



URBAN CIRCUS

www.circus3d.com

Urban Circus is fusing art with science by using virtual reality technology to design more effective urban environments.

In 2004, urbanist Dr Ben Guy noticed that many urban infrastructure projects are constructed with little foresight into the human experience of how they will ultimately be used.

He wondered if the same technology behind computer games and animated Hollywood films could be employed to design better cities, and established Urban Circus – a company that creates simulation technology specifically for the infrastructure sector.

Urban Circus' flagship product is 'UC Engine' – a platform that enables architects, engineers and decision-makers to virtually walk, fly or drive around designs before they are built. By creating intuitive simulations of bridges, roads, highways and neighbourhoods, clients can improve the quality of their designs and avoid costly construction mistakes.

After five years in business, Urban Circus now operates two offices in Sydney and London, employs 17 staff, and is jointly managed by Dr Guy and business partner Samantha Goddard. Clients include major infrastructure projects in the health, planning, transport, and mining infrastructure sectors in Europe and Australia. Dr Guy explains Urban Circus' success to date...

How would you describe your business model?

Urban Circus provides design simulation technology for the environment and infrastructure sectors.

What inspired you to establish the company?

I completed a Doctorate in Urban Design in the UK in 2004 and found that many civil infrastructure solutions were not necessarily good for the community because they were mono-functional. I recognised a need for a tool that would aid the design of infrastructure projects in terms of their human scale and experience, and deliver a more sophisticated integration with their environment.

At Urban Circus, we have created a simulation tool that allows designers, managers, decision makers and other stakeholders to have a user-experience of the infrastructure as it is being designed. This adds feedback and options to the design process.

How long did it take to build the UC Engine?

The Urban Circus engine took five years to develop, but we're continually developing it incrementally based on client feedback. Currently, we're adding construction auditing and reviewing capabilities to help clients understand the process of building – not just envisage what the end result looks like.

How did you calculate the risks and returns of entering this market?

Samantha and I have taken a lot of personal financial risk in setting up our business. We have not sought external investment, although we sometimes wondered if it was the right thing to do. We are always reviewing our options and learning.

In terms of launching our product, it was about testing the market as early as possible and adjusting our offering according to client feedback. If people like what you're doing, they'll ask for more. Our growth has been very organic and we've been commercially viable the whole time. We're now receiving a lot of interest from clients the United Kingdom, United States and Australia. What we probably need most is expertise and knowledge from business mentors, which we have started to seek out. Mentors and experienced, trusted people are highly valuable, I'm finding.

What impact has the UC Engine had on major urban infrastructure projects in Australia or globally?

We help our clients design better quality and more sophisticated outcomes at the human scale. The Brisbane Airport Link is a good example. The project involved an AUD\$4.8bn toll road and busway in Brisbane across 7km of interweaving public and private transport networks. Urban Circus integrated concepts from a team of hundreds of engineers, architects, construction and environment specialists in tight timeframes. Over eighteen months, this feedback resulted in great integration, reductions in cost, increases in certainty and a much better design outcome.

We've worked on many significant infrastructure projects such as Adelaide's new South Road Superway or the Glenelg Tram Overpass. Our clients tend to be State Governments and construction companies, and sometimes local government and developers.

How did you bring your product or service to market?

I wrote a business plan and then threw it in the bin. Sometimes you come up with a strategy only to discover people don't want what you thought they wanted. I think you need to test the market as early as possible with minimum expense and fuss. If people don't want what you've got, it will save you writing a business plan. I think people get that wrong sometimes. 'Just do it' is not a bad starting point.

Starting out, our biggest challenge was finding clients, and dodging the big, established competitors who want to keep the business for themselves and will do their best to squash you. You have to stay agile to outshine them.

You also need a network of relevant contacts. I had worked in this space for a few years so I knew I could offer different solutions to what was already on the market – that's what gave me a leg up. Trying to sell something to an industry you haven't been working in is tough. It's easy to turn up to a few meetings and everyone will say, 'This is amazing' – but converting that enthusiasm to sales isn't easy.

