

Virtual Reality Learning: **A Key to Improved Safety**

Objective: Create a Winning Safety Strategy.

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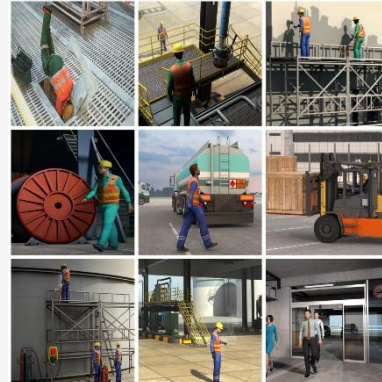


VIRSAT[®]

VIRTUAL REALITY SAFETY TRAINING

Virtual **R**eality **S**afety **T**raining (**VIRSAT**) is a company focused on developing new educational tools that can be used to enhance the safety competence and behaviors of the front-line workers and their supervisors. **VIRSAT** aims at providing the best available learning techniques to help companies to achieve a safer working environment. Virtual Reality is a new technology, which is able to achieve a revolution in new ways of learning.

Virtual Reality Safety Training
**helps companies to
make significant steps
in safety performance**





Mission

VIRSAT's mission is to develop, produce and provide innovative, practical and proven learning methods to impact safety competence and human performance of workers in industry.



Vision

Reduce the number of workplace related incidents.



Commitment

Extensive Training Games

Our solutions are developed with our customers in mind. Our Games are meant to adapt to different requirements across diverse industries. Through this, contractors of companies can also use the same training Games to ensure that their workers are fully aligned with the client's safety measures.

Results-driven Innovative Solutions

VIRSAT is focused on developing solutions that ensures performance and safety improvement of workers in high-risk working environment.

Exceptional Customer Service

Helping our customers establish an effective safety standard for their company and actually having the workers observe the protocols at all times is our top priority.



based Standard Life-Saving Rules



Driving



Line of
Fire



Hot Work



Working
at Height



Bypassing
Safety
Controls



Confined
Space



Safe
Mechanical
Lifting



Work
Authorization



Energy
Isolation

Interactive 2D 360° Training

This training is often derived from VR training. It is migrated for use on a PC, tablet or PC. This training certainly has a place in the modern portfolio of training. It is less immersive as VR training and also trainee distraction frequently plays a value decreasing role. However, where companies decide to roll out VR training with headsets this might complement the training. For those who cannot or do not want to use the VR headsets it can help to assure they are not “left behind”. VIRSAT enables seamless integration of the training results of both the VR headset and PC based training into one database. So, while two different training delivery methods are used the training content delivery can still be evaluated on the company wide level. We recommend that companies who obtain VR training also offer the interactive 360° 2D variation. Any employee can follow the training and full coverage can be assured in that way.



Mobile Phones and Tablets

VIRSAT makes training components available on mobile phones and tablets. This can be a useful addition to a broader training program. We do not recommend relying exclusively or primarily on these delivery tools except in some limited cases. A VIRSAT target audience quick scan can help to determine which tools are suitable. The use of privately owned devices can be considered but comes with its own set of limitations.



PC

PCs are present at many places in companies and privately owned. For that reason, PCs are often used for training purposes. For some training this is very useful. However, it must also be considered that PC-based training is not as immersive as 3D VR training. In some cases, it is adding value to use a PC training next to VR training. One of those cases is where people have difficulties in doing VR training because of motion sickness tendencies. A small percentage of people have that sensitivity. This may also be experienced by them by travelling by car or by plane. For those people it will be helpful to have the training available on PCs.



Interactive 3D 360° Training

This training method is superior to all previously discussed methods. PWC have demonstrated is this in a much referred to publication. VIRSAT is well placed to offer this training method. It is recommended to consider logistics, data capturing, MoC and administration challenges when introducing this very different manner companies going of training. VIRSAT offers all the services to get going.



VR Headsets with Controllers

VR Headsets with controllers are most frequently used when making VR training available to staff. The reason for this being that is low threshold to learn. Most people can pick it up quickly and it's also available on all headset brands.



Gesture Controlled VR Headsets

Headsets with hand gesture control are currently slowly being introduced in the market, replacing those without hand controls. Working without hands controllers can be very effective and useful. However, it is currently not recommended for the first VR Training to be introduced in a company. Using hand gestures to interact with the VR headset is more difficult to learn. Once staff know how to work with hand controllers, gestures control can be more easily introduced.



Head Safe

VIRSAT is introducing Head Safe, a head-mounted device suited for use in an industrial environment.

The hardware has:

1. A small screen positioned close to the user's eye;
2. An array of microphones through which the Head Safe can be operated;
3. High-quality speech recognition functionality suitable for a noisy industrial environment;
4. Speech recognition software for a number of languages;
5. A speaker and text-to-speech conversion software to communicate with the user.

