citrix™

Building a better way to work

Construction company creates mobile graphics workspace

The business challenge

"John Paul Construction is not a typical office environment," says Jim McDonnell, the company's Head of IT. "We're a very mobile workforce. Site offices get set up and stripped down every 12 months to two years, depending on the project."

The company, one of Ireland's largest construction firms, is a leading international specialist in construction, infrastructure and fit-out. John Paul Construction is delivering large-scale public and private projects across all sectors in Ireland and internationally. The company aims to deliver the very best construction experience to its customers, large or small. Site offices range in size from a single person on a laptop, up to 100 users accessing the latest in digital technology.

John Paul Construction is at the forefront of construction technology. It was the first contractor in Ireland and among the first worldwide to be accredited for ISO 19650 parts 1 and 2 (Building Information Modelling, BIM). Delivering advanced technology to a highly mobile workforce – often in remote locations – presents an ongoing challenge.

"We integrate a host of technologies for construction projects, but BIM is key," McDonnell explains. "Giving staff secure and mobile access to 3D graphics models and ensuring everyone was viewing the latest version of the model was difficult."

Setting up PCs for new users, or providing access for sub-contractors, was time-consuming and costly, as was handling requests to add new applications required for particular projects.

John Paul Construction worked with Platinum Citrix Solution Advisor, Enterprise Solutions, to develop a high-performance solution using Citrix Virtual Apps and Desktops and Nvidia.

Industry
Construction

Location
Ireland

Citrix products
• Citrix Virtual Apps and Desktops

Key Benefits
• Citrix Virtual Apps and Desktops creates a better way to work for over 400 staff and sub-contractors who can now access BIM and graphics applications securely and remotely

Delivering a secure, high performance, mobile workforce

"Consolidating our IT delivery was a key concern and Citrix enabled us to achieve that," says McDonnell. "We centralized our applications and our delivery to users. We removed local, site-based servers and created very lean sites with primary and secondary internet connections so that staff could log in to Citrix on their devices and access their working environment. This ensures that everyone is viewing the latest version of plans and models."

Security and IT management are also simplified.

"Security is the biggest benefit," McDonnell says. "Citrix gives us the means to effectively deliver IT services to our users in a very secure manner. Consolidating our environment in one location allows us to apply best-in-class security procedures and standards to ensure the security of our operations. An added bonus is the ease with which we can manage, monitor, and upgrade our IT environment and services."

John Paul operates two Citrix desktops, depending on needs. General users access a virtual hosted desktop while those who work with graphics-intensive BIM applications access a virtual desktop with dedicated graphics resources, leveraging Citrix 3D policies and Nvidia graphics cards.

"Citrix gives us the ability to publish apps individually for purposes of isolation, support, licensing or for ease of use. It also enables us to deploy applications to users quickly, if necessary. In some cases, we've installed, tested and deployed an application in less than an hour."

The ease and speed of deploying Citrix proved invaluable during the Covid-19 outbreak, as McDonnell explains.

"The majority of our users already had the Citrix environment in place," he says, "so it was an easy task to extend that functionality to the 10% of users who hadn't been working remotely up to that point. They were able to work seamlessly from home with little or no change to their working environment.

"Citrix is extremely flexible and facilitates remote working, allowing us to adapt to the situation. It showcased the adaptability that Citrix provides to the business," McDonnell continues.

Overall, "Citrix has made our work a lot more mobile. It allows us to expand the capability of what our users can do, rather than be limited by a traditional office setup. It's given our workforce a huge amount of flexibility and mobility."

Making BIM and 3D graphics easily accessible from any location

BIM is central to the operation of modern construction projects. Not only does it help reduce wastage, BIM is also used for visualization, planning, logistics and to produce asset model information at project handover.

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"With Citrix and accelerated graphics from Nvidia, we can deliver Windows 10 desktops with resource-intensive BIM and 3D graphics applications like Autodesk AEC Collections. Furthermore, due to our centralized set-up we make notable cost savings by being able to implement concurrent licensing."

The enhanced-graphics desktop has dedicated resources allocated to each user in the datacenter. With all processing occurring in the datacenter, users can login from any device over a wide range of connections and still be able to securely access the information they need.

"Our BIM department has gone from strength to strength, recently winning the BIM Excellence project of the year award at the 2019 Irish Construction Excellence for 1-6 Sir John Rogerson's Quay project. The majority of John Paul Construction projects are now BIM-based because our engineers can work onsite using Citrix and accelerated graphics.

"Citrix Virtual Apps and Desktops has worked for us across all types of connections," McDonnell continues, "3G, 4G, broadband, leased lines, microwave, on rare occasions when you might expect issues it has over-delivered."

Citrix also helps simplify and streamline basic IT procedures, McDonnell says. "For example, we've removed the cost and effort of configuring a BIM user's laptop by using Citrix Machine Creation Services. Creating a new, production-ready machine now takes minutes rather than hours and it is instantly available to the user no matter where they are located."

Citrix provides adaptability

Citrix and Enterprise Solutions are a central part of McDonnell's IT strategy.

"I'm very fortunate in having a partner like Enterprise Solutions that operates like an extension of my own department," he says. "We work very closely together. They're very familiar with our setup, and they're always on hand to advise and assist. They've never let me down.

"Citrix is the same. The construction industry is extremely fast-paced, and Citrix gives us the capabilities to adapt quickly and meet the demands of the business."

McDonnell concludes, "Citrix is an industry standard. It integrates well with other applications and platforms enabling us to leverage the infrastructure we already have while offering scope for continuing development."

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