AR for Guided Assembly

Knowledge transfer and training for new employees is often difficult when written or paper-based work instructions are the typical format. People tend to be visual learners and pick up new skills better with visual cues and guides (especially in the younger generations). Digital tools that provide point-of-work not only enable this visual learning, but are also able to be updated remotely and kept up-to-date at all times. These visual resources mapped onto the plane of work streamline worker learning and support, creating a more efficient and flexible workforce along with consistent product and process quality.

Why Guided Assembly?

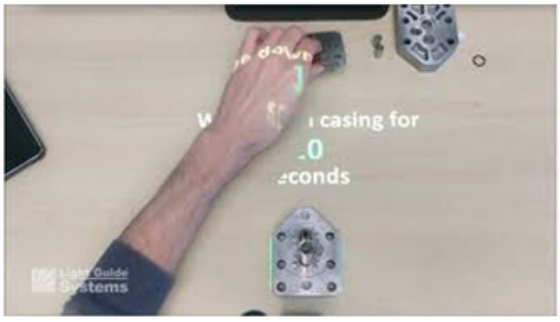
- People are visual learners
- Knowledge transfer
- Complex nature of assemblies
- Tasks not fit for automation

How is it accomplished?

- Work instruction on work area
- Visual instructions
- Reconfigurable for new tasks
- Digitized for easy update

Application Principles

- Visual confirmation of steps
- Control the workflow
- Integration with smart tools to automatically collect data



Shop Floor Impacts

- Reduce cycle times
- Improve training success
- Optimize processes
- Improve product quality

Light Guide™ Systems

Thanks to **Light Guide Systems** for their support in highlighting their AR Guided Assembly

Additional Suppliers for AR Guided Assembly

Schneider Electric created the EcoStruxure Augmented Operator platform that allows end-users to view operational data overlaid on live images of control cabinets, machines, or the plant itself. This tablet-based tool puts this live data in the hands of operators and technicians to aid in pinpointing and troubleshooting equipment.

Scope AR's WorkLink platform uses augmented reality to facilitate digital work instructions and remote assistance on a smart tablet or PC. Assembly workers can see instructions and virtual objects overlaid on a live image of the workpiece. Technicians can use the remote assistance tool to connect to a remote senior technician or engineer who can view the live images and overlay annotations or directions that facilitate collaboration to streamline the diagnostic and troubleshooting process.

The TeamViewer Frontline platform serves to help manufacturers digitize the work being done by frontline workers on the production floor. Augmented and Mixed Reality tools provide workers with heads-up information on wearable computing devices to put the information in the same field of view as the task at hand. Applications include digital logistics processes for part picking, work instructions for manual assembly operations, inspection process guides, and virtual troubleshooting with remote experts.

Lucas Ware uses smart glasses and AR to improve warehousing and distribution center operations by guiding workers through a pick list for order fulfillment. Vision picking systems keep the necessary information in the worker's field of view, eliminating the need to constantly shift focus from shelf labels to paper-based or digital picklists. The smart glasses also prevent errors by validating that the correct materials were picked in the right quantity.