



Capital city gears up for VR

Tshwane invests in virtual reality skills.

by Lauren Kate Rawlins

The city of Tshwane, in partnership with EON Reality, recently launched a R140 million Interactive Digital Centre (IDC) to invest in local Virtual Reality (VR) educational content creation.

VR hardware is finally catching up with the software that has been available for years, making it accessible and affordable for the consumer. However, there is a global shortage of VR content. The newly launched Tshwane IDC aims to address this problem.

Virtual reality and augmented reality (AR) are usually spoken about in the mainstream in terms of gaming and entertainment. But the technology also provides an immersive and visceral way of learning and teaching.

VR, or interactive 3D, does not require a student to speak or read a specific language. Instead of telling, it shows. Students are able to experience situations for themselves first-hand.

The IDC is an initiative between the city of Tshwane and US-based software com-

pany EON Reality. Both parties contributed to an initial capital investment of over R140 million.

The content and applications created by the centre will help with vocational skills transfer and improve local STEM education.

The IDC has four sections: the first is the showroom where VR and AR solutions are on display; the second is the VR academy; the third is a content development studio; and the fourth (not yet built) is a 4D theatre.

The centre will train 50 students each year



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free of charge in its VR academy. A prerequisite for the 11-month course is a qualification in multimedia, programming or graphic design, although the IDC will consider self-taught students with an understanding of 3D. Applications open each year is October.

Right time

Students will go on to either work in industry, start their own businesses or work for the IDC as a content creator.

Some examples of the projects the centre is currently working on include showing forestry students how to use a chainsaw

correctly, and helping medical students diagnose thyroid disease.

The content development studio has space for 25 people, with the option to expand to 150 with future funding. The first five content creators have moved across from local VR company, the Naledi3d Factory.

The Naledi3d Factory has been using EON Reality software for 17 years and was instrumental in bringing the centre to SA. Founder Dave Lockwood will now be running the IDC as centre director.

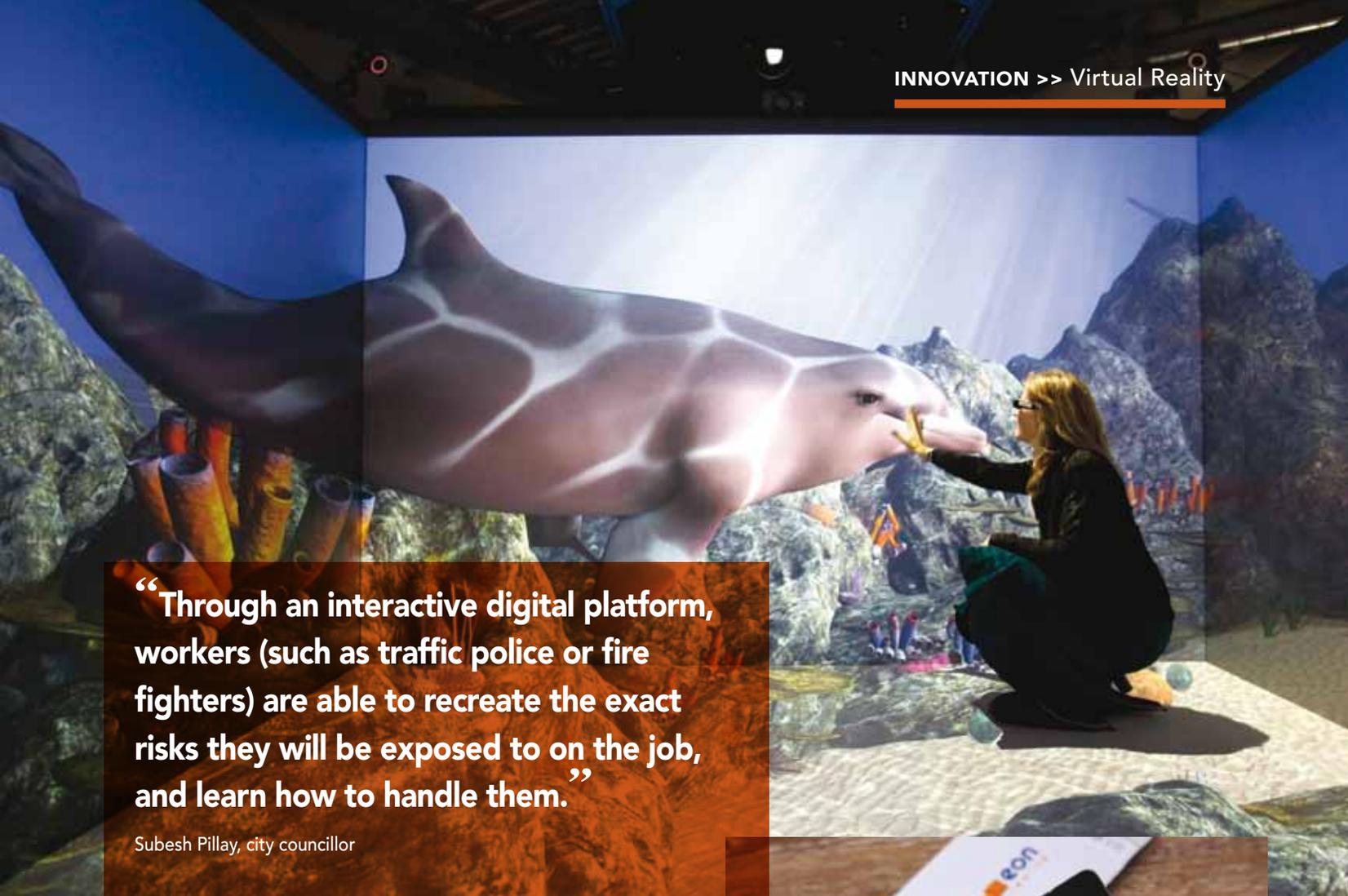
Lockwood says the technology has huge potential to support and transform how

