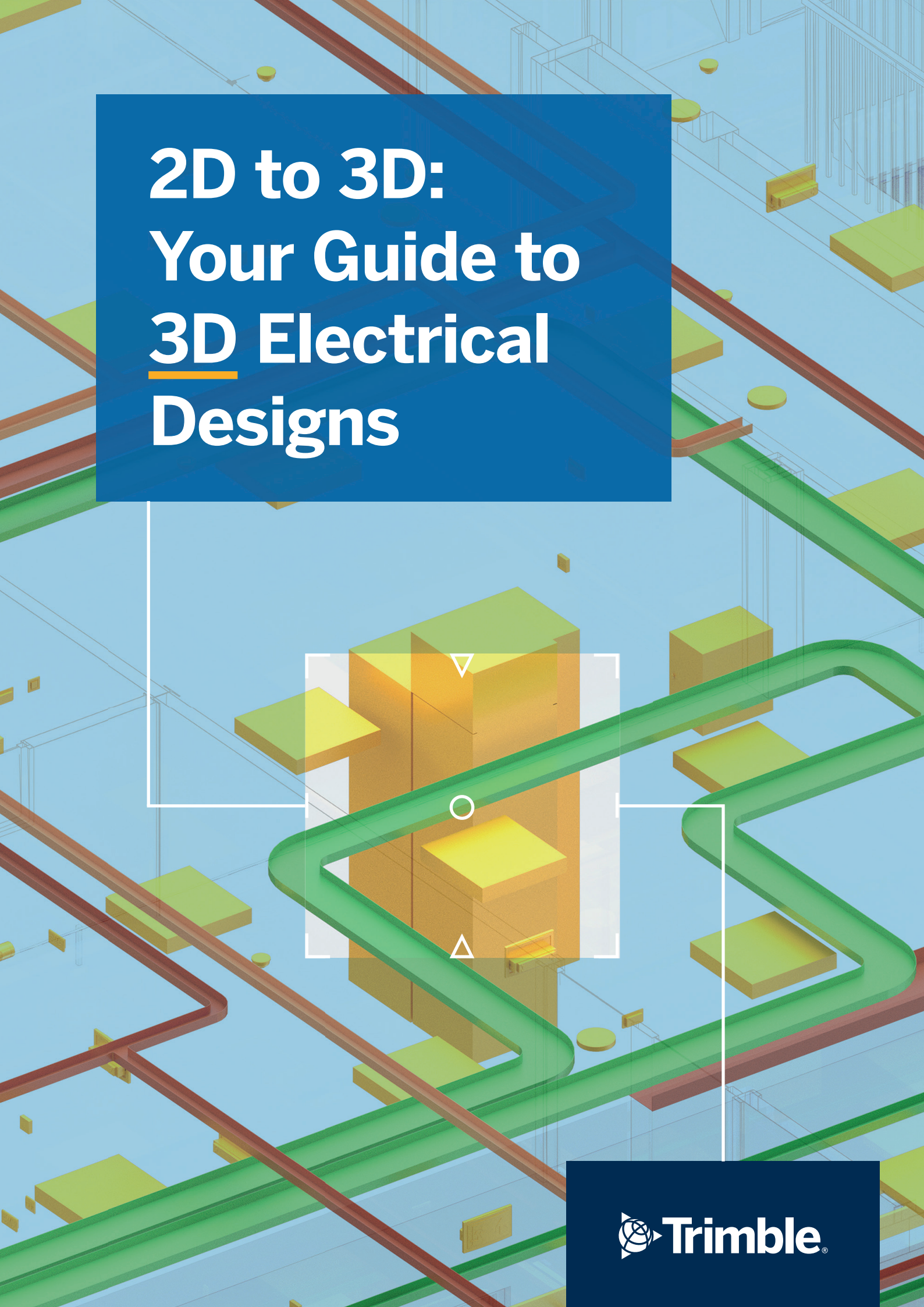
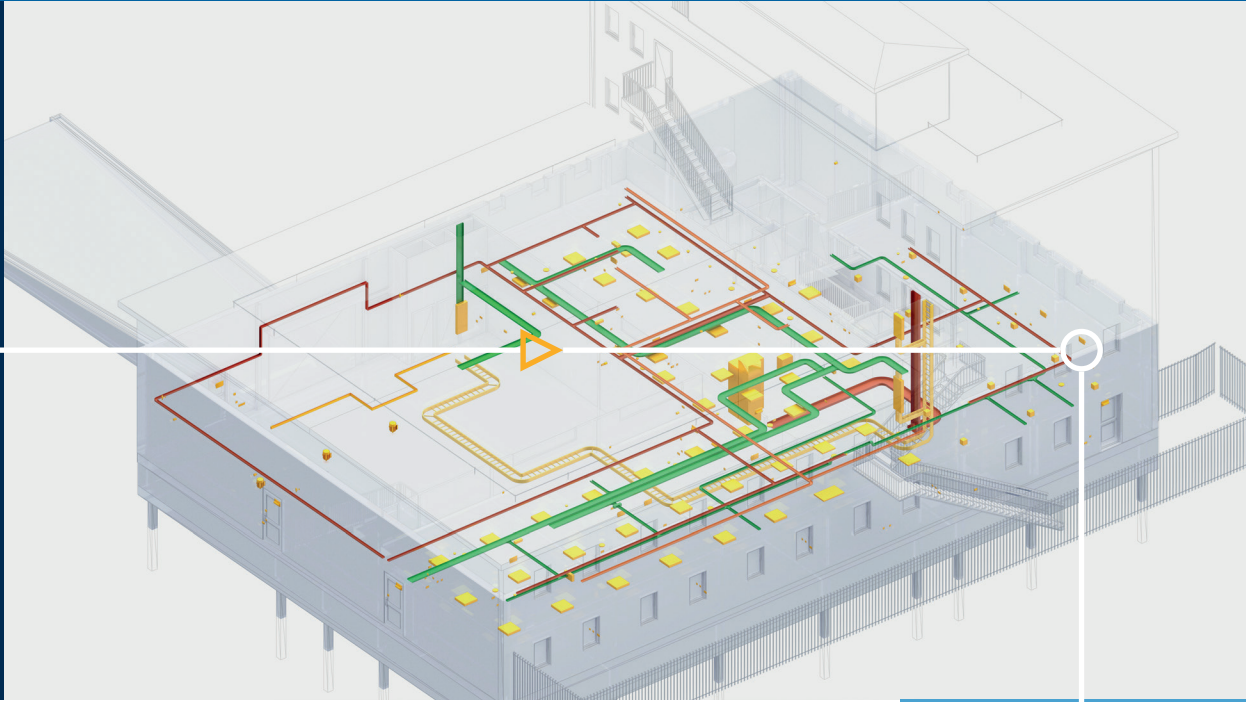


