IMMERSIVE TECHNOLOGY IN PROPERTIES

Jagoda Duda has worked on various scale projects as a designer and engineer, solving unique problems and presenting those solutions in way that is easy to understand. After years working in a *JOB*, she decided to jump head first into the property world as an aspiring developer and, by applying her experience, she also helps others show the full potential of their developments.
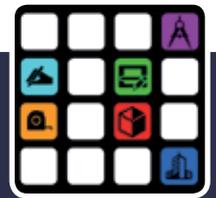
3Davenue.co.uk

A PICTURE IS WORTH A THOUSAND WORDS

Base Photo

3D image

In the property business we talk a lot about ROI, GDVs, and the number of rooms or units. We cut costs to increase profit and invest only what's necessary, rather than looking for opportunities to raise the value through selling the dream of that property – not just the bricks and mortar.

THE HUMAN BRAIN PROCESSES VISUAL INFORMATION 60,000 TIMES FASTER THAN TEXT

It is no coincidence that we are more likely to purchase something that looks good in the photos even if it's more expensive. We are buying not just with our emotions but with our eyes.

In property development, many decisions are made based on our ability to read 2D drawings, plans, sections and pictures of the existing state of a property, and then come up with our vision for it.

For those of us who don't have a technical degree, it might be very difficult to visualise the final look of a commercial property – what would it look like converted into flats?

How would a house look when it has been converted into an HMO or SA? How can we assess the size of a property's rooms and

bathrooms just by looking at a bunch of lines on a piece of paper?

Yes, you can see each floor and the elevation, but are you really able to see the full potential?

Some of us may struggle with finding investors or to get a proper valuation by just describing the idea behind a tired, dusty old house, workshop, pub or empty office space. The valuation of the project depends entirely on the imagination of the surveyor – and on your salesmanship skills.

Usually, when someone is describing their vision, our imagination takes its own spin on things and it always looks different in our heads. Sometimes our own vision is better than the actual outcome and we are disappointed. Sometimes our vision is worse, so we do not take on the challenge and miss out on a great opportunity.

Case Study: COMMERCIAL CONVERSION

Not so long ago, one of our clients (Andrew S Davies) asked us for help in presenting his commercial conversion for valuation. The valuation he had received, which was based on proposed plans and artistic impressions, was much lower than he expected and rendered the whole project not worth the effort.

We created the CGI design based on his brief and the artistic impressions, sent it over for review, and his initial comment was …

> *"Thank you Jagoda, this looks great, but I don't like it. Can we change the brown horizontal cladding for grey vertical, render the façade white and have a different colour of each door – chalet-like?"*

So that's what we did. It took half a day and a couple of thousand mouse clicks to create a pack of new renders.

Can you imagine the impact of such a change in real life? The wasted material and additional labour costs? Would you still do it? I bet you would treat it as lesson learned!

But this was not the purpose of the visualisation – this was just the side effect.

> Andrew: *"As I haven't developed the property it is difficult for ordinary folk to visualise the completed conversion. (…) I have another viewing on Wednesday. Without your help I doubt I'd have got interest at the price I'm asking. (…) worth every penny."*

The second valuation was £50,000 higher!
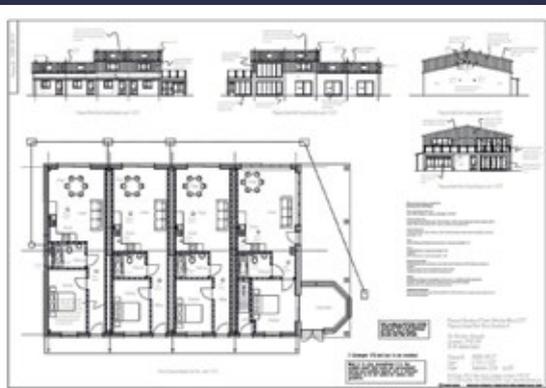
VIRTUAL DESIGN TO THE RESCUE

Virtual design is a process of creating the project in virtual space to give you an opportunity to see your development before its completion. You can then tailor it to your desired design and reflect exactly what you imagined.

Virtual design can be presented in many different ways; the most common are 3D plan, Computer Generated Images (CGI) also known as Photorealistic Renders, 360 Spherical Renders, and animation fly-through, which enables you to get a true-view experience of the development. You will enter every room, take a look around and get a feel for the space and interior.

All parties can conduct design reviews, find challenges in the design that are invisible on the 2D plan, decide on finishes, and by doing so, create a robust and high-quality development.

Working as a site engineer and later as BIM engineer, I've been on both sides of the drawing board and believe me, the design intent can be very easily lost; things can be overlooked resulting in high cost of rework, labour and material waste.

Why learn from your mistakes if you can avoid making them in the first place?


Augmented Reality
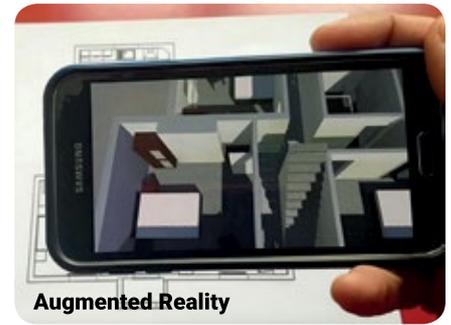
VISUALS GIVE US THE OPPORTUNITY TO SPEAK THE SAME LANGUAGE

No matter our nationality, we all understand visuals perfectly.

