REALITY OF VR

SIBUR shares its experience of applying VR.

In January 2019, KPMG published the results of the Digital Technologies in Russian Companies study, according to which the largest industrial companies view VR/AR technologies as one of the most promising innovations. Today, the virtual FX are no longer confined to the entertainment industry: the "new reality" is being used to train personnel, repair equipment and build production facilities.

#QUOTED#

In Russia, a quarter of oil and gas companies have already adopted VR/AR, which is expected to facilitate a consistent growth of the industry by at least 50% a year, according to analysts. Right now, the use of "virtual" technologies is most prevalent in marketing rather than production, but their potential has long moved beyond just promotion.

SIBUR has been implementing VR/AR technologies as part of the Digital Transformation project that sees the entire Company transition to Industry 4.0. AR is primarily used for equipment maintenance and repairs. At the Tobolsk and Nizhnevartovsk sites, fitters and mechanics remotely participate in consulting sessions with suppliers and experts from all over the world. The employees use AR glasses with a built-in video camera and a display, which allow them to receive any files from external experts via a single communications platform.

Virtual communications make it possible to carry out urgent equipment repairs without an expert group on-site, which reduces downtime and related economic losses. When SIBUR's employees needed to get in touch with their German colleagues during the installation of a new facility, AR glasses allowed them to continue the installation just an hour later, while usually matters like that take a couple of days to resolve.

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Another area of VR implementation at SIBUR is simulators. In Tobolsk, employees who work with electrical equipment use VR simulators to practice switching skills, which prevents mistakes and ensures safety in real life. The Tomsk site has been implementing a VR simulator for servicing compressors, enabling the facility to reduce decision-making times. In the long term, VR-based simulators will help employees become fluent in HSE regulations, including the handling of hazardous chemicals.

#QUOTE1#

AR devices linked to specific equipment will also be used for personnel training. Virtual technologies will model complex situations and guide users through possible solutions. In theory, AR can be used to monitor equipment, as all operating indicators can be viewed on a device camera or using special glasses.

NIPIgaspererabotka, a leading Russian centre for facility design, procurement, and construction, uses drones at its construction sites. Their software is able to compare the real situation with that specified in design documentation and control costs. The next step should enable the integration of drones in concert with AR so that builders could reference 3D hologram models in their helmets during their on-site work. SIBUR's corporate training specialists also plan to use helmets. This new format will provide for a greater sense of immersion and allow the team to work within a single virtual space.

Alexander Leus, AR/VR Industry 4.0 product owner at SIBUR, says that it is not easy for Russian companies to assess feasibility and cost-effectiveness of virtual technologies. The development of this new area can be facilitated with a comprehensive roadmap and improved regulatory framework. Due to the scale and conservative nature of their production facilities, industrial giants find it more difficult to adopt digital solutions, while the petrochemical industry has always been ahead of the curve in terms of automation.

Source
(http://www.tadviser.ru/index.php/%D0%A1%D1%82%D0%B0%D1%82%D1%8C%D1%8F:%D0%98%D0%BD%D1%82%D0%B5%D1%80%D0%B2%D1%8C%D1%8E_TAdviser_%D0%90%D0%BB%D0%B5%D0%BA%D1%81%D0%B0%D0%BD%D0%B4%D1%80_%D0%9B%D0%B5%D1%83%D1%81%1_-_%D0%BE_%D0%BF%D1%80%D0%B8%D0%BC%D0%B5%D0%BD%D0%B5%D0%BD%D0%B8%D0%B8_%D1%82%D0%B5%D1%85%D0%BD%D0%BE%D0%BB%D0%BE%D0%B3%D0%B8%D0%B9_%D0%B2%D0%B8%D1%80%D1%82%D1%83%D0%B0%D0%BB%D1%8C%D0%BD%D0%BE%D0%B9_%D0%B8_%D0%B4%D0%BE%D0%BF%D0%BE%D0%B8%D0%BD%D0%B5%D0%BD%D0%BD%D0%BE%D0%B9_%D1%80%D0%B5%D0%B0%D0%BB%D1%8C%D0%BD%D0%BE%D1%81%D1%82%D0%B8_%D0%B2_%C2%AB%D0%A1%D0%B8%D0%B1%D1%83%D1%80%D0%B5%C2%BB)

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