The background of the entire page is a complex 3D visualization of an electrical design. It features a network of green and red conduits or raceways running across a light blue grid. Various yellow and orange rectangular blocks, representing electrical components or equipment, are placed at different heights and locations. Thin white lines and small circular markers are scattered throughout the scene, suggesting a technical drawing or simulation environment. A large blue rectangle is positioned in the upper left, containing the title text.

2D to 3D: Your Guide to 3D Electrical Designs

Introduction

As the construction industry continues to evolve at a staggering pace, clients are increasingly looking for certainty through more precise and complex design information and automation in advance of awarding contracts. Building Information Modelling (BIM) is rapidly changing the shape of how we work in 3D.



What is BIM?

Building Information Modeling, or BIM, is a process involving the design, construction, and management of models for physical and functional characteristics of structures. BIM “models” are rich files full of data that can be extracted, exchanged, or networked to support decision-making regarding a building or other built asset.

Why are 3D models important?

3D modeling in construction is becoming more and more popular, due to the numerous benefits. They allow stakeholders to see a more real interpretation of a designed environment. Unlike 2D designs that need extensive instructions, 3D designs make it easy to spot minor details and correct them, which can avoid costly construction mishaps. 3D models can be used to quickly create or reproduce a 2D drawing, making modifying a 3D model relatively inexpensive.

But what’s the alternative and, ultimately, will it help you to win bigger and more lucrative contracts?



