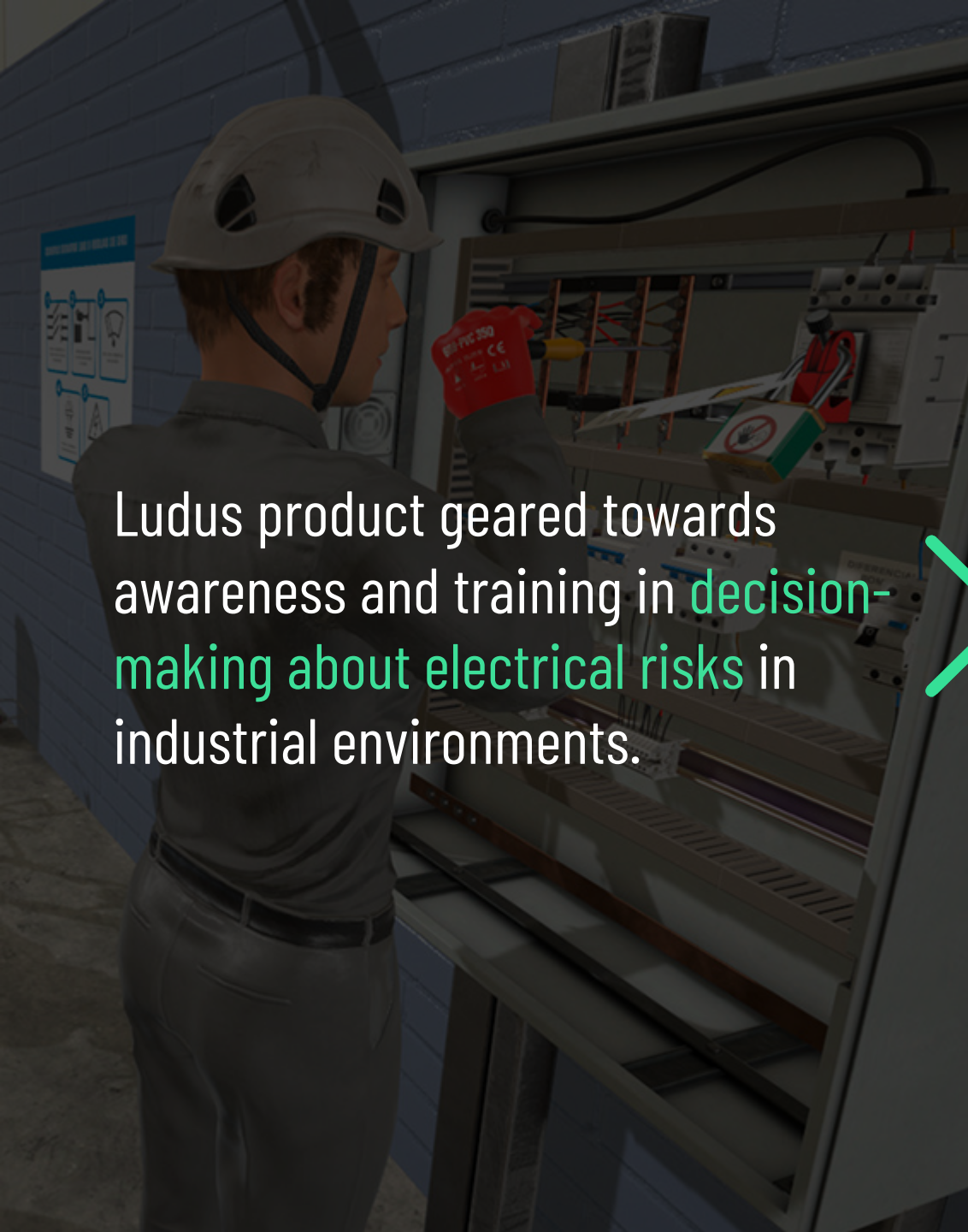


Technical Sheet



Electrical hazards

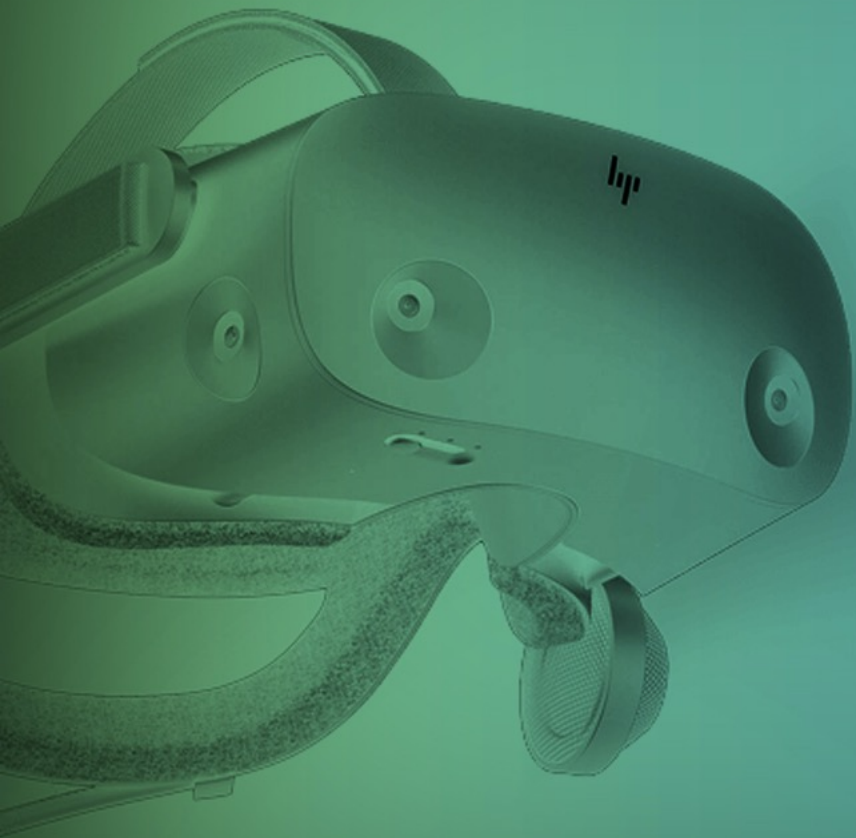


Ludus product geared towards awareness and training in **decision-making about electrical risks** in industrial environments.

Electrical hazards

- > The user's goal is to know different **electrical risk situations** and practice decision-making safely.
- > Simulation serves both to raise awareness of risks through accident experimentation, and to test the user in relation to avoiding such risky situations.





01

Simulation
content

Simulation content

Exercise: Risk of direct contact

.....

The evaluator must handle a low voltage switchgear that has been previously disconnected and consigned by another person. However, that person has not waited for the capacitors to be discharged so there is still tension in the same.

Estimated exercise duration: 10 minutes

PPEs availables

- Electrical insulated gloves and insulation blanket
- The trainer can show or hide them to show the example of an accident or test the user.

Accidents

- When having direct contact inside the switchgear the user suffers an electric shock. If he or she is carry enough PPEs, he or she wouldn't be harmed.
- At the end of the accident, the simulation explains to the user the cause and evaluates the decision he or she has made, informing him or her in addition to the damage he or she has suffered.



Simulation content

Exercise: Risk of indirect contact

The learner must remove a part of a machine using a **screwdriver**. The work the user must perform is mechanical, however, an installation error is causing to pass tension through such machinery. In addition, the machine differentials are faulty.

