

SYNQ

VR TRAINING MANAGER FOR CARRYPICK

TRAIN YOUR PICKERS INTENSIVELY IN A VIRTUAL WAREHOUSE ENVIRONMENT BEFORE THEY'RE ACTUALLY ON THE JOB

Picking is considered one of the most labor and cost-intensive processes in intralogistics. With tasks such as finding the correct items; ensuring they are counted, separated, checked and labelled; as well as documenting each pick using a scanner or touchscreen monitor, it's clear that training staff to pick efficiently can utilize valuable time and resources.

The SynQ VR Training Manager application from Swisslog introduces a new approach to training for CarryPick solutions, which increases the efficiency of workers in your warehouse picking operations.

WHAT IS THE VR TRAINING MANAGER APPLICATION?

The Swisslog SynQ VR Training Manager has been developed to overcome the intensive, on-the-job training required for pickers within a warehouse environment.

Swisslog's SynQ warehouse management system framework is the software that controls and orchestrates the material handling equipment in your warehouse or distribution center. Adding the VR application uses productive software in combination with an immersive VR experience to deliver the best possible training.

Both users and warehouse training managers have the opportunity to test and train picking processes in a virtual world using live WMS processes. Users will have several training levels to complete where their picking speed and accuracy is assessed, evaluated and recorded, before they are certified to work in a live environment.

Data on pick rates, accuracy and movement are recorded and evaluated by training managers within the SynQ user interface (UI). Training managers can then evaluate, compare and gather vital picking data statistics that will be reported in the SynQ Inspection Manager reporting suite to enable accurate picking assumptions per user, per shift and per order configuration.

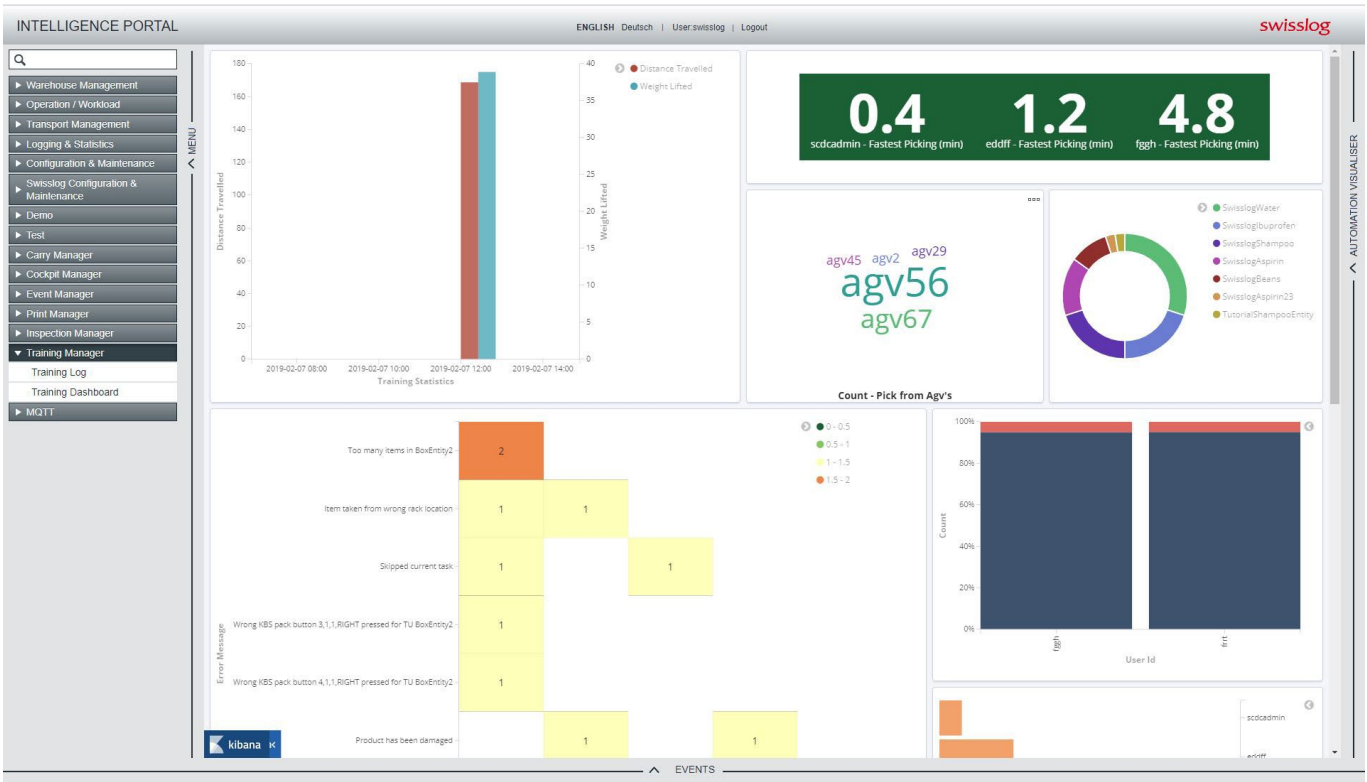
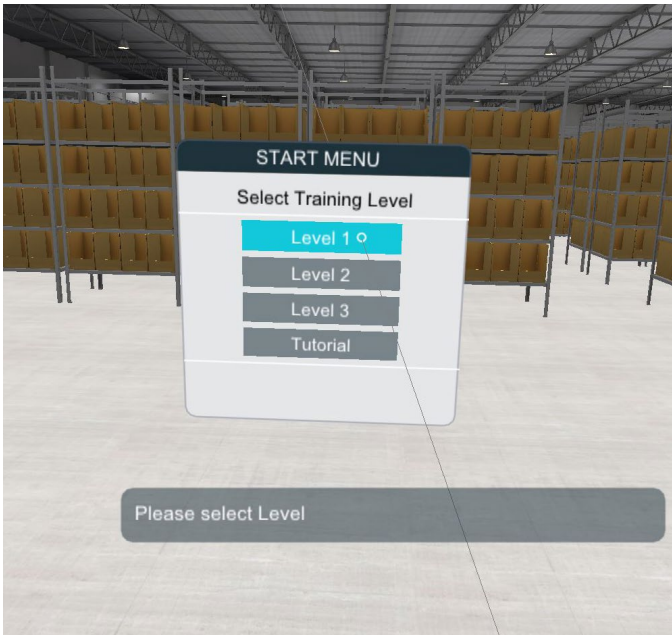
BENEFITS