Reap the rewards of 3D

Deciding to change something you've been doing for a long time is not without its challenges. However, seeing how quickly it makes a positive difference to your business makes the change worthwhile. Before you can start to change something so important to your work life, it's a good idea to look at all the available alternatives in detail. The last thing you want to do is find yourself switching to an inadequate solution that leaves you feeling there's been no measurable improvement and wishing you were doing things the old way.

Using old design processes can also prove costly, so it's a big bonus when you start to see a direct improvement to your cash flow and the ability to plan and invest for the future. Thankfully, there are products out there that can help you adapt to what works for you.

Software is used by electrical engineers throughout the world for electrical designs carried out to multiple regional standards, with the outputs from the software being used in different ways. For example, they may be sent to a contractor for the design to be developed further to take account of installation factors. Design information may also be sent to a quantity surveyor to estimate an element of work. Meaning it is hugely important to all members of any project that the flow of this critical information is not only seamless from one team to another but also traceable.

Rolling out new software

Standards and codes play a huge part in determining whether a project will prove profitable. Something as minor as making a change to your initial design could have a major effect on time and cost. These potential risk contingencies may be built in your existing work processes and can weigh down your competitiveness by adding ever increasing project costs. On larger projects, the risk of inaccuracies and rework becomes considerably greater. Using a software that rigorously calculates electrical distribution requirements in accordance with up-to-date regulations is a real bonus.

Features such as preventing users from selecting inappropriate permutations are also invaluable.

The capacity to flag up errors, transgressions, and non-conformances at calculation time also safeguards against losing money due to onsite challenges. In addition to saving you time and money, these features can make a real difference to the quality, efficiency, and accuracy of your work and help build and strengthen client relationships. In fact, they can most definitely help you to win work.

Accuracy with no filters

New and existing clients want to know that their project is accurate and conforms precisely to regulations. It's impossible to demonstrate this by just using bid documents. Software that demonstrates compliance with standards clearly shows that your design is not a legal liability. Software should ideally offer sophisticated reporting capabilities, enabling you to present easy-to-digest information to your clients that can be thoroughly audited. Whatever the size of the project, compliance with regulation is crucial, and the importance of calculations that keep up with regulation and amendments changes, before they come into force, cannot be overstated.

Another key feature of electrical design software should be its ease of use. Sometimes software might have the capacity to achieve great things but, if it's not user-friendly and simple for everyone to use, those benefits can be wiped out by the need for costly operative time and training. If you've worked one way for a long time, switching to a replacement shouldn't involve the need to go through a difficult transition phase. If you're going to make the change, solutions that are as easy to use as a desktop device should be what you're looking for.

Major benefits of working in 3D

- **Simple, low risk communication for all**

A 3D model is the single source of truth. Unlike 2D designs which need multiple clear instructions on how to understand design information, 3D designs leave little to interpretation while still enabling engineers to embed annotations directly where they're needed, negating the need for double handling of information.

- **Truly effective collaboration**

Due to working in the 3D environment, you are able to better engage and collaborate with other stakeholders in real-time. The entire design is in one place so it is easier to see the impact on the overall design when changes are made, helping to finalise the design quicker and vastly reducing the potential of costly post-installation corrections.

- **Highly adaptable timesaving workflows**

Working in 3D not only enables the creation of new efficient workflows that are just not possible with 2D design, it also enables the optimisation of more traditional ways of working. The process of creating 3D models can also automatically generate rich 2D plans if required, which leads to better coordination and accuracy.

