Technical Sheet

Ludus

Postural ergonomics

Ludus product aimed at training the detection of ergonomic risks.

Postural ergonomics

- > The aim is to offer the trainer several virtual scenarios in which different **ergonomic risks** are represented.

- > During the task trainees will have to identify and correct ergonomic unsafe situations. At the end of the task, all **unidentified risks** will be shown to the rest of the class.

- > This product covers a **wide range of risks** related to postural ergonomics, bad posture, adaptation of the workplace, taking care of your back and teleworking.

01

Simulation Content

Simulation content

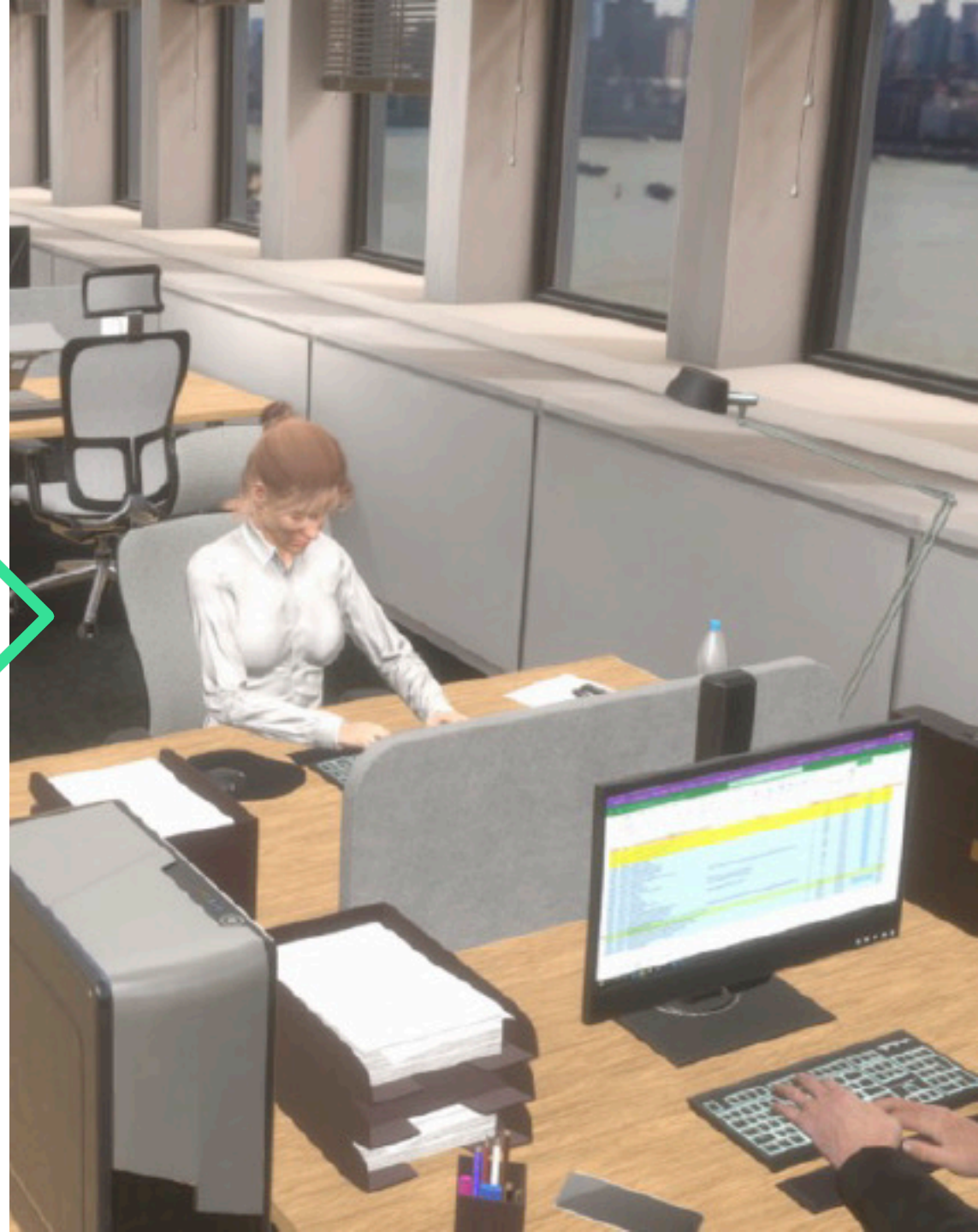# Office Stage

The first version of the product will include an office scenario. The scenario will include the typical components of an office.