- Speed up onboarding and reduce training overhead costs.
- Minimize operational impact of training on picking capacity at your workstations; Workstations do not get occupied with training staff and testing scenarios can be created without the need for test orders. These scenarios can be produced within SynQ for specific VR workstations.
- Validate picking processes automatically through KPIs and increase picking accuracy.
- Increase operational effectiveness before system go-live and stay flexible with remote training functionality. Instead of a one-to-one approach, multiple users can be managed and trained remotely (or locally) by the same training manager. Process changes or developments on existing SynQ solutions can be fully tested in the VR Training Manager and validated with key users ahead of introduction into a live environment.

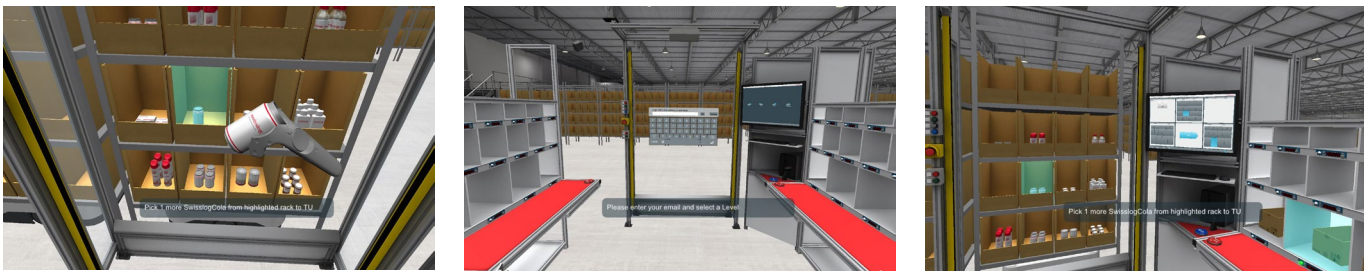
TRAINING LEVELS

There are three levels to the training, each one based on decreasing support from the VR software.

- 1 Level one is for new users and includes text prompts, allowing trainees to follow processes and learn by doing. This level is based on parameters agreed on between you and Swisslog.
- 2 Level two is for the standard user and removes visual prompts, placing a time limit on text prompts. It gives the user access to work in a 'real life' environment where mistakes can be made, recorded and learned from.
- 3 Level three is for super users of the VR software, where training managers are able to remove all visual/text prompts, remove the skip button and manage exception handling.



Validate picking processes automatically through KPIs



ONBOARDING MADE SIMPLE

Currently, all training takes place at picking workstations. Workstations and picking environments are linked to a live WMS system, so businesses usually cordon off one workstation to train new users. This causes issues in terms of training intensity, a slowdown in picking speeds, reduced capacity to deliver to customers, and the danger of process or picking errors with new users. It is a one-to-one process, with intensive time and resources spent onboarding new staff, or retraining existing staff on new processes.

to take up valuable space at a physical workstation. It also means more than one person can be trained at once. This enables a 'one-to-many' rather than 'one-to-one' relationship when onboarding and training new staff.

