



SICK
Sensor Intelligence.

Virtual reality – the future of learning?

SICK is building a new learning world and gaining initial experience with VR goggles

From today, Virtual Reality is real: SICK AG's training center is moving to a new campus. In an effort to get employees accustomed to a more active form of learning, the business has been using Virtual Reality apps developed in partnership with **tts**. The aim is to introduce a whole new world of learning ideas, and VR simulations are ideally suited to the goal.

Based in Germany, SICK is a global manufacturer of sensors and sensor solutions for industrial applications. With a portfolio of over 40,000 products, the global training requirements for the business' 8,000+ workforce are substantial. Two and a half years ago, all SICK's training resources came together to create the Sensor Intelligence Academy (SIA). At the heart of the academy, a new Learning Management System allowed employees to book any training course in the learning portfolio. Now, the

system is being rolled out to customers too. With construction of the new campus scheduled for the end of 2018, SICK is taking the opportunity to develop an exciting new learning concept: the 'SICK learning world of the future'. "We're experiencing a sea change in the way learning is delivered," explains Isabella Löffler, Team Lead Learning Media at SIA, "And we're committed to creating a learning environment that supports the change".

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Looking at the world of tomorrow, today

Delivering Industry 4.0 training was an early goal for the SIA and, working in collaboration with **tts**, web based training has already been delivered on this subject. But the next step will be more ambitious: "A virtual reality module that presents our range of SIA training initiatives in the new learning world is expected to meet high expectations." Artificially generated 3D worlds will impress users with their realistic look and feel. The experience will be out of this world, creating the impression of real face-to-face encounters convincing enough to support truly memorable, immersive learning scenarios. According to **tts**, two forms of immersive learning are particularly suitable for the creation of corporate learning: the 360-degree photo panorama and real-time rendering.

Simple in-house production of a 360-degree photo panorama

A genuine photo of an actual industrial plant forms the basis of SICK's first foray into the world of photo panoramas. Captured with a special 360-degree camera, then enhanced with so-called "hotspots", this was the first VR application to be created for the product training division. "This kind of VR can be produced in-house quite easily", says Löffler. "The hotspots are great for illustrating how the various sensors in the plant interact."

Real-time rendering: reality, but not as you know it

Thanks to dynamic animation, real-time rendering delivers an even more vivid experience. The computer-generated world depicts scenarios that are impossible to photograph or don't even exist yet. The interactive-exploratory potential seems virtually





Facts & Figures

- Sensor manufacturer with over 8,000 employees worldwide
- Has been using **tt knowledge force** since 2014
- Already testing visions of the future with the help of computer-generated scenarios
- More creativity thanks to its VR module
- Envisages using VR technology in many other areas

unlimited and – just as SIA intended – the learner plays a much more active role, discovering through intuitive, proactive exploration.

Stimulating curiosity to arouse widespread enthusiasm from customers and employees: That's what prompted SIA to opt for real-time rendering when it created the 'SICK learning world of the future'. SIA and **tts** teamed up to design the concept with the help of authentic architectural drawings for the planned 'real' building and exciting ideas for potential new training tactics. The process covered everything from mock-ups (digital models), detailed concept designs, sound dubbing and 3D modeling, through to the app's final development.

Virtual, but deceptively real

The result was a highly captivating experience where learners can start

their "quest for knowledge" in a virtual movie theater with a video on the big screen, or, if they want to, can jump directly to the training room. From there they can move from one station to another using the experience's "hotspots", to immerse themselves deeper into the learning world of the future. Finally, a section of the room morphs into a new model that visualizes a new form of learning based in the future, as the soundtrack explains how this innovative new learning will be designed in the new SIA campus building.

Lessons learned

140 product managers were given an opportunity to beta test the new version – and they were delighted. Enthusiastic feedback confirmed that the immersive experience prompts curiosity and a thirst for knowledge,

producing an almost irrepressible urge to explore. Users enthusiastically jumped from one hotspot to the next as they became increasingly engaged in the virtual world around them. **tts** has already incorporated measures to counteract dizziness, known as VR sickness, which is rare, but has been known to occur. A bluetooth joystick for smartphones now also encourages users to immerse themselves even deeper into the virtual training experience. So, what's the conclusion? "The VR module is perfect for getting employees to open up in creative two-way discussion", says e-learning expert Isabella Löffler.