



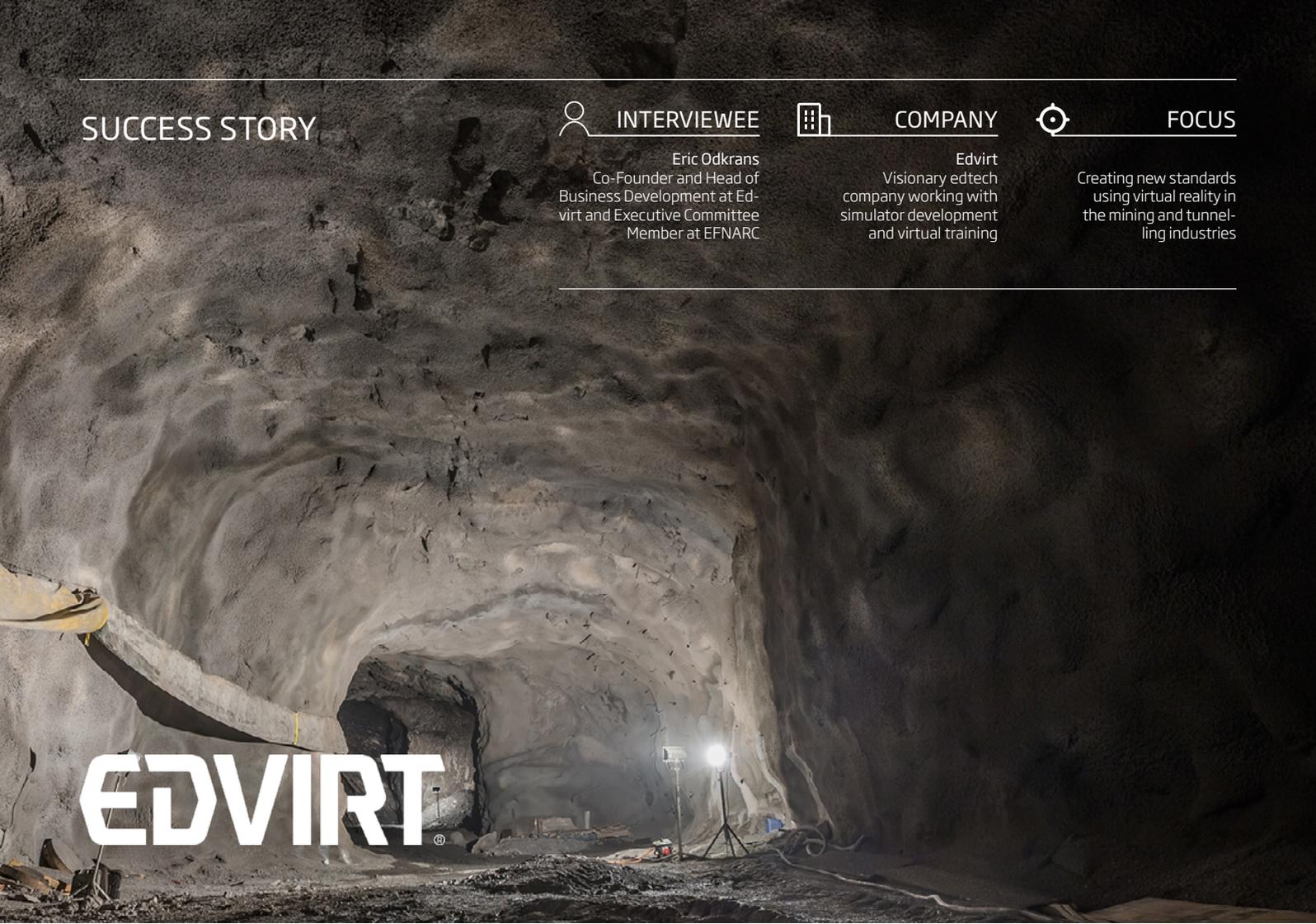
Eric Odkrans
Co-Founder and Head of
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Edvirt
Visionary edtech
company working with
simulator development
and virtual training



Creating new standards
using virtual reality in
the mining and tunnel-
ling industries



EDVIRT

10 years of creating new standards using virtual reality

Simulators and virtual training are now an industry standard in the sprayed concrete industry, and it's largely thanks to EDVIRT's determination to improve nozzle men training.

EDVIRT's unwavering commitment to enhancing nozzle men training has played a significant role in establishing simulators and virtual training as the prevailing norm within the sprayed concrete industry.

EDVIRT is an edtech company working with simulator development and virtual training in the mining and tunnelling industries. What started as a research project conducted at Chalmers University of Technology in

Sweden has now evolved into an international brand changing the landscape for sprayed concrete nozzle man training.

THE STORY IN BRIEF

The opportunity

Tunnelling contractor BESAB presented the idea of a shotcrete simulator to Eric Odkrans and Petter Börjesson at Chalmers University of Technology.

