



AUTODESK **CONSTRUCTION CLOUD™**



Connected Construction Supports Business Growth for Kirby Group Engineering

Over the last number of years, Kirby has expanded its project pipeline and client base growing substantially across mainland Europe. Their expertise and experience in building data centres across the region has fuelled this growth, supported by their focus on staying innovative and mobile. But at the core of Kirby's mission is delivering operational and engineering excellence and their success demonstrates a commitment to exploring and investing in continuous improvement.

This relentless focus to deliver value, stems from the company's five core values of people, safety, quality, delivery and value. People and their safety are at the centre of everything the company does. Kirby prides itself in being honest and fair with all its clients and supply chain, and has grown their business through delivering highest quality services and always seeking out reasonable agreement in everything that it does.

Customer Snapshot

FIRM SIZE: 1,000–5,000
FIRM TYPE: SPECIALTY CONTRACTOR
REVENUE: 4.5 MILLION
FOCUS AREA: INDUSTRIAL
HQ: DUBLIN, IE

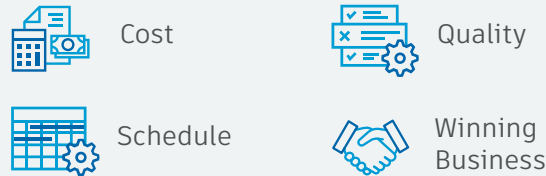
PHASE:



PRODUCTS:



VALUE DRIVERS:



Digitalising to deliver Better Outcomes

Mark Danaher, Technical Services and BIM Manager for Kirby Group Engineering, began working with Autodesk Construction Solutions 18 months ago with the objective of optimising the current ways of working at the firm. For Mark, it was important that the team were able to explore software and technology that helped solve common issues in the industry – from increasing reliability by using data better to facilitating greater collaboration across the group and supporting their supply chain partners to deliver better outcomes.

“A number of years ago, we looked at how we could develop our business in a way that would give added value to our clients, support our growth agenda and ensure that safety and quality are at the heart of everything that we do,” says Mark. “Working with Autodesk, we identified a number of manual or fragmented processes that could be digitised to not only save time and remove repetition, but also provide better insights to support us and our clients. A lot of our traditional processes were lengthy and time-consuming which impacted us effective collaboration with supply chain partners and customers.”



Putting the Technology into Practice

Mark was working on a particular project that he identified as a suitable candidate for piloting the new technology. Kirby took the lead co-ordinator role on the delivery of two new data centres for a leading cloud computing provider in Dublin. The project involved incorporating the application of prefabrication and modularisation expertise to the project delivery. "On data centre projects like this, compressed schedules and site restrictions can often be a problem, reducing site storage, site tooling and congestion of people was critical to completing the project on time, safely. We introduced offsite manufacturing, which was key in helping us to achieve this," says Mark.

Mark and the Autodesk team mapped out Kirby's end-to-end project delivery journey for this particular project – keeping a view to rolling out more widely across all future projects. They identified how they could move to a more connected and digital way of working by phasing out manual and paper-based processes and joining up their digital practices into one unified place that was easy to access for all involved in a project. They decided to transition all their projects away from using a mix of different software solutions and paper-based processes onto BIM 360 within Autodesk Construction Cloud™ – a unified platform that connects project teams and data in real-time, from design through construction.

"Standardising processes, capturing data better for more informed decision making and using technology to protect the safety of their employees were the most important aspects of this journey for Kirby," says Mark. "As our project portfolio across Northern and Central Europe continues to grow, it's essential that we maximise our collaboration efforts across geographies while providing our leadership team access to better insights across our entire project portfolio."

To embed the technology and support the entire team at Kirby to understand the value the technology could add, the company developed The Kirby Way – the company's cultural, systems and process approach to doing business. Mark explains: "The Kirby Academy, which is part of The Kirby Way, trains all key site staff to deliver its projects as a collaborative team using world class processes. BIM 360 is a key enabler to this, and piloting the technology on a few projects first helped us to develop this training iteratively for the team. We were supported by Autodesk to develop some of the training solutions for our Academy. We're committed to ensuring we're using world-class software in the right way – applying the best processes and delivering the best possible outcomes for our clients and for us." The training for the team not only provides a thorough understanding of how technology is applied to projects and it also reaffirms Kirby's key values of quality and safety to their employees undertaking the training.

Key benefits

15%

Total project hours saved

20K

Hours saved during construction

12.5%

Efficiency gain

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-Mark Danaher

Technical Services and BIM Manager,
Kirby Group Engineering

Harnessing technology for better insights and a more connected construction process

For the data centre project in Dublin, Mark introduced BIM 360 from the outset with supply chain partners, the client and teams across Kirby. This was vital in allowing seamless collaboration across disciplines, companies and teams and ensured every collaborator had access to up-to-date project data from drawings and designs to the latest comments on necessary revisions and changes. A complexity that added to this project was the use of offsite manufacturing and modern methods of construction. This required meticulous planning and meant that the project plan needed to run absolutely to project timescales as the entire electrical switchrooms were assembled from modular units in highly engineered prefabricated components. This provided the client with a customised solution that was flexible, scalable and facilitated rapid deployment schedules also reducing the amount of people needed on site which helped improve safety.

“A key element of this project was the use and application of prefabrication and modularisation in project delivery,” says Mark. “We did this by applying just-in-time methodology, which requires meticulous levels of planning because it brings a zero-waste approach to the production process. By applying modern methods of construction such as prefabrication and modularisation, we needed to make sure absolutely everything to do with project timings ran smoothly on and off-site.”

Using BIM 360 on the project, Kirby was able to save over 20,000 hours on the construction activity – the equivalent to 15% of the total project’s lifecycle hours. These hours were redirected towards constructing the modules for the electrical switchrooms in a manufacturing facility – in a safer and more controlled environment. Not only did these savings support efficiencies across the project but they also helped Kirby to keep its own employees, and supply chain partner teams safer as it meant the project needed fewer workers on site leading to a less congested construction site.

“By digitising our quality control and health and safety checklists on the project, we were able to capture quality and safety control issues directly from the site as it was being installed. These issues were automatically recorded in BIM 360 and fed back into

our analytics dashboard so other collaborators could have access to important data and make informed decisions on quality and safety without having to be on site all day, every day,” says Mark.

Introducing a more digital and connected way of working helped the project team improve the quality of their delivery – they reduced the amount of rework they needed to do on site during construction by using BIM 360 for a more connected pre-construction process. The project team saved 4,000 hours that would traditionally be lost to manual workflows and when it came to the snagging process, they reclaimed 1,500 hours equalling a 12.5% efficiency gain per week on the project. Not only does this result in better quality outcomes for Kirby’s client, but it provides the company with a better view of any issues and resolutions related to the project. In addition, they now have better insights on the asset to help with future decision-making which can lead to a more sustainable and smarter asset management strategy.

Using Data to Refine Ways of Working

“Growth is a key part of our story and we’re relying on data more and more to help us understand how we can continue this growth, make better decisions for our clients and our people,” says Mark. “From BIM 360 we can have better insights on our quality and safety data, but we can also access information on how many people we have on sites, how efficient our projects are and more,” states Mark. “Data allows us to predict more, helping us to be proactive rather than reactive and reduces some of the risks we carry. Using data to do this helps us to predict where the next problem is going to be and eliminate it before it becomes an issue. There’s still a long way to go on this journey but with the help of the Autodesk team, I think Kirby can continue leading the way as one of the most technology and data-driven construction companies in Europe, which excites me.”