



# Electrical Substation Training Platform

for engineers in Virtual Reality



# THE Problem

Traditional learning techniques may not allow achieving desired results because of the high cost of learning equipment and its use, possible danger and it's entirely two dimensional. Diagrams, presentations and verbal description often fail to grasp audience attention and don't convey the intricacies or specific aspects. The most crucial problem students face is getting from the screen or pages into physical space.

01

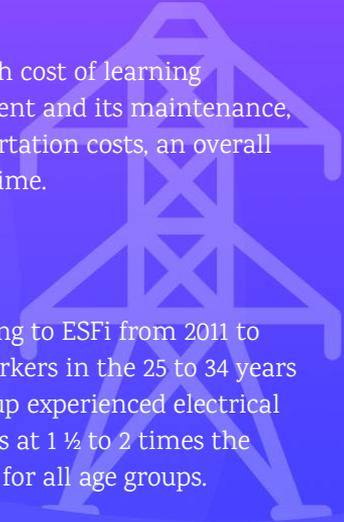
The electricity market is always in need of a large number of high-level specialists with appropriate training.

02

The high cost of learning equipment and its maintenance, transportation costs, an overall loss of time.

03

According to ESFi from 2011 to 2015, workers in the 25 to 34 years age group experienced electrical fatalities at 1 ½ to 2 times the average for all age groups.





# OUR Solution

The Electrical Substation Training platform is designed for universities, training centers and organizations, power engineering and mining companies, who wants to provide high-level education and skill training for students and employees. Replacing onsite training with life-like VR scenarios reduces safety and security concerns and provides immersive and memorable learning without increasing the cost.



## Immersive and memorable learning

In virtual reality, learning becomes safer and more efficient.



## Reduced travel costs and time

No need of bringing people into a field.



## Remote learning

Collect and manage information about trainees, plan training sessions and track the results remotely.



## Easy training process

Collaborate with anyone regardless of distance and the size of your facilities.



# Platform features



## Overview mode

Allows you to walk around, get acquainted with the details of the parameters of the equipment and its parts.



## Training mode

Allows you to do rounds, recreate dangerous conditions to test workers problem-solving abilities.



## Virtual library mode

Allows you to the construction, to detach into separate parts and appreciate technology, particularities of equipment.



## Personal account

Get collaborative tools to build smarter training and meet your business goals.



# Overview

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Overview mode brings you to the electrical substation where you can explore its equipment, take any mechanical part, move it around, see-through, see all the details no matter the size or location of your facilities.





# Training

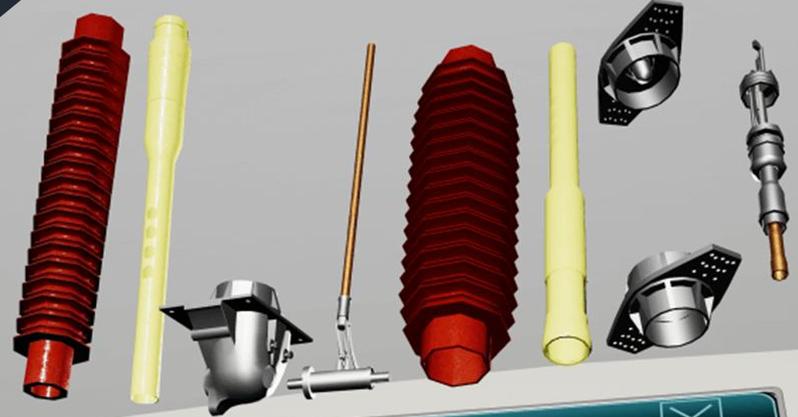
In training mode, you can do rounds, re-create dangerous conditions to test workers problem-solving abilities. Also, you can run training for several people at the time to coordinate their actions.





# Virtual library

Virtual library mode provides you with detailed information about specific machinery or equipment.



## Live Tank Circuit Breaker

- 1 Crank Case
- 2 Fixed Contact Finger
- 3 Fixed Contact Pedestal
- 4 Insulating Push Rod
- Lower Terminal Plate
- Mechanical Sieve
- Contact Pedestal
- Insulator
- Terminal

### Insulating Push Rod

The LTB is a high-performance circuit breaker designed for a maximum breaking current of up to 40 kA at rated voltages from 72.5 kV up to 170 kV. The LTB is available for single or three-pole operation. Thanks to the excellent current-carrying capacity of the circuit breaker, it can handle rated loads of up to 4000 A in some configurations. It is suitable for all applications and configurations, including deserts, the tropics and cold climates – withstanding natural disasters from hurricanes to major earthquakes.

Scale

Reset transform

# Personal account



- Measure the value of training and manage enterprise learning with ease.

Track and report on compliance.

Explore trainings analytics to improve effectiveness.

Identify your top contributors, learners, and content to build programs around their success.

Manage Instructor Training offerings by identifying instructors and locations, setting course attributes, and maintaining wait-lists, rosters, and grades.

- Make learning personal.

Provide learners with easy access to required learning, personalized suggestions, and referrals from co-workers.

Launch one-time or triggered training to deliver the right learning at the right time.



# Worldwide VR revenue

\$ 9,0

Billion in 2018

20x

Growth by 2020

**VR revenue will total almost \$30 Billion by 2020 - 15 times that it was in 2015**

Like most new technologies and platforms, virtual reality has had a rocky, but predictable, start. But the path is clear: by 2020, the virtual reality market will be worth 15 times what it was in 2016, \$28.3B to be precise. This year, the emerging market will grow to a considerable \$9.0B, driven mainly by hardware with software getting its footing.





# Results, that can be achieved by using ESTP 4 engineers in VR

**2x**

Reduction of the time for preparation of teams for repair work

**63%**

Reduction of injuries

**45%**

Reduction in equipment downtime

**2.5x**

Reducing the search time and the time to eliminate operational problems

**60%**

Reduction in the period of professional training and retraining of staff

**99%**

Bringing to automaticity the implementation of the rules of action in an emergency



# Thank You!

[www.digitalengineeringmagic.com](http://www.digitalengineeringmagic.com)