PDFs.

“This powerful [Dell Precision] workstation and AMD graphics enable us to maximize our time to give the very best product to a client. We’re producing a better product in the end because we have the dependability, quickness, and quality this new system delivers.”

Bernie Lappe, Director of Architecture, CESO

Plus, there is project management software, our internal tracking system, an internet browser and email. On a lesser machine, you'd probably have to consider shutting some of those things down."

Lappe said, "You've got all these different models from different subcontractors—structural, mechanical, electrical plumbing—and they're all loaded at the same time. So, having a machine like the Dell Precision workstation with Radeon PRO graphics that can do all that means your frustration is zero. You're just working, not worrying that at any moment something critical will freeze, and that's what this workstation delivers."

To help users see the big picture while multitasking, the AMD GPU drives the Dell UltraSharp U4021QW, a 40-inch 5K x 2K ultrawide monitor that Lappe describes as "crisp, clear, and the smoothness is just awesome. There's none of the freezing or black spots that I have experienced with other setups."

Engaging clients and exceeding expectations

Of course, CESO's highest priority is its clients. That means frequent opportunities for the client to see CESO's work throughout the design process. These days that often means sharing work live on video conference from the Dell system.

A recent project for First Baptist Columbus, a church in Mississippi, required CESO to produce vision casting material (VCM) packages to provide master planning, perspective, and walkthroughs of the campus to help fundraising efforts. The CESO team built the materials using a combination of Photoshop, Revit, and Enscape to drive a stunning, well-received presentation. According to Lappe, the Dell Precision workstation with AMD Radeon PRO graphics made it possible to "re-render some things as we walked through their questions. Having the confidence to add lighting and other features in real-time to help people connect with the space is invaluable to our client and us."

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You're just working, not worrying that at any moment something critical will freeze, and that's what this workstation delivers."

Bernie Lappe, Director of Architecture, CESO

"We've all had that awkward silence where everybody on the call is waiting for somebody's computer to do something," says Lappe. "When you are with a client, saying 'we'll have to revisit that later' just isn't as good as engaging with them in the moment. It's important that a CESO client understands the volume of the space we are designing for them. The new AMD GPU-powered Dell workstation gives us tremendous capability in those critical scenarios. In the past, I would have printed a bunch of different views to show them. With the Dell Precision workstation, I can open the model in Revit and essentially walk around it to show them how people would experience the space. When you are talking about a client's time, money, and expectations, that level of confidence is what we need."

Lappe points to SketchUp as an example of another, particularly graphics-intensive workflow. "We have to deal with models that are very dense with machinery and graphics. And talk about vertices! These SketchUp models contain just crazy amounts of points. That kind of work has crashed other machines, but the Dell Precision workstation with AMD Radeon graphics handled it, no problem."

Meeting today's deadlines and the future's expectations

"We're always under so many quick deadlines," said Lappe. "There's only so much you can do in a limited time. This powerful workstation with AMD graphics enables us to maximize our time to give the very best product to a client. We're producing a better product in the end because we have the dependability, quickness, and quality this new system delivers."

Lappe concludes, "In the future, we're thinking about doing a Virtual Reality (VR) room so that we can invite our clients in and have them experience the space, including all their equipment and anything else they need to see. The value offered by systems like the Dell Precision 3640 Tower workstation with AMD Radeon PRO W5700 GPU puts a lot of great opportunities within reach."



About CESO

When CESO was founded in 1987, a small team had a vision of providing civil engineering and survey services to businesses and municipalities in Dayton, Ohio and the surrounding area. Today, CESO is a comprehensive firm offering start-to-finish capabilities through its ability to provide surveying, civil engineering, environmental, landscape architecture, interiors, and architecture services to its clients. The CESO team's combined experience, expertise, and strong relationships garnered over the last 30 years allow CESO to excel at creating experiences that drive business results. To learn more about CESO visit cesoinc.com.

About Dell Technologies

[Dell Technologies](https://www.dell.com) (NYSE:DELL) helps organizations and individuals build their digital future and transform how they work, live, and play. The company provides customers with the industry's broadest and most innovative technology and services portfolio for the data era.

About AMD

For over 50 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies—the building blocks for gaming, immersive platforms, and the data center. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit amd.com/RadeonPRO.

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