complex subjects are taught across Africa.

“Language barriers, as well as low literacy levels, tend to reduce how we understand what is being said and taught,” says Lockwood. “By showing a concept in a way that we can also play with it, means we can ‘see’ what is being taught; hence, we can understand it better and also remember it for much longer.”

The Naledi3d Factory has done work all over Africa, but Lockwood says a powerful PC with a good graphics card needed to be lugged around to make it work.

He adds that the IDC comes at the perfect time: firstly, because the same powerful hard-



“Through an interactive digital platform, workers (such as traffic police or fire fighters) are able to recreate the exact risks they will be exposed to on the job, and learn how to handle them.”

Subesh Pillay, city councillor

ware can now fit into someone’s pocket and, secondly, because the centre will be able to create local and relevant content.

“We were really worried a few years ago that if SA did not make a plan to create its own content, we would be relying on American and Indian imports,” says Lockwood.

With VR learning, students need to experience simulations they can relate to or the level of engagement drops.

Future investment

EON Reality expects global AR and VR markets to reach \$150 billion globally within the next few years and the 3D market is estimated to top \$227 billion in 2017. The software company says content creation has to expand to keep up with local and global consumers’ needs.

Research done by Goldman Sachs earlier this year shows VR technologies will be bigger than television inside of ten years.

The IDC is a central part of the city’s long-

term plan, Tshwane Vision 2055, which aims to break the cycle of generational poverty, inequality and underdevelopment.

While the investment may not create jobs for thousands of people off the streets immediately, the city says it will benefit indirectly by using VR to train a high-skilled workforce.

City councillor, Subesh Pillay, says: “Through an interactive digital platform, workers (such as traffic police or fire fighters) are able to recreate the exact risks they will be exposed to on the job, and learn how to handle them.”

Lockwood says it’s important to emphasize that VR does not replace a teacher or trainer, but gives them a better tool with which to teach.

To sustain the centre, shorter paid-for



courses may be on offer to the public in the future.

The IDC will concentrate on four areas of content creation: vocational skills development, maths and science at schools level, international and heritage.

Lockwood says ‘heritage’ content will see the creation of scenes from South African history before the arrival of Jan van Riebeeck. The centre is particularly passionate about this content and hopes to use it to empower and inspire young South Africans. **D**