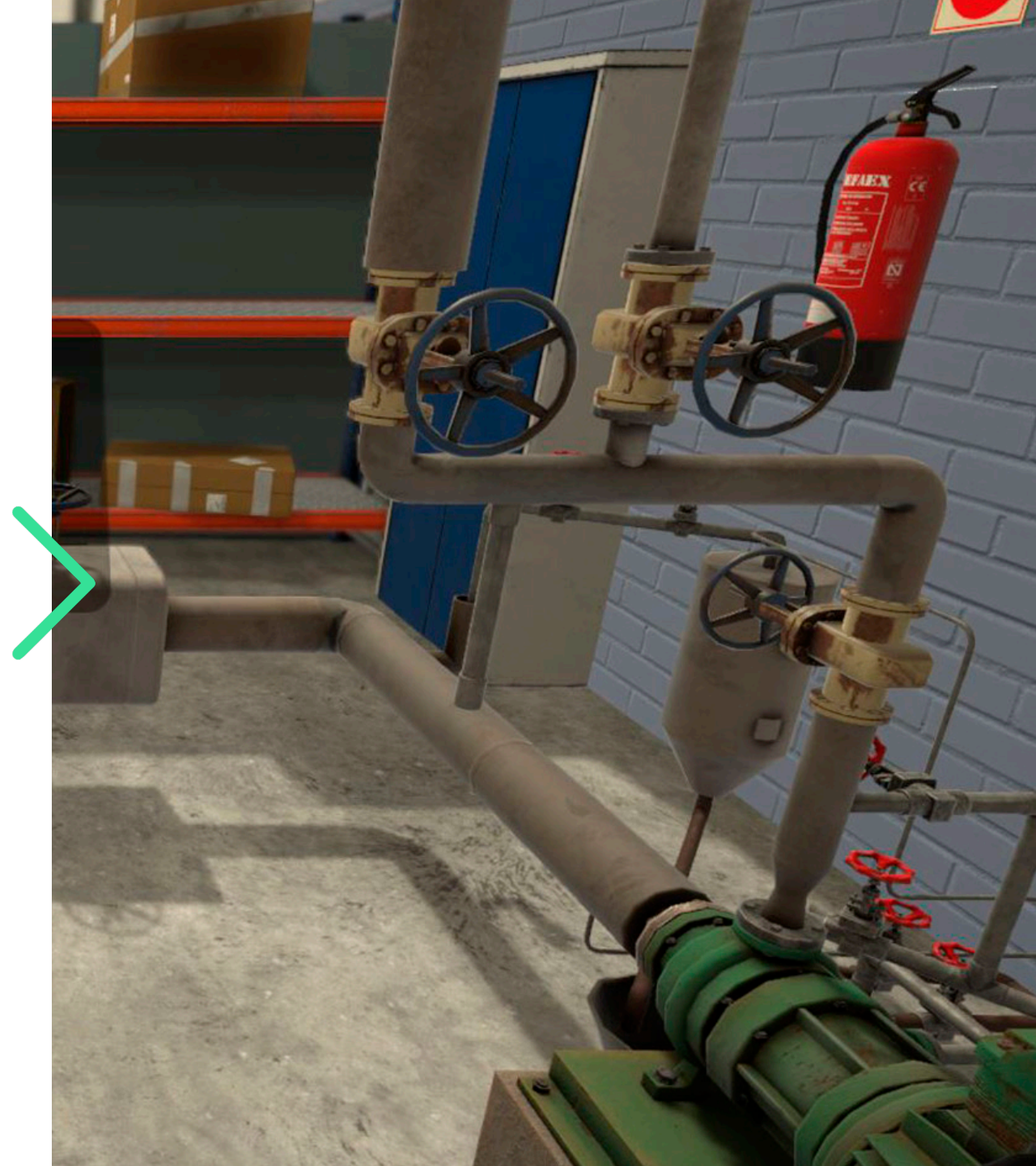
Estimated exercise duration: 10 minutes

PPEs availables

- Electrical insulated gloves.
- In addition, there will be a screwdriver with insulated handle and one without insulating properties.

Accidents

- If the student is not properly insulated, will suffer an electric shock by indirect contact. Before touching on the machinery, the evaluator can check the differentials of the machine and decide not to do such handling.
- At the end of the accident, the user is explained that the crash was due to an error in the installation that has caused tension to deviate to the element that he or she has touched.



Simulation content

Exercise: Arc flash risk

The user must replace a thermal-magnetic breaker in a low voltage **switchgear**. When he or she approaches to the switchgear and goes to cut one of the wires using scissors, he or she inadvertently makes contact between the dough and one of the wires, causing a short circuit that generates arc flash.

Estimated exercise duration: 10 minutes

PPEs available

- Electrical insulated gloves, fireproof gloves and dielectric face shield.
- Possibility that the user may also wear a metal necklace that has to be removed before doing the operation.

Accidents

- Burns in several parts of the body.
- Impact from flung materials.
- Depending on the level of protection the user have decided to have, the user may be damaged or other.