How many staff do you employ?

We employ 17 staff, which is a nice size. We've invested more in hiring quality staff while keeping our office costs down. Our office is very humble. We opened a UK office 12 months ago as Samantha lived there for five years and saw an opportunity to expand our client base there. We have gone very high, to the CEO and chairmen of the biggest projects in Europe.

In Australia, we now have a software division, production team, a sales and marketing team, and business administration services. My partner Samantha Goddard is Director and Chief Financial Officer. I'm Managing Director.

You employ everyone from 3D artists to programmers and marketing executives – what are the challenges of employing such a diverse mix of practitioners?

In 2009, we realised we needed some strong systems in place and a more formal division of responsibilities, which is not something I thought we'd ever introduce. But you do need rules, processes and systems in place. That way, when a new person joins, there is a process for training them and passing on knowledge – before, it was all in my head.

When you employ more than 15 staff, you're torn in too many places. Now, we go through a process every time a new staff member joins, we have an organisational chart, and our structure is a bit more hierarchical. We realised that having quality people at the head of functional departments will allow our business to enjoy another spurt of growth. I won't be managing everything – the right people in the right place can be more efficient.

What indicators do you use to measure your company's performance?

By asking, 'What's happening in six months time from now?' If we have a major project coming to a conclusion, will we be able to run on half the revenue if we don't have another client to replace it? We've tried to implement a scalable business model because we do need to be flexible. Clients often want a solution tomorrow. It might be unreasonable, but you just have to get on with it. Responsiveness is important.

What's your approach to risk and experimentation? How important is prototyping?

Between one quarter and one third of our workforce is purely dedicated to research and development and creating new technologies, because that's what our business relies on. We've spent five years developing the Urban Circus Engine, but we are a young business and we're still establishing ourselves. We now want to formalise our processes to capitalise on what we've built so far.

Looking back, is there anything you could have done differently?

A million things. I would definitely say it's a good idea to find a mentor earlier – before you even speak to your first client. There are many people out there willing to give advice who are already successful and would like to give something back to the business community. Half an hour of their expertise might save you months and years of terror. It doesn't have to be a formal board, although that may be something that's coming for us soon. It's more about having a network of people to talk to. There are too many times where I've gone around in circles like a rat in a wheel. It gets very tiring!

Where do you see future potential for 3D design/immersive technologies?

I think there's a lot of pressure to make things look beautiful. Our clients don't openly ask for beauty, but there's an expectation for our [simulations] to look as good as they possibly can. It is science and art. Portability, usability and intuition are also very important. A lot of design tools people are building – you can't use the damn things. Intelligent technology is legible and easy to use, because clients don't want to be fighting with technology, they simply want to use it to create the best outcomes.

What are the challenges your business faces looking forward?

Sales. We're doing a lot of work on growing our sales team right now. Obviously you can't follow your sales staff around while they're out there touting our technology. That's part of the 'risk reward' equation where minimal risk can lead to great reward. If you can't handle the risk, then you're in the wrong game.

I used to worry that a competitor would create a similar product to ours, but it hasn't happened. I think the 100,000 small things we do differently make us special. It's not just our technology but our whole system of doing things that differentiates us.

We recently attracted a mentor – a client who had a contract with us but is now working with us in an advisory capacity, who has added great value. Finding mentors that are objective, who you respect and who know about the thrust of running a business can offer great value. But doing this earlier is better.



AT A GLANCE

Name: Urban Circus

Sector: Infrastructure simulation

Launch date: 2004

Directors: Dr Ben Guy & Ms Samantha Goddard

Total staff: 17

Products/services: 3D simulations; virtual environments; video fly-throughs and animations; Urban Circus Engine

Milestones: Urban Circus was one of four finalists for the Nova 106.9 Award for Creativity (2008) and 2009 Lord Mayor's Business Awards. In 2010, Urban Circus won an international competition to provide simulation services to the Victorian Government (Transport) for five years; it also won a position on the Roads & Traffic Authority (NSW) panel through national competition in the same year.