



YULIO^{VR}

VR TOOLS

OUR GUIDE TO GETTING STARTED WITH VR IN ARCHITECTURE

ARCHITECTURE VR TOOLS – GETTING STARTED

When Yulio started working with Architecture firms like Gensler, Diamond Schmitt and more back in 2016, VR was already clearly going to be transformative to the industry. In the intervening 2 years, we've heard firms move past the idea that it may be useful and start talking about how they integrate and use VR, and what new roles VR has opened up on their teams.

If you're looking to get starting using VR in your architecture practice, we have some simple ways to get started, and some questions to ask to ensure you choose the right solution.

Change management is difficult in any organization, and many of us have seen valuable tools which are under-utilized. To effectively add VR to your workflow, you need to have a vision for how VR will be used. To get you started, here are some of the most common things that can be achieved with VR as learned by our early-adopter clients.

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— BIM and TRADES COMMUNICATION

“We now use VR within several stages of a project from sharing and collaborating on ideas in-house to presenting ideas to clients and also for clarifying with contractors exactly what they need to build. Using headsets works really well when people are remote and can experience a design from wherever they are. During larger, in-person meetings, we tend to put VR designs onto an iPad or on a big screen. That enables us to navigate quickly around environments and for everyone to view the same thing. It doesn’t rely on having 10 people sitting together with goggles up to their faces which might be a little weird. It’s also been of huge benefit to contractors as they can understand exactly what they’re building without the need to take entire teams through hundreds of drawings. We’re not just giving them technical specifications but showing them the intent, what the finished product is meant to look like. They can ask us questions and clarify anything they need to and there’s far less opportunity for confusion down the line.”

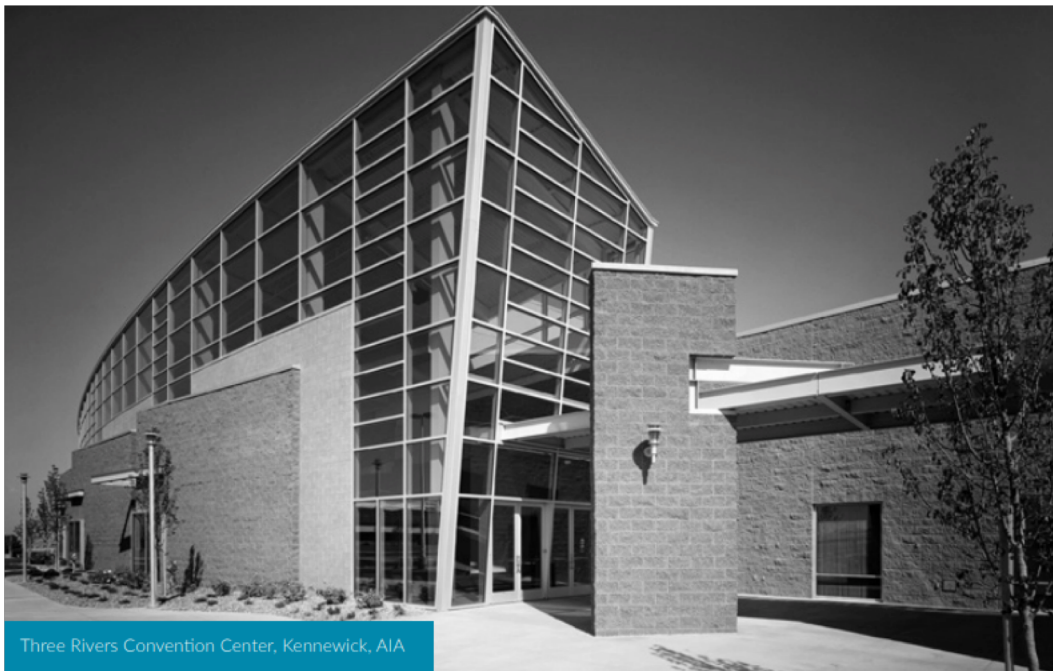
-Ross Hunter, Company Director at Graven, Glasgow



SHARING A VISION

For us 3D visualisation is a key piece to how we convey information. When we're presenting to clients using Sketchup 3D models - people often don't understand what they're looking at or specifically where they are within a design. VR offers another way for us to share and communicate our design intention. So many people have a hard time reading floor plans and even 3D renderings so VR offers us a tool to help them visualise more clearly and understand what they're going to get. We're still looking at ways of integrating this into workflows. There is a strong general appetite from our team to use technologies to help improve productivity and efficiency in sharing design so there is a lot of self motivation behind it. But ultimately we did it because often times, the client "just can't see it".

-Indy Dehal, Principal, ALSC Architects, Spokane



Three Rivers Convention Center, Kennewick, WA



The Giambrocco build in Denver, which Gensler showed off in VR

BUSINESS DEVELOPMENT

Gensler is all about new tools and exploring ways to increase our abilities to design, so Yulio is one of these companies that aims to create a seamless connection between what we do and what VR provides. As an office, particularly in Denver, we have found that it's a great opportunity to show people the potential of this at a local trade show.

Typically, the environment of a trade show is so that you're inundated by so many things, that people are usually a little guarded. But being at the booth while using Yulio, we noticed that the Yulio content is a lot simpler. It relies on a lot less custom technology or special set up and instead, is a simple tool for conveying 360 renderings through screens, headsets – plus it's all through the cloud. It was an interesting experience to see a technology that is effective.