The challenge

Petter got to work on developing the software prototype, while Eric focused on the commercial potential of the simulator.

The foundation

In February 2013, EDVIRT was founded upon acquiring its first customer, LKAB, a prominent iron ore mining company in Sweden.

An academia success story

Working with the tunnelling and mining industry to make commercially viable innovations

As a part of their master's thesis, [Eric Odkrans](#) and [Petter Börjesson](#) were introduced to the idea of developing a shotcrete simulator. Tunnelling contractor BESAB presented this idea to Chalmers University of Technology. Petter got to work on developing the software prototype, while Eric focused on the commercial potential of the simulator.

After completing their individual research projects in 2012, they found that they could in fact simulate sprayed concrete and that there was a need for it in the industry. In February 2013, Petter and Eric founded EDVIRT after getting their first customer—[LKAB](#), a prominent iron ore mining company in Sweden. Already from the beginning, their aim was to standardise virtual training of nozzle men.

In many cases, the academic space can develop great research, which sadly ends up in the desk drawer. The industry also often sits on great commercial ideas that never are challenged at a research stage. But, when



“When academia and industry collaborate, and especially when there are motivated entrepreneurs involved, remarkable innovations can be realized.”

academia and industry collaborate, and especially when there are motivated entrepreneurs involved, remarkable innovations can be realized. EDVIRT is a good example of that.



Experts at customized training solutions

How can real-life processes be improved with virtual training?

Over the past ten years, the EDVIRT team has grown their list of products and services, focusing primarily on safety features, training courses and virtual training for tunnels and mines.

According to Eric, their strength lies in analysing processes and identifying whether they can benefit from virtual training. While many processes are suitable for on-the-job training or theory, others benefit from virtual training. However, a mix is often most efficient—**and that's where EDVIRT comes in to develop training courses that heavily involve virtual training but also incorporate real-life scenarios or theory aspects.**

An essential part of their process when developing training courses and

software applications is involving industry experts every step of the way. As Eric says:

"Whatever we develop, we do it with people in the industry. All our products have been jointly developed with personnel from machine manufacturers or tunnelling and mining companies. Real operators regularly give us feedback on the product throughout the development process."

The EDVIRT team are also regularly out in the field, including visiting mines and underground tunnelling projects, to talk to industry experts and shotcrete operators in real-life scenarios.

"We're experts at training and software, but not necessarily at all mining processes. Hence, we always include industry experts from the field or research."

With their main business being developing training courses for global mining and tunnelling companies, the most important thing for them is to provide a good teaching tool. According to Eric, their tool



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needs to be able to take the operator to the next level, and that doesn't necessarily mean simulating reality.

"The important thing is that we speed up the learning process and can safely teach people. Simulating a machine to be 100% like reality is often not what our trainees want. They rather want to train on the essentials and the application and practice things they might not be able to do in real life. We also need to use a strong teaching methodology that incorporates different training scenarios so that operators can learn the entire process—from A to Z."

10 Years of EDVIRT

A global footprint with key alliances

Over the past 10 years, EDVIRT has collaborated and partnered with many key industry organisations, including [EFNARC](#), [Master Builders](#), [Freeport](#), [LKAB](#) and [Sandvik](#) to name a few.

The team has also grown to 12 employees, with Eric

as the Head of Business Development, Petter as the Technical Manager and [Tomislav Rogan](#) as the CEO.

According to Eric:

We're a fun, multicultural team working in an exciting international industry."

While a significant focus of their projects has been in Sweden, stemming from their base in Göteborg, they've responded to the international de-

mand for their product and established a global footprint. EDVIRT's first client was the Swedish mining company [LKAB](#), and their second was the London Underground with the [Crossrail](#) project. Other key projects include [WestConnex](#) in Sydney.

EDVIRT has partnered with [EFNARC](#) to share their ideas and thoughts on nozzle training. They're proud to say that EFNARC's prestigious certification now require virtual training and testing.



"We're a fun, multicultural team working in an exciting international industry."

Eric Odkrans, Head of Business Development at EDVIRT





What's next for EDVIRT?

New horizons and on-going commitment

In February 2021, ED-VIRT was acquired by **DSI Underground**, part of the **Sandvik** Group. While ED-VIRT remains a standalone company in the group, they now also internally develop innovations with

a sales network spread globally.

According to Eric, EDVIRT is focused on spreading simulator training to more applications and is committed to developing more innovations in the space.

EFNARC is the Authoritative Voice of Contractors, Manufacturers, Raw Material Suppliers and Consultants in the Specialised Construction and Concrete Systems Industry. As a member of the organisation, EDVIRT works with EFNARC to improve nozzleman training and safety standards.



EDVIRT IS A PROUD MEMBER OF EFNARC - WORKING TO IMPROVE TRAINING STANDARDS TOGETHER WITH SPRAYED CONCRETE INDUSTRY