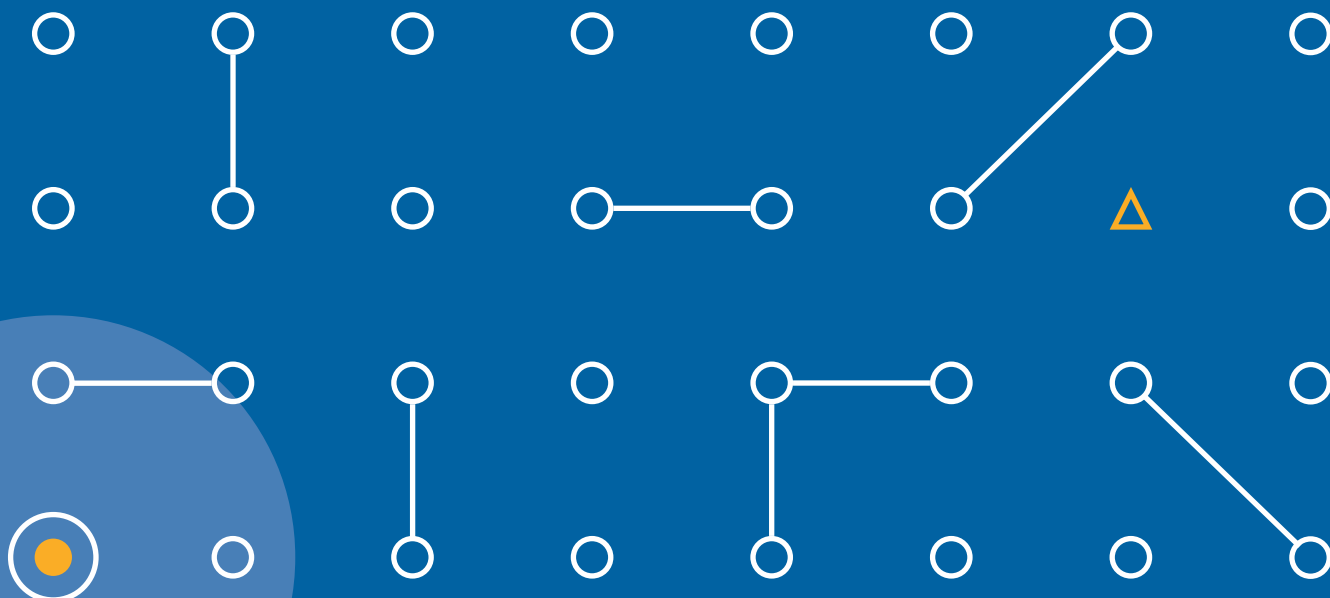
- **Win bigger, more lucrative contracts**

With the UK Government requesting projects adhere to The UK BIM Framework (formerly referred to as BIM level 2) as a minimum, being able to prove that you can perform projects to this Framework and integrate the required electrical information within the 3D model, is essential to your future success in winning bigger contracts.

- **Future-proof your business**

The UK Government initiative Digital Built Britain is working towards implementing even more advanced BIM workflows and standards within this decade to further build on the cost and programme savings, improvements in Health and Safety and stakeholders' engagement that UK BIM Frameworks projects deliver today. One of the keys to unlocking even more BIM lead benefits is a truly open collaboration, cloud-based common data environment (CDE). Trimble Connect is a truly open CDE platform which can provide what your business needs to adapt your collaboration infrastructure now and in the future.





Building on the long term benefits

When you make the shift to electrical design software, you're not just looking after the immediate benefits for your business. You're also making an investment in the long-term growth and survival of a successful enterprise. Having made the best choice to ensure you're fit to perform at your best in a rapidly evolving industry sector, now is the time to take steps towards making the most of your new found vigour. Increasingly, clients are requiring that Electrical Engineers work within a 3D model environment while still complying rigorously with regulations and standards. Up until now, this has meant valuable time has been invested in duplicating schematic drawings into a 3D Revit Model and that's assuming a familiarity with Revit in the first instance!

Trimble supplies with Stabicad a complete electrical solution with both design and engineering capabilities all in the same 3D environment, as well as a comprehensive export to Trimble's ProDesign 2D solutions.

Avoid errors and needless rework and get your electrical system design calculations where you need them the most - directly in your 3D model. Stabicad is equipped with a full suite of British Standard and Regulation compliant calculations.

Designers and Engineers can output a wide range of crucial information through the generation of reports and the export functionality to various extensions. Calculation overviews are available at the click of a button to ensure design integrity through clear, low effort yet accurate communication, enabling fully informed and fast decision making throughout the project lifecycle.

Imagine being able to bid for bigger and better projects in a world where 3D working is becoming more and more essential. If you're already familiar with ProDesign, switching to Stabicad's 3D environment - while utilising the same features - is intuitive. There's no relearning. Just adding to your existing knowledge.



Helping you understand
the benefits of using
3D design software