-Alex Garrison, Architect, Gensler Denver

WHITE LABEL SPACES

Using VR to either ‘white wall’ or show potential interior layouts and styles for commercial real estate rentals is another VR application that’s been successfully demonstrated by our client, Dream, in collaboration with Mayhew, an office design firm. Until recently, common approaches to successfully leasing commercial properties would involve either physically stripping out all existing walls and furniture and creating a white-walled, blank canvas for the next renter or, alternatively, installing rented staging furniture to mock up a possible look and feel. Being able to show rental space virtually, stripping out unwanted elements and manipulating environments quickly and easily to suit a renter’s specific choices – without any need for actual physical alterations and therefore at almost no cost – is a great VR use case. Dream invited realtors to a blank warehouse space, and created a VR kiosk near a set of footprints on the floor, inviting agents to “stand here”



Paul Bradshaw, vice-president of sales for Mayhew, a Richmond Hill-based office interior design firm, uses Yulio in working with realtors, and is an enthusiastic proponent of VR. “We work closely with realtors to customize interior spaces and this allows us to show how the space could perform for their customers,” Bradshaw says. “The infrastructure cost is minimal and it’s readily accessible to everyone.”

FEASIBILITY

VR's ability to provide viewers with a clear spatial awareness of an environment before it exists was put to great use by Mayhew for Kubota, a tractor, and heavy equipment manufacturer when designing a new showroom facility. Scaled renders of Kubota machinery was added to detailed CAD drawings of the proposed showroom before being created as VR experiences.



Mayhew designed Kubota Showroom in Yulio VR

With Kubota's products being so significant in scale, being able to evaluate exactly the how the space would end up when full of equipment – before anything existed in real life and any cost had been incurred – had obvious value. Developers were able to experience the look, feel and layout of the structure from several different vantage points, and understand exactly how it would be once it was in place. Taking the time upfront to think through the physical placement of heavy machinery, while still having a human-focused workspace potentially saved significant money and time, had problems been uncovered during construction, instead of in advance with VR design.

CHOOSING THE RIGHT VR SOFTWARE

When you're looking for a virtual reality solution for your architecture or design firm, start by thinking about your clients. It's their reaction to your VR presentations that will drive ROI from VR. Your VR decision should be guided by how you want to use VR to first attract, then pitch and ultimately present final designs for clients. Any solution you choose must integrate across the key areas of your workflow, from authoring, through viewing and storing designs. As you begin your VR investigation, you'll find it helpful to break your criteria down across these categories to help you prioritize which software features are critical to meeting your goals.

— AUTHORIZING CONSIDERATIONS

Check with a vendor about the transition from authoring your existing 2D designs to VR experience. What are the interim steps and how long does it take to create the VR experience? If programming skills are involved, how intense are they and how much can be leveraged between projects? A lengthy authoring process which doesn't use the tools you already have in-house may result in good visual experiences but will make design inefficient, and probably result in VR being used for only one stage of major projects. By contrast, a simple process with turnkey outputs can potentially be used from pitch to final presentation and portfolio at multiple levels of fidelity. One valuable use of VR is showcasing variants to clients – in lighting patterns or color schemes or letting them explore sightlines. Complicated process will mean it isn't feasible to create variant renders, and you will end up using the technology for only your final presentations. That may work for your intended uses of VR, but you will limit your ability to use VR to gain client feedback and have it help you guide them to quick decisions.

CHOOSING THE RIGHT VR SOFTWARE (CONT.)

VIEWING CONSIDERATIONS

The solution should work whether you are presenting something in person, or remotely. Consider the presentation modes that fit into your existing meeting styles. Does your firm do 50% or more of presentations remotely versus in person? Are you typically presenting one to one or one to twenty people? Are your stakeholders scattered among different cities and countries? The infrastructure of the solution you choose needs to support all the right presentation cases, so be sure to ask vendors about any limitations to the location of either presenters or viewers, about how many users can be on the system at once.

Once you are in front of a client, asking them to view something in VR, consider what the handoff of the headset will be like for your client. A key challenge with VR is that viewing is an isolating experience. When you have a client wear a headset, you are essentially blindfolding that person. It creates discomfort for many people, either because they fear looking foolish in front of their colleagues or in some cases, due to nausea.

Think about how the presentation will flow as you tell your design story. Ideally, there will be a way to direct the viewer's attention to specific elements of the design, rather than have them wander on their own. And a way for you to see what they are looking at when they give feedback.

A browser-based viewer that doesn't require goggles may also be important. You will encounter motion sensitive people who are reluctant to try the headsets and will find that headsets aren't yet ubiquitous among your clients. While this viewing method takes away some of the immersive effects of VR, having it as an option is critical if you plan to share your designs remotely with someone who doesn't have a headset.

— SHARING AND STORAGE CONSIDERATIONS

Ask any potential vendors where and how your files are stored, what the security is like and how dependable retrieval is. If you are uploading your intellectual property to a vendor's website or to the cloud, you also need to know they will be there when you need them. Ask about the vendor's uptime commitments, any redundancies and whether or not you need internet connectivity to share your designs. These small technical considerations may be the difference between a smooth presentation and one where you can't access the experience you were about to show a room full of clients. Additionally, find out if a vendor's pricing model is at all based on storage. Is there a certain number of projects you are permitted to store? If you are permitted only a few projects per month, they may not be accessible as part of long term storage. Think about the potential for designs to be shared not only with clients but long term as part of an online portfolio, used in PR releases and accessed in real time during pitches as you show potential clients your experience with similar spaces.

Like any business software solution, the VR system you choose should be reliably world class in its service level agreements and ability to enhance, protect and present your intellectual property.

NEXT STEPS

The real power of VR is in storytelling. It enhances good design by letting clients experience it rather than just view it. The right VR solution will strike an optimal balance between viewing experience, communicating your message and practical authoring to allow for easy integration in key stages.

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HOW TO GET STARTED
AT [YULIO.COM](https://yulio.com)

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