On stage appear:

> **Ergonomic risk situations.**
> People incurring ergonomic risks.

> **Situations that do not imply risk.**
> People working correctly.

Configuration possibilities

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Before starting an exercise, the trainer will be able to configure:

> **The maximum number of errors** allowed to the student.

> **Exercise mode:**

- **Mode with questions.** The student must detect the risks of the scene and answer a question to correct it.
- **No questions asked mode.** The student must detect the risks of the scene.

> **ACTIVE** risk situations:

- All active risks.
- Random active risks.

Exercise description

The student must take a walk through the office **setting to detect and correct the maximum number of possible ergonomic risks.**

To do this, when you consider that a situation represents a risk, you must point it out and answer a question indicating/**proposing a solution to the risk**.

> If a situation is detected and corrected correctly, it will be marked as **SUCCESSFUL**.

> In the case of not detecting a risk situation, or proposing an erroneous solution, it will be marked as **ERROR**.

At the end of the exercise, the errors made will be displayed.

Response feedback:
During an exercise, the trainer will be able to show or hide the feedback that is offered to the student after interacting with a risk.
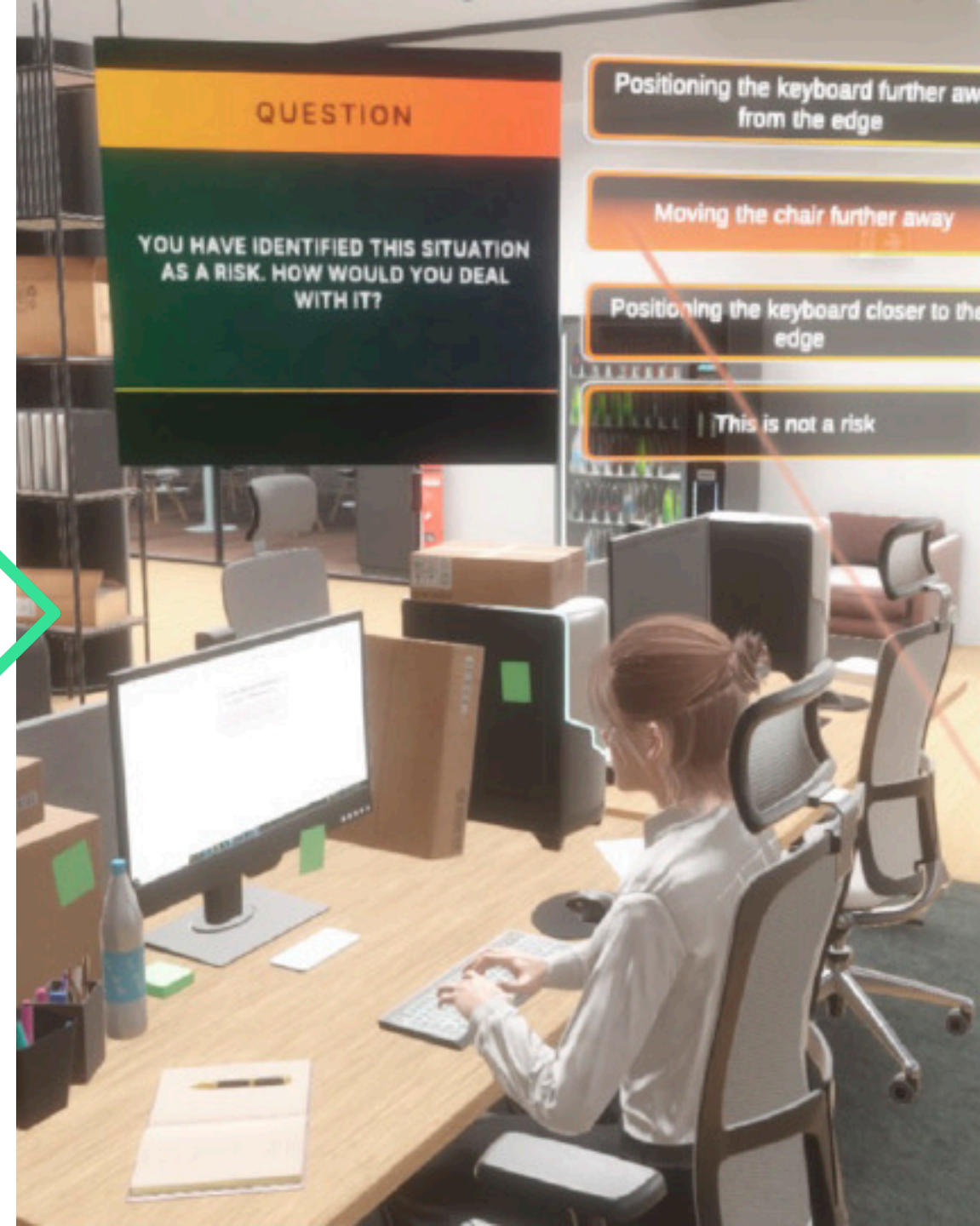
Exercise duration

