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Ninad as an entrepreneur has over 20 years of experience in gaming and interactive media space. He is currently the COO of WITS Interactive Pvt. Ltd., and is also the Co-Founder & COO of GoPhygital, a VR, AR, MR focused venture incubated by WITS Interactive. Chhaya has an extensive experience in creating and publishing games across platforms and has several award-winning games to his credit. He regularly speaks at conferences both in India and internationally, on topics covering AR, VR, MR, Gaming, and also advises businesses in formulating their phygital strategies.

Future of Infrastructure Development down the decade

Virtual Reality (VR) as a technology is considered to be typically associated with gaming through an enclosed headset (HMD) which immerses the user into a virtual world of sheer awe and excitement. However, now-a-days VR is not only used in gaming, it is increasingly being used across various other industries. This technology is currently being used by numerous companies in the real estate sector to showcase project from design and construction of a building/bungalow to condominiums for sale. VR helps the user see their next home/business and the surrounding area before they decide to buy, saving the company's and user's time and money.

Virtual Reality experience provides the owner and the client a virtual and realistic vision of the project rather than the typical drawings. As for many of the clients and owners, it is difficult to think in three dimensions a verbal or written plan. Hence VR will add a new dimension to the future of infrastructure down the decade. It gives a completely new phase for marketing and construction companies by bringing the specific vision of a client to life by providing plenty of room for sharing ideas and making alterations during the pre-planning stages.

Along with the major corporations, small and medium sized businesses can also make use of this technology for home and office renovations. Even small construction projects can take advantage of this immersive technology. The applications and headsets completely immerse the user by keeping them away from the distraction and helping them focus on the content matter.

VR will become an integral part of the deconstructing and infrastructure process from the architect's office room, to the job site. Construction projects are a lengthy and expensive proposition and it pays to consider all the factors before laying the first stone. Hence, once the construction has begun, changing tracks midway through a build is very difficult from all aspects like financial, administrative and logistical reasons; blueprints may need to be resubmitted and reapproved by the city or other government authorities. The materials needs might change and a small alteration in the design can have a huge effect on other parts of the construction.

However, sometimes it is not possible to track every variable once a building or a construction project begins to take shape, while problems and various deficiencies in the design may become apparent that were not visible on the blueprint earlier. VR provides a creative and elegant look to the blueprint by making it interactive and realistic, giving the user a sense of what the project would look like before its completion and before a single worker sets foot on the job site.

One of the biggest and the best changes in the future would be the impact Augmented Reality (AR) will have on architectural and construction industries by giving a live view of a real-world environment, whose elements would be augmented by computer-generated sounds, video, graphics or GPS data. It will give the engineers and the designers the ability to visualise the projects realistically by converting the 2D drawing into 3D models, helping the users to visualise the model as it would appear to be in the actual environment setting.

The benefits of VR and AR are well known but the technology's main barrier lies in the target audience (public) perception. We all know that the popularity of VR/AR comes from the gaming industry, hence the construction companies and customers alike may be skeptical to adopt and use it. However, young workers and architects in the construction business should embrace the adoption of VR and AR in order to push them to the forefront of construction. As younger generations are far more open to adoption of newer technologies, and eager to innovate and revolutionise the construction industry, the introduction of VR and AR experiences will help its acceptance to grow in the market and will eventually influence construction in a much more impactful way. With this innovation, we can say that AR and VR will change the future of infrastructure down the decade and the paper plans will be obsolete. ▲