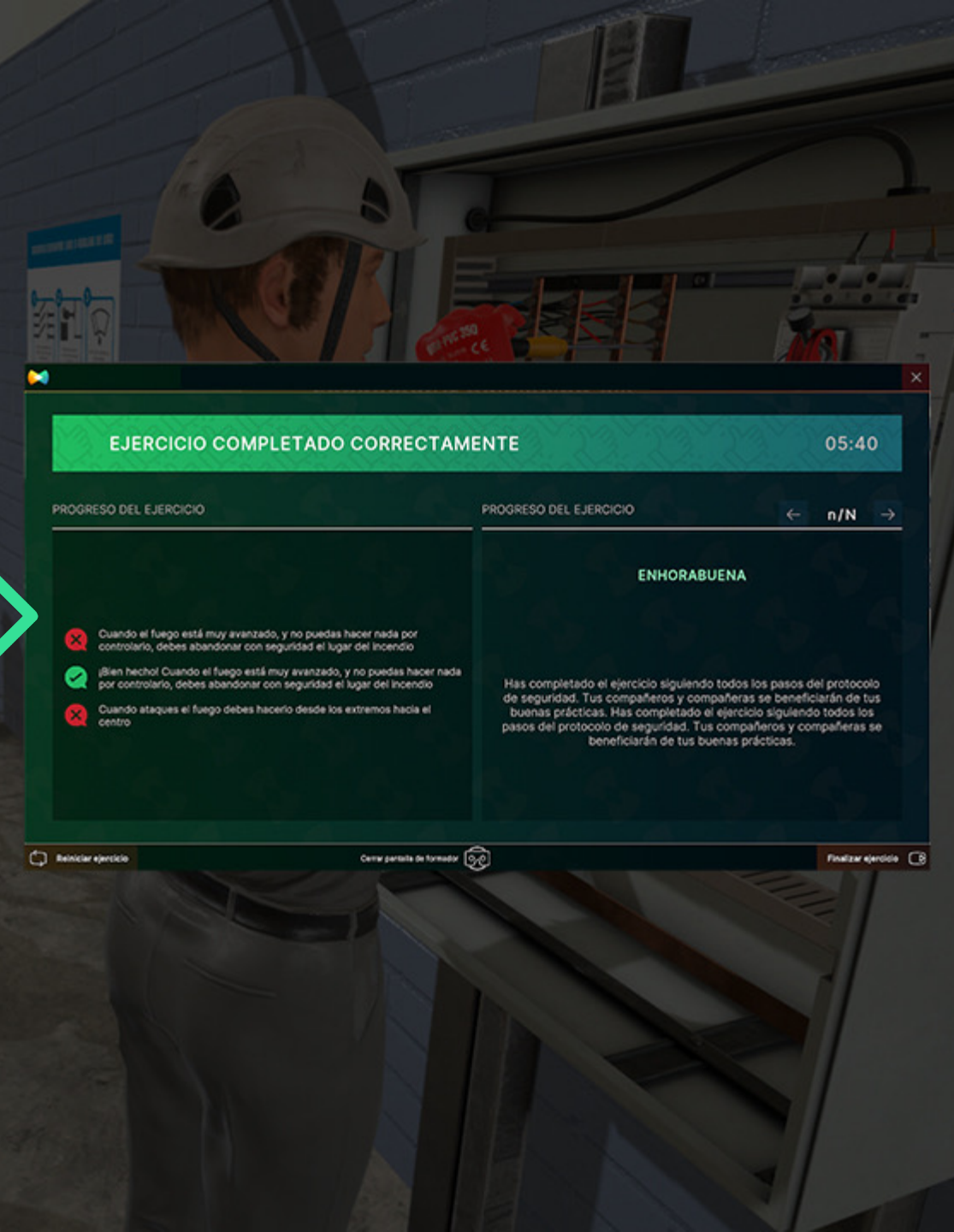


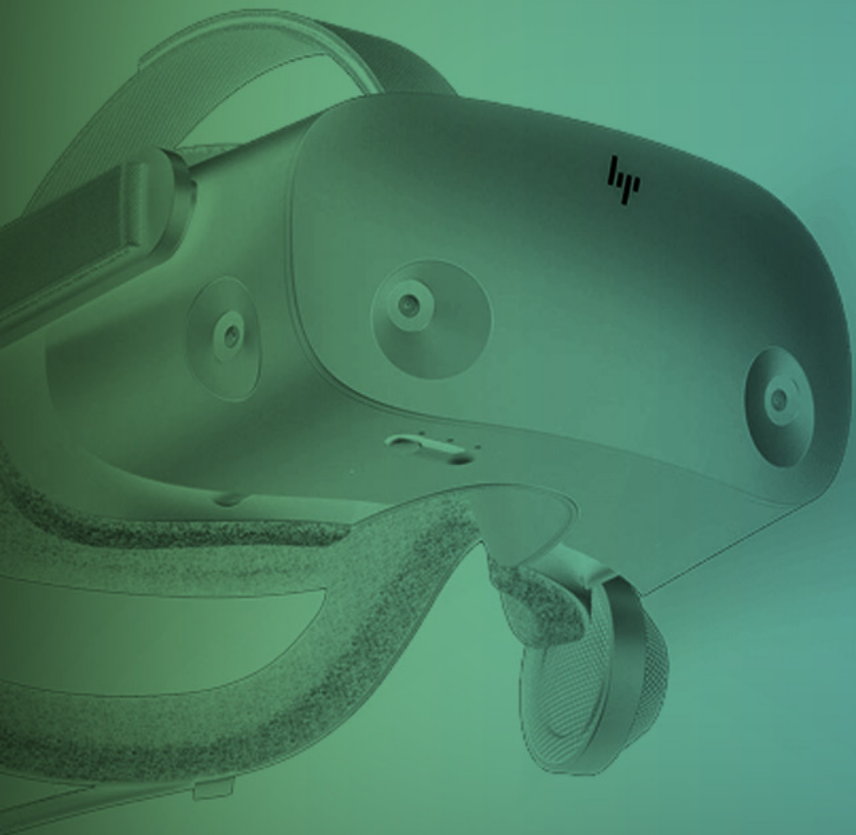
Basic statistics

Statistics system

Basic statistics displayed to the user at the end of the simulation

- Duration of the exercise.
- List of mistakes made.
- Errors in PPEs selection.
- In case of an accident, additional information on damage received and avoided.





02

Future
updates

Future updates

Possible product extensions

New electrical risk prevention systems

- Updating exercises with new insulation systems, hot stick, PPEs, signaling types, new accident cases...

Measurement and testing operations on low voltage installations

- The user must make several measurements in a low voltage switchgear following safety standards.

Rescue of an injured person

- The user must help a person who is suffering from an electric shock. Before setting the person away, the user must disconnect the power from the circuit to avoid damage.







03

All trainings,
one platform

First European Platform

for realistic training in **labor and health security** with
Virtual Reality

Platform advantages



Content access

Living products in
continuous improvement



Teacher training

Pedagogical support for
teachers in the use of VR



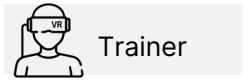
Hardware
at **cost price**



**Improve your classes on
safety and health**, adding an
immersive component to the
trainings