In 2014 I was managing the refurbishment of my home in the UK while I was abroad. I created drawings of a proposed layout, drew elevations of all the bathroom walls to show the intended design and layout of tiles. I planned the position of the lights and power sockets, designed the kitchen and prepared a "shopping list" for builders. Every detail was planned and drawn up remotely as I couldn't fly back and forth to oversee the process.

In the UK, many builders' teams include foreigners. Not all of them are fluent in English, which can be a cause of lots of grief, frustration and misunderstandings.

Augmented Reality

The fact that they are great professionals and deliver cost-effective service means we decide to choose them anyway and deal with the additional stress because we see the big picture.
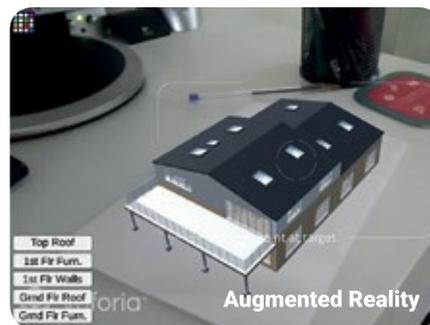
Visual aid not only helps with communication and collaboration on site, but also reduces the need for hand holding and constant site management.

"THE CGI LOOKS GREAT BUT CAN WE MAKE THE EXPERIENCE EVEN MORE REALISTIC?"

Yes. Application of immersive technologies in construction gives us opportunity through Augmented and Virtual Reality.

Augmented Reality (AR) overlays a real view from the camera with artificial ones. It gives you access to 3D content via scanning specific markers to launch connected apps, video or 3D models of the building on your mobile device.

At the end of the article, you have a QR code (or just search for VRUGO in app market), which points you to our AR app. After installation and launching the app, just point your device camera at the 2D plan illustrated.

Portable VR glasses

You will now be able to see the whole design from every angle, even switching on/off different floor levels.

If you are fed up with 100-page Powerpoint presentations and you a fan of novelty and gadgets, then you can reduce it to a single page document with a building plan view.

With the AR app launched on your mobile or tablet you can conduct whole design reviews.

Can you imagine having a whole portfolio assigned to your business card and at the same time an evergreen marketing tool, easily accessible and always at hand?

Virtual Reality (VR) completely replaces your world with a virtual one and it is the most challenging for content creation and experience. You can create virtual tours through your design in 1:1 scale, carry out design reviews and present your idea before any real work even starts.

Virtual Viewing and live customisation ▶

You can also experience and interactive walk-through either in game mode on a desktop or VR mode with headset.

You can view the apartment-to-be in real time, configure the interior, pick wall colours, bathroom tiles and floor finishes. In short, you can create a bespoke design tailored to the end consumer's vision and style.
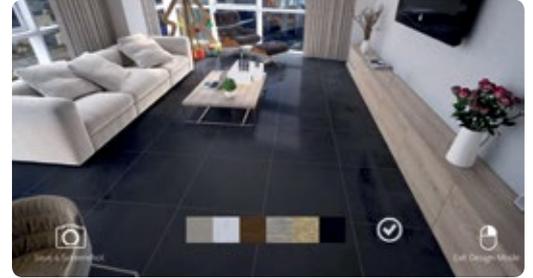
Case Study:
DESIGN REVIEW

Michael found us through Facebook (networking!), having seen examples of videos we had posted. He had started on the development of a 135-year-old rectory house into a HMO and needed a tool to convince investors on a crowd-funding platform about his design intent. He wanted to demonstrate how the space would be re-used, walls moved, beds placed, toilets installed, with every square foot accounted for.

We worked through the plans with Michael, and as a result created a detailed 3D model of the whole rectory, showing the furniture in every apartment and colour-coding each unit to emphasise the layout of each floor.

The whole model was then converted into Augmented Reality and assigned to a GA plan of the rectory (see side image). Michael then used the Augmented Reality model on a discussion panel with stakeholders and property developers to explain the rationale behind particular details, as well as allowing everyone in the room to use their device to review the model independently.

The whole process helped to pinpoint problematic areas, especially in loft apartments due to the complex roof shape.

The project was designed by architects but not optimised for builders (ie, bathtub installations would be a nightmare), and without a proper 3D model, would have proved impractical.

Michael Slodczyk: *"Thanks to visualisation and AR models created by 3D Avenue we were able to design apartments, especially in the loft, quicker and better than by using just conventional plans and sections. We are very pleased working with Jagoda & Mark and are planning to use their services on our large-scale project in Sheffield for off-site sale."*

So, if we could summarise the benefits on immersive technologies, which have the biggest impact?

We now live in the digital era. Everything is available online: shopping, communication, data storage and processing. So how do you cut through the noise? How do you stand out from the crowd and reach potential clients, engage with them and keep them engaged longer than your competitors, with your vision, excite them about your products and services and make them come back to your content again and again?

With Google and Apple constantly pushing the limits of your mobile devices, with HTC Vive and Oculus Rift breaking the barrier between what's real and what's not, this technology is here to stay and is no longer a fad or a toy; it is a fully-fledged tool to use now. To save time and money, to make investments go further and to make your project stand out above the crowd.

TRY IT YOURSELF NOW WITH YOUR PHONE

1. **Open App store or use QR code**
2. **Install VRUGO**
3. **Launch the app**
4. **Point at Rectory plan**