

COMPANY  
**E+I Engineering**  
LOCATION  
**UK**  
SOFTWARE  
**Autodesk Construction Cloud**  
**Autodesk AutoCAD**  
**Autodesk Revit**

## Collaborating in the cloud to deliver enhanced data management



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*"I have found them incredibly helpful and easy to work with, while they have, through it all, always understood the importance of both parties achieving returns on their investments."*

**Colum Davison**  
BIM Division Manager  
**E+I Engineering**

### How Autodesk Construction Cloud software is driving efficiencies for E+I Engineering

E+I Engineering is the largest electrical switchgear manufacturer in the UK & Ireland, that pioneers unique in-house integrated power solutions tailored to each individual client project. The company believes that their people are their best asset and have invested in a highly qualified and experienced team of Chartered Engineers to work in their manufacturing facilities across three continents. With over 30 years' experience in delivering high quality integrated power solutions, their team are experts in providing technical services, project management services and unrivalled customer support for every client project.

E+I Engineering has a proven track record in consistently delivering projects to the highest of standards. They boast a varied portfolio of successfully completed projects

across the globe, specialising in mission critical power distribution for industries such as Data Centres, healthcare, industrial and Transport. With 30 years' experience in the field, their team provides specialist technical services, unrivalled customer support and project management throughout the entire project.



The company has traditionally used a combination of Autodesk AutoCAD and Revit® BIM (Building Information Modelling) software to carry out design work. It uses Revit primarily because it has established itself as industry-standard design software and also because BIM capability is now being asked for as a qualifier onto projects by many of its customers. It bought its design authoring licences from its design and data management partner, Cadline, a company from which it also receives training and support.

Guided by Cadline, E and I Engineering recently invested in Autodesk Construction Cloud construction management software, a tool used for managing design, construction and project data.

## Building a common data environment

Working within a Common Data Environment (CDE) has become increasingly important to E+I Engineering. The company has been quick to transition away from paper-based processes and siloed ways of working, both internally and when working with partners, customers

and suppliers. It was looking for a CDE that would enable it to access data from anywhere at any time and build a truly collaborative environment.

That need has become still more urgent since the pandemic struck, with the advent of Covid forcing people to work from home. E+I Engineering estimates that 50-60% of projects it is involved in today use Autodesk Construction Cloud, so it made sense to adopt it both for projects and for its own internal use.

E+I Engineering's BIM Division Manager Colum Davison, said: "There are other common data environments out there in the marketplace but choosing Autodesk Construction Cloud was an intuitive decision for us. We have used Autodesk software for years and migrating to Autodesk Construction Cloud was the logical next step as we evolve our design and data management capability."

## Project outcomes

One of the goals E+I Engineering was looking to achieve from its implementation of Autodesk Construction Cloud was to enhance its own capability by focusing more on creating its own BIM content. It is planning to also make this content available to clients who can access it from the E+I Engineering website.



Davison highlighted the benefits of the new solution. "It enables you to create a comprehensive historical record," he said. "You can roll back and see the timeline and all the various versions of design models. It is also a good central

repository for us at the design stage, enabling us to look after Excel and DWT files and share information between the BIM department and project engineers. We can also capture information from site and feed it back into Autodesk Construction Cloud.”

## Putting solutions in place

Working with Cadline, E+I Engineering has now implemented many of the modules that make up Autodesk Construction Cloud. These includes Autodesk BIM Collaborate, which allows the company to carry out clash detection in the cloud. That helps it to complete effective designs when it receives models in from other disciplines and other agencies, by enabling it to create a federated model which pulls together all the different models highlighting any clashes, and also creates related reports.



Another key model E+I Engineering is using is known as ‘Autodesk Build’, which is used for onsite activities. This enables the company to see the documentation that is in the field itself on a mobile device but also to interact with those devices and report any data from a checklist or a commissioning sheet back into the cloud, so that it is all stored in a central location.

E+I Engineering rolled out individual modules of the Autodesk solution soon after the implementation. Cadline provided a range of services to help ensure E+I Engineering optimised its use of the software. Cadline’s James Philip worked closely with the design team,

delivering an implementation project that enabled the business to quickly realise the benefits of its investment into this new technology.

It started with a scoping session which focused on the overall goals of the project. It also provided targeted training, based on what was agreed in the scoping session. This included training for administrators and then separately for core users, with wider training for the rest of the business. E+I Engineering has also commissioned Autodesk to deliver separate training on the software with a wider group of engineers across the business in a bid to drive up adoption levels.

This user and admin training was followed by several ad hoc sessions, where Cadline helped its customer to go through some of the training points to make sure this system is set up and configured correctly. It provided support throughout the implementation and then technical support, delivered through a helpdesk on an ongoing basis until the project closed out about two months later, at which time E+I Engineering reported what worked well; what didn’t work and how the two companies could best address issues.

With the implementation complete, E+I Engineering has decided to run every new project through Autodesk Docs, and is also planning to use Autodesk Docs internally to share information across different departments and between designers and engineers. The company now has around 40 licences of Autodesk Construction Cloud products in total.

Davison is happy to pay tribute to the role played by Cadline through this process, and more generally. “Having collaborated with Cadline for a number of years,” he said, “I have found them incredibly helpful and easy to work with, while they have, through it all, always understood the importance of both parties achieving returns on their investments.”

“They have provided us with various design licences over the years, and more recently have assisted us in selecting

the appropriate ACC software for our users' requirements, which is a testament to their understanding of our business needs," he added. "They give us the support, back up and results we need from a supplier. Customer care and service has been excellent throughout."

## Tapping into the benefits

For E+I Engineering, the biggest benefit of using Autodesk Construction Cloud is that it stores data in the cloud, and users can therefore access that data from anywhere at any time, and therefore continue to be productive, when working remotely, or from home, or as part of a wider business ecosystem. A collaborative design approach based on Autodesk Construction Cloud enables users to have their design model in the cloud and share it widely. For E+I Engineering, this capability allows their designers across the world to all access the same model for example.



The fact that the approach supports a single source of the truth is another important benefit. With some major engineering projects today involving the creation of thousands of drawings, efficient file management and version control is key. Users can have complete confidence that they are checking out the latest version of a drawing thanks to Autodesk Docs' version control capability. Autodesk Docs' is also user-friendly. It is easy, even for people with little technical knowledge of CAD software packages, to navigate the model and extract the data and information they need.

## Future Focus

Cadline and Autodesk are now working on ways in which Autodesk Construction Cloud products can be used to address the wider business challenges E+I Engineering has. The electrical manufacturer is itself looking at making further improvements including creating documentation, barcode scanning - and linking that through to the actual design data. It is looking at quantification. It is also considering how it could potentially connect Autodesk Construction Cloud to other business systems. Finally, it is focused on opportunities to adopt Autodesk Construction Cloud in other areas as well as looking at other Autodesk design software tools that could potentially bring benefits to design and engineering. It is a design future defined by opportunity, with Autodesk Construction Cloud at the heart of it.