

# **Game-Based Training**

VIRTUAL TECHNOLOGY TO KEEP TODAY'S WARFIGHTERS ENGAGED

# With an unrivaled global network, we help clients execute large, integrated training exercises around the world.

In 2017, the U.S. Navy suffered two deadly ship collisions that led to an investigation into the cause of those tragic incidents. The inquiries found that, in both instances, a lack of system knowledge, failure to comply with procedures, and poor team coordination contributed to the disaster. With proper training, they determined, accidents of this nature could be avoided.

#### **Proper Training Saves Lives**

Traditional classroom training alone can't prepare service members for the challenges they'll face in action. Stove-piped training solutions, aging Tactical Training Equipment (TTE), and increased student throughput requirements only exacerbate the problem. A new generation of trainees and new technological capabilities require a new approach to military training.

Fortunately, the U.S. military is modernizing its approach to training across the board. These modern training systems must support classrooms of students, enforce procedural compliance, and scale from individual to watch-team training to drive maximum readiness.

## The Future of Training Is Virtual

At HII, we provide game-based training solutions that let you take advantage of technology to keep today's warfighters engaged. With immersive, interactive modules, we deliver better outcomes

than passive classroom training of the past. Our vendor-agnostic game engine approach allows us to create solutions that are tailored to your distinct training needs using the best technology on the market.

These game-based training solutions have already been incorporated into U.S. Navy Courses of Instruction (COI) across Surface Navy pipelines and are deployed at the Surface Warfare Schools Command (SWSC), Surface Warfare Engineering School Command, Littoral Combat Ship Training Facility (LTF), and the Center for Surface Combat Systems (CSCS).

With iterative requirement definition and developmental processes, we produce training in parallel with your evolving curriculum and objectives to help the warfighters of today across all of America's Armed Services drive the missions of tomorrow.



### **HII Game-Based Training Solutions**

We design and develop modern systems that help warfighters train like they fight, because we understand that preparation requires full coordination—not readiness in piece parts. Our engineers and technologists apply an agile engineering methodology and vendor-agnostic approach to every project, saving time and money for our clients, while delivering industry-leading game-based training solutions.



#### **3D Scanning**

We provide non-contact, non-destructive data capture of the environment to be replicated in the gaming environment, so that we can recreate it as true to life as possible. This 3D scanning allows for both individual component and large-area environments to be precisely documented for use as a 3D art source for a game-based training solution.



#### System Modeling

Using our deep modeling and simulation experience, we translate characteristics of real-world systems into operational models designed to invoke appropriate responses within the gaming environment. Deterministic system models allow for non-scripted, free-play training scenarios that include cascading equipment faults using virtual equipment and user interfaces.



#### System Integration

Learning is often an evolution. That's why we rapidly integrate partial solutions to decrease the time it takes to develop a total training solution. Our engineering trainers integrate with bridge trainers to create team training opportunities, taking advantage of best-of-breed simulations to immerse trainees into realistic, virtual, game-based training environments.

# **Spotlight:** Virtual Maintenance Performance Aid (VMPA)

Our VMPA 3D virtual environment architecture integrates physics-based system emulations into tailored interfaces to teach system interactions, enforce standard troubleshooting principles, and train system of systems interactions and dependencies. The architecture allows us to support training for any unit or equipment—surface, sub-surface, air or ground.

The VMPA solutions—including the Readiness Control Officer Trainer, Navigation System Maintenance Trainer, Machinery Control System Trainer and Propulsion Plant Operator Trainer-range from standalone classroom training devices to fully integrated team trainers that offer both instructor-led and evaluation modes of operation.

By integrating live, virtual, constructive (LVC) components, these training systems improve student proficiency, increase overall system knowledge and produce competent watchstanders while expanding overall training pipeline capacity.

