

Designing a virtual future in SA

In St Marys, South Australia a quiet revolution has been taking place for near on a decade. In 2008 Kadego was an established engineering design company with clients in defence, automotive, resources and other diverse industries. In 2016 the company has a much broader focus and is taking the lead in SA in developing real world applications for Virtual Reality (VR).

Having previously specialised in automotive design, Kadego had already been through some turbulent times by 2008, including the closure of Mitsubishi Australia's manufacturing plant nearby in Tonsley and the general shrinking of the automotive design market in SA.

Managing Director Gavan Doyle made a conscious decision to expand into visualisation. The 3D data created in the design process could be utilised for marketing purposes by creating photo realistic renderings and animations. Roll forward to 2014 and the natural progression seemed to be virtual reality.

The developments in virtual reality have been significant in the past few years and Kadego have kept abreast of the developments and used that time to develop the skills required to bring VR into real world applications.

In October 2016 the focus on VR within Kadego developed to the point that Gavan appointed a new role of 'Business Development – Technical Operations' to further develop the high tech aspects of the business. Geoff Langridge was the person appointed to the role, with a specific focus on advanced CAD systems, visualisation and virtual reality. With a combination of mechanical engineering and information technology qualifications, engineering design experience and a broad appreciation and grasp of technological advancement, Geoff is ideally suited to guide the technical operations of the company.

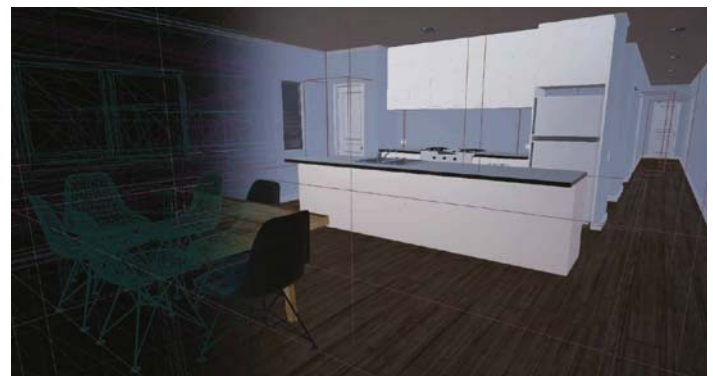
Amongst the real world applications for VR in defence and general industry are:

- Sales and marketing visualisations and interactive scenarios
- A virtual learning environment for training safe practices and workplace inductions
- Walkthroughs for final pre build inspections and design reviews with a focus on aesthetics and functionality
- Product selection within a virtual environment – usually with a range of options to choose from.

On his new role Geoff said. "It's a really exciting time for us. We have a great opportunity to utilise our engineering expertise to offer some useful insight for our customers. For many people a virtual environment offers a realistic experience that they will remember. That's great for inductions and training because they have actually done it – as opposed to watching a video or a slide show. There are also occasions when a final design review inside the environment really helps. We've had customers make design decisions at the last moment, having noticed something they hadn't realised was a problem from drawings or models. It might be something as simple as a bulkhead blocking a view through a window from a certain angle in a house. As engineering people we like to think our visualisation skills are very good, but there is no substitute for the real thing. We provide the opportunity to see the 'real thing' before it's too late to do something about it."

Kadego believe that VR will develop into a key pillar of their business over the next 12 months and have taken steps to ensure this, including:

- Appointment of Business Development role for Technical Operations
- Discussions with UniSA with a view to collaborative efforts
- Participating in VR focus groups
- Discussions with allied and like minded companies in SA and elsewhere
- Researching other applications of VR
- Researching real world uses for Augmented Reality (AR) in industry



Key client Mark Fusco, Managing Director of Advanced Focus, agrees that VR is an important emergent technology for industry. "VR enables the simulation of new facilities, processes and products in a digital life like environment. Tools like VR help companies to lower the cost and risk to innovate, facilitate the sharing of information and the validation of new designs. This provides the ability to make changes quickly and prior to incurring significant cost during and after physical construction.

"Kadego has a team of talented engineers that offer this VR capability in addition to their existing CAD design and engineering design offering. Advanced Focus use and recommend their capability and services," he says.

With one eye on the future, Augmented Reality is next on Kadego's radar. This technology involves the merger of digital information with a real world backdrop. It's the logical next step for a company working hard to adopt new technologies and changing markets.

Kadego offer services to take you from concept to design to virtual reality. For more information and some design and visualisation examples visit <http://www.kadego.com.au>.