The VIRSAT Head Safe helps with inspection and reporting. It is simple to use and does not require any paper forms or administrative steps. It is suitable for use by workers and inspectors. The interface is graphical with spoken words in several languages. It is fully hands-free. The user can control the Head Safe with spoken short sentences or single words. This works even in noisy environments, as the hardware uses multiple microphones near the user's head. Head Safe inspections follow the IOGP Life-Saving Rules - Start Work Checklists. The inspection results are stored in a database as the inspection progresses.



Any missing aspects are brought to the attention of the inspector/worker. Alerts for work that is started with a missing safety-critical point can be generated automatically. Head Safe works wirelessly and does not require computer or digital skills to be used.

It has the following features:

1. Simple to use by workers.
2. Information provided in English. Other languages are optional.
3. Speech-controlled. No keyboard or similar device needed. Suitable for noisy environments.
4. Each inspection element will be prompted.
5. Taking a photo of relevant inspected elements will be prompted.
6. Inspection data and photographs will be automatically stored in a database.
7. IOGP graphics are used where possible.
8. Photographs of inspected elements are stored in the database. This serves as visual evidence for the stored data.
9. The deliverables include an end-user training course.
10. The first three inspections by workers/inspectors are virtually accompanied by a VIRSAT-provided instructor.
11. Regular summary reports of inspection results will be sent to selected staff.

12. Covered subjects are:

- Confined Space Entry
- De-isolation Re-energizing
- Driving
- Energy Isolation
- Excavation
- Hot Work
- Live Electrical
- Man-riding
- Mechanical Lifting
- Rig Floor Tubular Handling
- Work Around Mobile Equipment
- Work Near Water
- Working at Height

13. Optional features:

- Additional subjects for inspection
- Additional languages
- Additional inspection elements
- Remote assistance: Through the provided incorporated camera, support staff can remotely assist the worker when requested.
- The worker/inspector can be registered automatically by holding their ID in front of the Head Safe camera.
- The registered ID can be set up, allowing the inspections to be carried out based on the worker's competence.
- The database registration of the inspection results can trigger alerts to supervisory staff or Subject Matter Experts in case of missing inspection elements.
- The GPS location of the inspection location is stored.
- The QR code or other identification of the equipment/process being inspected can be stored.

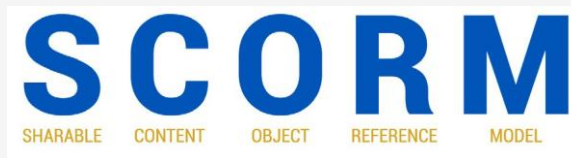
VIRSAT is adding an artificial intelligence (AI) extension to the Head Safe™ device. This extension is called Safety Wizard™. It is designed to be used by staff performing field work at a production facility.

The purpose of the Safety Wizard™ is to answer safety questions asked by industry workers. The questions are asked verbally while working in an industrial environment and wearing the Head Safe™. The answer will be provided by Head Safe™ in spoken words, supported by graphics. Ample attention is given to ensuring that incorrect answers are avoided.



SCORM and Customer LMS

All products as presented in this catalog can be delivered as standalone training. However often there is a desire to integrate the training in the company's LMS. Therefore, all relevant training in this catalogue can be offered as a SCORM package. The SCORM package can be uploaded to the company's LMS and as such be fully integrated with the other training courses of the company. All required details of the training performance of the trainees can be stored in the LMS. This includes scores on specific questions and time it took to answer to answer it. For some games it is also possible to report where the trainee was looking at when answering the question. E.g. where do they scan the presented work scene for unsafe conditions?



Gap Analysis

Introducing new training is often preceded by a gap analysis to determine what areas are strong and what areas need further improvement. VIRSAT offers support in this space. This can be done in structured F2F interviews carried out by local staff. A report identifying strengths and weaknesses is the result of such gap analysis. If required a training plan to address the weaknesses can be offered as well.

Communication Tools and Method Quick Scan

The above gap analysis is carried out with a specially developed communication tool. This tool can also be made available to customers so company staff can carry out gap analysis. Training of staff to use the tool effectively can also be provided.

Implementation Support

VIRSAT can provide all the support that is needed for the implementation of VIRSAT novel training methods. Typically, this is done by local VIRAT staff locally together with virtual project managers. During weekly progress meetings the customer is kept informed on the progress of the implementation.

User Administration

Company LMS systems can be used for user administration and training attendance records. In case that is not desirable VIRSAT can offer such a service as well. This includes the training database, cloud based, and also the various other steps like inviting trainees, booking venues, keeping attendance records, etc.

Thank You

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