An enviable reputation
Established in 1990, ARM is a ten-strong private architectural practice. According to Douglas McKirdy, one of ARM’s three partners, “We endeavour to continue as a niche player in the residential market and to develop our recent expertise in the leisure and commercial sectors, ultimately to pursue the application of the latest CAD technology to assist in communicating our design objectives to clients.” Having wholeheartedly embraced CAD at the outset, the practice’s policy of keeping abreast of current trends has resulted in early experience in various developments such as the use of colour plotting in presentation material. Now, the practice is leading the way with its use of Autodesk Architectural Desktop for 3D design and 2D working drawings.

Immediate potential
ARM is certainly leading with technology, but only when it can help the practice improve and generate real benefits. According to Douglas McKirdy, “Much of our business comes from winning competitive interviews. In one short interview, we must convince the client panel of the merits of our design. We had been quite successfully communicating a 3D world in flat 2D, using perspective artists to illustrate our concepts. However, we were reliant upon them interpreting these concepts correctly in time for the interviews. We were not always in control, it was more or less impossible to make any last minute changes and it was a costly operation.” ARM continued to search for a better way. The practice has been using AutoCAD since 1990. When the time came to upgrade to AutoCAD 2000, they called in local Autodesk Systems Centre TMS. That was the start of an enduring relationship. Douglas continues, “When they showed us Autodesk Architectural Desktop (ADT), we immediately saw the potential.” As a result of their initial experience, the practice has upgraded the system to five seats of ADT 3.3 integrated with one seat of Autodesk VIZ and one of Piranesi, a 3D ‘painting’ tool for architectural image presentation.

That’s when the penny dropped
Convinced that designing in 3D with Autodesk Architectural Desktop (ADT) would offer significant added value for their clients and themselves, ARM looked for an appropriate project on which to make a start. The opportunity came with ARM’s involvement in a lottery-funded community project. The feasibility study had been carried out by another practice and, although ARM had been invited to submit a bid for the full project, they felt that the initial architect had the advantage. To redress the balance, ARM turned to ADT. Douglas recalls, “We had submitted a fee bid but to be honest, we felt we were just making up the numbers. Three hours before the interview, ARM decided to prepare a rough concept sketch to discuss at the interview, and decided to try using ADT. 45 minutes before the interview, we walked out of our offices with an A1 plan, two axonometrics and a VIZ image, even though at that time we’d had no VIZ training. That is when the

"3D CAD is not just for the big practices. It’s for architects like us, too."

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"We could not have done it without ADT."
Douglas McKirdy, Partner, ARM Architects

Tomorrow’s world…..today
It was once said that 3D CAD technology is really only for big architectural practices; that only they can afford highly-priced software and hardware and the trained and dedicated staff; that only they can attract commissions big enough to justify the use of 3D. Of course, this may have been true twenty years ago, but Autodesk and its customers have long since disproved this shibboleth. Now, 3D design solutions are more affordable, more accessible and more usable than ever before. So much so in fact, that practices that do not adopt tomorrow’s world, today, are finding themselves at an increasing disadvantage compared to their more forward-looking peers. That is certainly not happening to ARM Architects, an innovative and visionary practice based in Glasgow. The practice has been using Autodesk Architectural Desktop to win more and more business.

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Douglas McKirdy, Partner, ARM Architects
penny dropped. With ADT, you have control right up to the last minute so you can spend more time creating and designing. At the interview we communicated our concepts in 3D, in full colour, and we won! Up to that point, the practice had been cautious about carrying out all work in 3D. However, as Douglas relates, "When everyone saw what we had done they agreed to make the move."

It's all gain
From that point on, the practice has not looked back. In Douglas's view, ADT has "...shortened our design times, made us better designers. We can experiment more; really test out a design before we take it to the client. Don't forget, the first time most architects see their design is when it is built. Not at ARM though, now that we have ADT." He adds, "ADT has made us more productive and more profitable, especially as we made a decision a year ago to do all working drawings in ADT." As an example, he cites a competition win at the end of 2001. The client had purchased a development site from a local authority and was under pressure to obtain planning and Building Warrant approvals by the end of March, starting just before Christmas. The planning application was submitted two weeks into the New Year, the working drawings for eight flat types were completed with two man-weeks of effort and an elapsed time of three weeks, and planning was completed within the deadline. Douglas is happy to be quoted, "We could not have done it without ADT." To get the best out of ADT in this way, there is, of course, some initial configuration to do, defining walls and window styles and so on, but Douglas confirms, "Once that is done, it's all gain."

A challenge met
Douglas cites as another example, a £3.5 million social housing project now under construction in Glasgow. During the design development stage, ARM presented 2D ADT plans and 3D Piranesi and VIZ images at the fortnightly client meetings. ARM noticed that the committee was looking only at the 3D image, not at the 2D plans. As Douglas says, "No one had shown them that sort of thing before. In the past, they would have been lucky to get coloured 2D plans and elevations. And here we were showing them 3D coloured images with trees and people. That was something they could really relate to." And it wasn't difficult, either. Frequently, the presentation work would be done on the same day as the client meeting, producing axonometrics from floor plans then rendering in VIZ. Simple 3D images would take no more than around 10 minutes to produce, once exported from ADT into VIZ. Douglas advises, "You have to know how far to go with the detail though. It is important not to lose sight of what the drawing is intended to convey. Don't waste time on unnecessary detail."

Start straight away
What advice does ARM have for others looking to advance to ADT? Douglas is very clear, "Training is a must–have. In fact, it is almost as important as the product itself and should be budgeted. But do programme to mix time to get experience between training periods. We told TMS what we wanted to do in the training and they configured it accordingly."

As for making the transition to ADT, he comments, "You can't all of a sudden embrace ADT. There is not much point in stopping existing projects to move them over to ADT, so make a start with one building at the design stage and get familiar with it, get comfortable, then start on the working drawings. There will be a steep learning curve initially; you need to get familiar with the principles and the interface. Allocate someone to take the time to set up standard office styles for objects such as walls, windows doors and so on, and make them available to all users. Everyone needs to be familiar with the concepts, so spread the knowledge. I found Autodesk's Discussion Forums very helpful. Don't be put off. You will reap the benefits." He cautions, "Mind you, ADT won't do everything. Be aware of what it won't do. Thankfully, there is still the need for the architect." Looking back, Douglas is certain, "We do not regret for one moment the decision we made. I just wish we had made the move to ADT sooner."

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