> The trainer has the option **to repeat an exercise**, in case, for example, the student makes many mistakes or wants to make a point.

> The expected average time to complete an exercise is **10 - 15 minutes**.

> The trainer can force the end of the exercise and go directly to the results to see the errors made so far, in case an exercise takes too long.

End of the exercise

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The exercise can end in different ways:

> **The trainer ends the exercise**. The trainer has an option that allows him to end an exercise at any time.

> **The student completes the walk around the stage**. When the student goes through the entire scenario, the exercise ends automatically.

> **The student detects all the risks**. When the student detects all the configured risks, the exercise ends.

> **The student makes more than N errors**. The trainer will be able to configure the maximum number of errors allowed for each student. When the student exceeds the maximum number of errors, the exercise ends.

In all cases, at the end, **a summary of the risks not correctly** detected will be displayed.

Risk situations included

Wrong screen distance

Person working with **the screen** (17") **very close** to the eyes (<50cm)

Wrong neck angle

Person working with **neck extended/flexed** (screen too high/screen too low)

Prolonged neck turns

Person working with a screen located at **more than 45º**

Very tall chair

Person working with **legs dangling**

Wrong forearm position

Person working with **forearms/wrist** pressed against edge of table

Wrong back angle

Person working in a chair with **the back bent forward** (badly adjusted chair/poor postural hygiene)

Wrong knee angle

Person working with **knees at less/more than 90º**

Wrong wrist angle

Person working with **wrist bent** (up, down, sides)

Wrong shoulder angle

Person working with **arms away** from the body

Risk situations included

Wrong leg position

Person sitting **cross-legged**

Wrong leg position

Person sitting with **legs dangling** unsupported

Messy table

Person working at a very messy table, and consequently with **wrong posture**

Improper chair

Person working with **a chair that is very high** in relation to the table and very far from the peripherals