20 complete products with more than 500 exercises.



- Road safety
- Plant risk prevention
- Fall protection
- Safety officer at heights
- CPR
- Overhead Crane
- PPE. Personal Protective Equipment
- Warehouse safety
- Plant risk assessment
- **Electrical hazards**
- LOTO
- Fire safety
- Confined Spaces
- Safety in construction
- Mobile elevating work platforms
- Postural ergonomics
- Forklift risks
- Hand Injury Prevention
- Use and Handling of FHCs
- First aid

We are continually adding **new updates** and content to the platform



Calendar

of incorporation to Ludus

01

Demo

Product demonstration.
Financial proposal
presentation.

02

Suscription

Platform hiring.
Reception of the material.

03

Onboarding

Welcome pack.
Commercial arguments.
Graphic resources.
Marketing sheets.
Video tutorials.
Training for trainers.

04

VR training

Unlimited use of the training
resources available on the
platform.
Platform maintenance and
update.

Why VR?

The impact that virtual reality has on learning is **remarkable**



Active learning

Based on Edgar Dale's Pyramid of Learning


VR learners are...

 **4 times**

Faster at learning than in a conventional classroom

 **3.7 times**

More connected to the content than learners in a classroom

 **2.3 times**

More connected to the content than learners in e-learning

 **4 times**

More concentrated and focused



Learn by Living

ludusglobal.com