Restricting all training to a VR world also generates data on training errors. Therefore, mistakes can be identified and highlighted for new staff to overcome any issues. Having a VR environment also allows training to occur anywhere. It can be completed remotely, away from the warehouse, and can be done before solutions are completed and built in the project phase.

The SynQ VR Training Manager provides two key advantages to customers who are either just starting with SynQ as their WMS solution, or for existing SynQ customers who have new or seasonal staff that need to be onboarded quickly into a live warehouse environment. The application introduces a new approach to training pickers that removes the need for training

IMPROVED ACCURACY

Retraining for existing users is also a key consideration for existing warehouse operations to ensure all operators are picking at optimum performance and following picking process steps accurately. By scheduling regular recorded training sessions on existing processes, it enables performance management and incentive schemes to be applied with accurate data.

Trends and retraining requirements can be quickly identified through SynQ Inspection Manager to support continuous improvements. Each process step is followed, recorded and reported within SynQ.

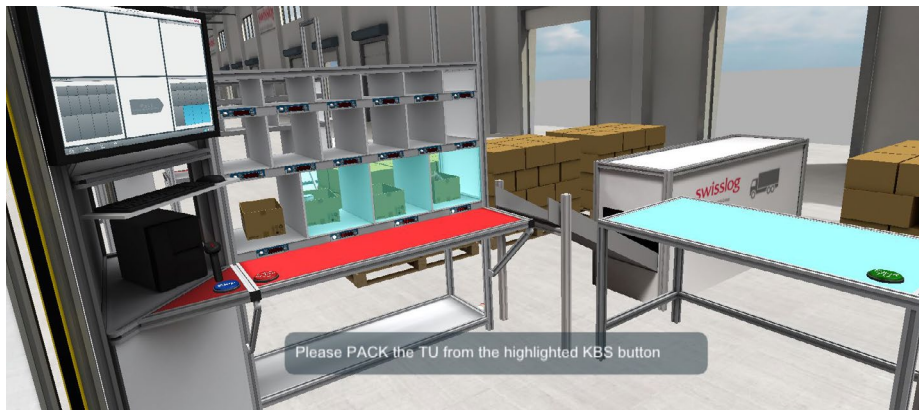
Further consideration is made to the ergonomics of picking for the user. Movement and distance covered are also calculated and recorded as part of the picking operation to focus on continuous improvements.

Full integration with the SynQ WMS solution means there will be no need for customers to implement additional software. The application can be added to an existing SynQ setup or included with a new SynQ package.

Having access to a VR environment based on Swisslog's 3D visualization will allow the customer to keep a digital copy of their warehouse, and test new processes before they are implemented to see the outcome.

All CarryPick AGV movements are emulated within the software, meaning the customer can track movement of each AGV at all times, and users will become accustomed to how the robots work before entering a live environment. The software is also continuously developed for compatibility with the customer's facility and manual picking operations.





WHAT YOUR IT TEAM NEEDS TO KNOW

The SynQ framework is based on the latest Java Enterprise Edition (Java EE) technology and represents a complete suite to control a productive CarryPick AGV system.

It includes all Warehouse and Automation Management functions and provides services for VR clients. A Management UI is implemented as HTML5-based web application including WebGL 3D visualization.

All CarryPick AGV movements can be emulated by a thin emulation layer for demo purposes also.

LIVE PICKING WITH ZERO OPERATIONAL IMPACT

The loading and creation of each unique VR environment is based on Swisslog's SynQ 3D visualization solution. This enables the user to visualize all hardware and subsystems that integrate with the SynQ WMS solution. This is then blended with physical rack layouts, workstations and products stored, and is then implemented in the SynQ UI. It is then represented at each workstation to allow physical interactions through the virtual world to the SynQ solution.

The VR client application is based on a Swisslog developed high-performance rendering engine to visualize the complete warehouse. A built-in physics engine provides a realistic user experience of the picking of actual products. A further browser rendering engine is integrated into the VR world to visualize the SynQ UI at pick stations. Also, Swisslog has developed a lightweight publish-subscribe-based messaging protocol to exchange messages between SynQ and VR clients. This allows real-time visualization of AGV movements within the VR application.

ABOUT SWISSLOG

In today's competitive world, companies must be able to deliver the right orders to the right customers at the right time. Errors and delays in order fulfillment can have a lasting negative impact on the brand and reduce operating flexibility since large warehouse inventories tie up capital within the company.

As a full-service provider of automated intralogistics systems and a dedicated partner, Swisslog delivers everything companies need to optimize logistics, from planning through implementation.

Our order fulfillment and inventory solutions enable companies to achieve the highest throughput at the lowest cost, efficiently handle large catalogs of SKUs, and accurately meet delivery demands and requirements.

DESIGN



Consult



Analyze



Plan



Evaluate

DEVELOP



Engineering



Integrate



Implement



Ramp-up

DELIVER



Maintenance



Support 24/7



Optimize & spare parts



Modernize & expand