Use of peripherals without adapting

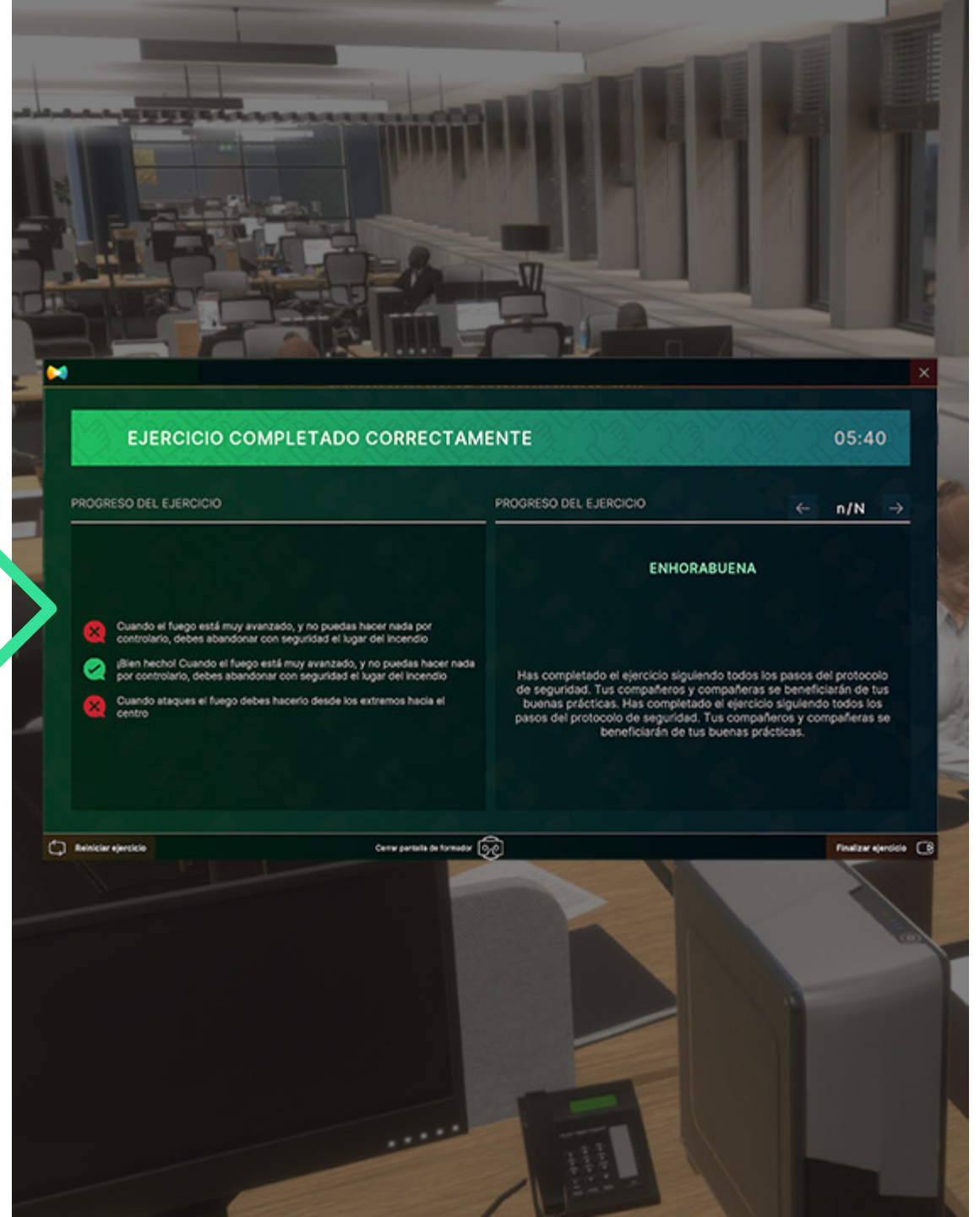Person working with a **small mouse** (wrong wrist angle) or with an unadapted keyboard

Basic statistics
Statistics System

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

> Exercise timing

> List of mistakes

02

Future
updates

New scenarios

New virtual scenarios with their specific risks will be included in future updates. The following scenarios are planned:

> Trade area

> Domestic environment

> Vehicles

Future Updates
New risks

New ergonomic risks in the office scenario will be included in future updates

Wrong angle of elbows

Person working with elbows at **less/more than 90º**.

Inability to change position

Objects under the table that prevent the correct positioning of the legs/change of posture.

Glare

Person working with **reflections on the screen** caused by a badly placed light source.

Lack of light

Person working in a **dimly lit area** with their face very close to the screen.

High temperature

A thermostat will be rendered indicating that **the office temperature is not correct** (too high/too low).

Complementary products

As a complement to this postural ergonomics product, at Ludus we are assessing the development of a **new product** related **to manual handling of loads**.

This product would be oriented to the field of logistics, replenishers and the industrial sector.

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**

Learn by Living

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

20 complete products with more than 500 exercises.

Trainer

- 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**

People remember...

10% of what **they have read**

20% of what **they have listened**

30% of what **they have seen**

50% of what **they have seen and listened**

70% of what **they have seen and written**

90% of what **they have done**

95% of what **they have done and felt**

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-learnings

4 times
More concentrated and focused

Ludus

Learn by Living

ludusglobal.com