

COMPANY

Johnson & Johnson Institute

DEVELOPER

Osso VR

INDUSTRY

Healthcare



CASE STUDY

# Driving greater adoption of cutting-edge medical technology

The Johnson & Johnson Institute is enhancing surgical training and team collaboration with Osso VR software and the Oculus for Business platform.

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## How the Johnson & Johnson Institute and Osso VR are enhancing surgical training and team collaboration with Oculus for Business.

Surgical training hasn't changed much over the past 100 years. Residents observe experienced surgeons, and then they're given more autonomy until they can perform surgery on their own. But according to Sandra Humbles, Vice President of Global Education Solutions for Johnson & Johnson Medical Devices, this model is no longer sustainable. "Technology is accelerating the pace of surgical innovation," she says, "and now there's more for a surgeon to learn than ever before."

Justin Barad, M.D., agrees. An orthopedic surgeon and software developer, he founded Osso VR after years of frustration in operating rooms. "There were always new medical devices, but we would literally be Googling how to use them while the patient was on the table," he says. "Learning curve data shows that you have to perform a new procedure 100 times to be proficient. So we often didn't use the new devices for safety reasons — we didn't have time to learn everything well enough."

Some promising new medical devices fail to gain widespread adoption because they require extensive training before surgeons feel comfortable using them. And traditional training methods don't measure or provide objective feedback on a surgeon's performance.

### Building surgical training experiences in virtual reality

In 2017, Johnson & Johnson Institute's Education Technology & Innovation team developed VR experiences to train surgeons to implant orthopedic devices. The experiment showed that VR had promise, but the team couldn't find a way to scale the training until they discovered Oculus for Business and Osso VR.



**We knew VR could help surgeons learn new procedures faster than traditional teaching methods like watching videos or reading textbooks...what would have been nearly impossible just a short while ago is now within our reach thanks to Oculus."**

Sandra Humbles  
Vice President of  
Global Education Solutions

Johnson & Johnson  
Medical Devices

"The Oculus form factor is more portable than our previous solution," says Tim Mauri, the team's director. "And the Oculus for Business software allows us to provision hundreds if not thousands of training headsets with ease." The team is also making the most of Oculus for Business features like the Device Manager. "In a highly regulated industry like healthcare, we have to have the right training content on the right headset at the right time, and the platform helps ensure that."

Osso VR is continuing to build out the training curriculum for the J&J Institute — it includes more than a dozen modules so far. Each one gives surgeons the opportunity to put on Oculus Quest headsets and learn the steps of a procedure in a realistic virtual setting that carries no risk to patients. Justin Barad of Osso VR says that knowing the steps means fewer mistakes and more efficient procedures in the real world. "And we build in checkpoints to be sure the quality level is there and the surgeon is learning," he says.

During the COVID-19 outbreak, the J&J Institute and Osso VR have seen a spike in requests from academic medical centers that need a way to continue their residents' training now that elective surgeries are being canceled. "Medical centers don't want to end up with a shortage of trained surgeons, so there's an urgency to this," says Mauri. "And we have an incredible VR solution powered by Osso VR, supported by Oculus, and backed by objective data that verifies its effectiveness."

### Enabling remote collaboration in challenging times

The Oculus for Business platform is also allowing members of both teams to keep collaborating despite shelter-in-place orders. They put on their Oculus Quest headsets and join virtual meetings where they sketch out ideas and plan events on virtual whiteboards. Tim Mauri likes the immersive feeling of VR meetings more than the 2D experience of video conferences. "I can high-five team members in virtual reality," he says. "After having had limited human contact for weeks, this is a convincing experience of being with other people and getting work done."

### Looking to the future

"With the portability of Oculus Quest headset and the support of Osso VR, we will be scaling access to our VR training platform quicker than ever before," Sandra Humbles says. "We want to make VR available to every surgeon in every hospital around the world. We're focused on training the procedures and ensuring our products are used safely in a way that's more time efficient, cost-effective, and measurable."

## Superpowers of VR

VR delivers unique capabilities that give enterprises a competitive edge.

### Top 3 VR superpowers for the Johnson & Johnson Institute:



High Stakes, No Risk



Unlimited Re-Dos



Objective Insights



**The Oculus Quest headset offers the most premier VR experience for surgical training."**

Justin Barad, M.D.  
CEO and Founder  
Osso VR