

Technology Spotlight: Augmented Reality

Augmented reality (AR)—different from virtual reality (VR) or mixed reality (MR), both topics for later conversation— is technology that overlays digital or “virtual” objects onto our real world spaces. AR is becoming increasingly mainstream—think Pokémon Go, or the down-and-distance lines on football TV broadcasts. However, AR isn’t just for gaming or entertainment—it is being widely used across many industries to solve interesting business challenges. In fact, AR is in active development/use across HII.

On construction of the aircraft carrier USS Gerald R. Ford (CVN 78), Newport News Shipbuilding piloted an AR program for reviewing and inspecting construction to ensure the removal of all temporary steel. The existing manual process relies on pages and pages of diagrams, and in practice, depends on experienced tradesmen who have committed designs to memory. Now, using a tablet with an AR overlay, an inspector compares the existing structure to the digital diagrams, and can quickly identify the temporary steel.

At Universal Pegasus International (UPI), part of HII-TSD, pipeline engineers are using AR in the field for design. From using 3D visualizations to communicate complex designs, to visualizing new construction against existing infrastructure for early clash detection and design verification, AR is helping UPI improve safety, prevent project interruption, and ensure that the entire team, including non-technical staff, can visualize design and spatial data.