Augmented Reality for Safety: Reality Check on Tech Implementation Meeting Kit

WHAT'S AT STAKE

Augmented reality tools are making their way onto worksites, overlaying digital information on the real world through headsets, smart glasses, and handheld devices. When implemented well, AR can improve training, reduce errors, and help workers identify hazards in real time. But when the technology is rushed in, poorly fitted, or misunderstood, it can create the very hazards it was meant to prevent. A worker wearing a headset who is focused on digital overlays may miss a very real forklift coming around the corner.

WHAT'S THE DANGER

AR technology introduces a unique set of hazards that come not from the work itself, but from how the technology interacts with your awareness and your surroundings. These risks are easy to underestimate because the tool looks helpful.

Distraction and Divided Attention

AR overlays compete for a worker's attention. When someone is focused on a digital instruction or visual cue, awareness of the physical environment drops. In a dynamic worksite, that gap can be serious.

Field of Vision Restrictions

- Many AR headsets and smart glasses physically narrow the user's peripheral vision.
- Workers wearing a headset may not see hazards approaching from the side or from above.
- In high-traffic areas, a reduced field of view creates real

collision and struck-by risks.
- The worker often does not realize how much their vision has narrowed until something catches them off guard.

Ergonomic and Fatigue Issues

Wearing a headset for extended periods causes neck strain, eye fatigue, and headaches. A tired, uncomfortable worker makes more mistakes regardless of how good the technology guiding them is.

System Failures in Critical Moments

AR systems can freeze, lose calibration, or display incorrect overlays. If a worker is depending on AR to navigate a hazardous space and the system fails mid-task, the consequences can be serious.

HOW TO PROTECT YOURSELF

AR tools are meant to assist you, not replace your training or your judgment. Staying safe with these tools means knowing when to use them and when to look up from the screen.

Keep Your Head Up, Not Just Your Overlay

Make it a habit to scan your physical environment regularly, even when AR guidance is active. Set a personal rule: every few steps or every few seconds, look away from the overlay and check what is physically around you. Digital information does not stop a real-world hazard. Your awareness of the actual space you are in always comes first.

Get Proper Training Before You Use the Device

- Do not accept a headset without knowing how to use it safely in your work environment.
- Training should cover how to navigate menus without losing situational awareness.
- Know how to remove the device quickly in an emergency.
- Learn how to recognize when the system is giving you incorrect or outdated information.

Report Discomfort and Fatigue

If wearing the headset causes headaches, dizziness, neck pain, or blurred vision, report it. These are not minor complaints. They are signs that the technology is impairing your ability to work safely, and your site should have usage time limits and scheduled breaks built into AR work procedures.

Treat AR Guidance as a Suggestion, not a Command

AR overlays can be wrong. They may show outdated information, fail to account for a hazard that was just introduced, or simply glitch. Always cross-check critical guidance against your training, your procedures, and what you can see with your own eyes. If something the overlay tells you does not match what you are looking at, trust what you can see.

Know How to Remove the Device Fast

In an emergency, you need to be able to get the headset off quickly and without looking. Practice removing it. In a fire, a chemical release, or any situation that demands fast movement and full field of vision, fumbling with tech is time and awareness you cannot afford to lose.

Flag System Issues Immediately

If the AR overlay freezes, displays an error, or shows something that does not match physical reality, stop using it. Flag the issue to your supervisor before continuing work.

FINAL WORD

AR is a tool, and like every tool on a worksite, it can help you or hurt you depending on how it is used. Your training, your instincts, and your awareness of what is actually in front of you are always the foundation. The tech supports that. It does not replace it.