

## **VIRTUAL REALITY BASED WORK SAFETY SIMULATIONS**

### **The REDSAFE basic package includes the following products:**

- VR Work Safety Simulations Licence for Meta Quest 2 or 3
- Admin Panel

### **VR OCCUPATIONAL SAFETY SIMULATION SCENARIOS**

- Risk Finding Simulation
- Fire Safety Simulation
- Work at Height Simulation
- EKED Lockout, Tagout Simulation
- Distracted Behaviours Simulation
- Personal Protective Equipment Use Simulation
- Safe Working Simulation

### **ADMIN PANEL FEATURES**

- Enter user data and start the simulation
- Scoring of users' actions
- Determination of mistakes and work accidents made by users in the simulation
- Determination of the number of mistakes made
- Determining the completion time of the simulation
- Ranking of users according to their score
- User search and listing
- Export data to excel format

### **TECHNICAL SPECIFICATIONS**

1. The objects in the simulation are VR supported.
2. After the user completes the training, the mistakes and work accidents he/she makes in the simulation are shown on the admin panel.
3. The simulation can be started from the admin panel.
4. The user's hand movements, interaction with objects (holding the object, dropping it on the ground, etc.), whether he/she uses the equipment he/she needs to use correctly, etc. information is recorded instantly in the database.
5. When the user walks in the real world, he/she can also walk simultaneously in the simulation.
6. The user's mistakes in the simulation have consequences in the simulation. For example, if a worker working in a high-rise building does not take the necessary precautions, the user can fall down from the building in the simulation etc. results can be simulated. In this way, users can experience how severe the consequences of the mistakes they make in the simulation can be as if they were in reality.
7. Users can walk within a specified area in the simulation environment.
8. It is possible to go outside the specified area by teleport method.
9. In the simulation, the user can walk within a specified area in the same way where he/she travelled with the teleport method.
10. Virtual reality based 3D sound technology is used.

Note: Specifications are subject to change.

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11. Thanks to the controller, virtual objects can be interacted with. (Virtual objects can be interacted with hands).
12. User interactive simulations are developed with Unity Physics Engine.
13. Created objects and models are compatible with virtual reality.
14. Within the simulation, there can be virtual employees doing their jobs and a user-interactive virtual work machine.
15. There are features such as fulfilling certain tasks and scoring.
16. In the simulation, the user can get information about the device, application, equipment, security measures pointed by the Controller.
17. Using their hands in the simulation, they can use the work machine and various tools in the specified environment.
18. The hands in the simulation move according to the position information received from the controller. In other words, the real hand movements of the user are transferred to the system. By using the buttons on the controller, the user can hold, release, operate and interact with objects.
19. The objects in the simulation are of high quality and realistic enough not to destroy the user's sense of realism. The user can look 360 degrees in any direction and walk in the simulation as he wants.

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