

Success stories - Arch-e-tech



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Coves Waterfront Grouphousing

Potential for new heights in Architecture

Mauritz Kruger has practised architecture for 20 years, backed by a Masters degree from Pretoria University. He most recently saw his career change when he split from a previous partnership and started his own practise using Autodesk Revit as his preferred CAD software.

Together with Stephanus Cronje his in-house CAD expert, Mauritz Kruger has to-date excelled in the field of group housing, sectional title and cluster homes, along with some industrial projects following his investment in Autodesk's cutting-edge Building Information Modelling (BIM).

Having migrated to Revit from Micro GDS, Mauritz echoes other Revit champions' responses to the software: "I am blown away by how Revit allows the design process to unfold via a parametric model. There are instant results in productivity allowing more time for the design process; I am spending phenomenally less time making changes and the client is benefiting from the improved communication and timeline professionalism."



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Three unit designs offer a range of sizes from 180m² to 235 m², and are double-storey or semi-detached, featuring stone cladding, cantilevered multi-roofs and open gables.

Only Mauritz and Stephanus worked on the project: "There was a lot of repetition in the design," says Mauritz, "but with Revit it was easy, we took just two months to get to completed working drawings, and that included all the changes from the client, which were quite drastic. We had to change both the site layout and one of the unit styles completely and we were able to do this within one week. Better still; within just three weeks from design start we had approval from the client. This was our biggest project to date, and Revit allowed us to show them completed animations - not only did this help communicating with the client, but it was of huge benefit to the developers marketing department as they were able to show potential buyers 3D views."

Continues Mauritz: "The advantage of Revit as a design tool is that in the early stages of the project you have a 3D model which provides early visualisation, and allows you to create and change components in a fluid way. For example, it would have been difficult to visualise the space inside the units with any accuracy, with Revit you are enabled to do this with complete accuracy. Further, Revit's functionality meant that onto the 3D model we were able to add more and more detail - it allowed structural elements to be added on in an easy way much later on in the project. Revit's bi-directional associativity then allows you to look at any perspective by swinging direction, there is no redrawing another perspective."

Mauritz says he is getting more and more excited about Revit and is just beginning to explore its full potential. He says Revit is an easy programme to



learn as long as you own the intention. "We had an easy transition to Revit because we needed to work on projects immediately so we just got on with it. Revit thinks differently to other CAD programmes but once you understand it, it makes more sense as a way of designing."

"The efficiencies we gained with Revit is that we are getting quicker client acceptance of designs, the client has a clearer understanding of how the finished product is going to look and the project is finished quicker."

"Another efficiency gained was with our rendering process - which was previously very laborious and with badly shaded views. Now we render in less than 2 hours and with Revit you can almost call it instantaneously."

"We also purchased Cadplan's Power Pack which was very helpful - having pre-created families offered speed, and allowed us to then add our own specific touches. Having South African content helped a lot making everything more streamlined and efficient."

Mauritz Kruger had to expand their graphic cards and RAM because 3D files are large and sufficient speed is needed, added to that he says training is necessary. "But it meant that within 10 weeks we were working on our own on projects."

Mauritz nods when he is asked if Revit has changed the way he practises architecture:

"Working in an updated model at all times gives you security - you know you don't have to restart the project when things change, and the client is always making changes. We have more confidence that changes are correct and the 3D model is giving you a precise image - it becomes a virtual building of what the client actually wants."



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Discussing his decision criteria, Mauritz says: "We have realised that this is the way CAD is moving. We did look at both Archicad and Caddie when we were at the purchasing stage, but once we saw a Revit demo we knew this was the route to go. Cadplan is very professional, they impressed us, the other guys simply didn't impress us.

We realise that Revit is still developing but this is okay because already we are on something much better. Revit has changed our approach to our clients, providing them with a 3D model and animations early on. Not only does it help them and us, but it gives us an advantage above our peers. And the return on investment has been good, we have gained productivity on our longer term clients. Our shorter term clients are seeing something new and will use us again because of that.

The developers on this housing project have never had 3D animation before. It is something which they can then use as a marketing tool. As the market realises the accuracy of the 3D model in the building process, they are going to demand it more and more.

Revit offers a lot of scope over many fields in the building industry. Budgets and scheduling are the first major inroads, but a whole highway lies ahead."

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