NAVAL AIR STATION NORTH ISLAND, Calif. - On the heels of creating its sheet metal artisan training program last April, Fleet Readiness Center Southwest (FRCSW) expanded its depot-level training endeavors in January to include a paint training course.

The concept and timeline for the course, which targets workforce and production quality, was initially developed in May 2017.

Daniel DeMilio, deputy integrated production team lead for the paint complex, was joined by subject matter expert planner/estimator David Chavez, paint training crew leaders Daniel Hernandez, Donnie Kilgore, Dustin Briggs, and crew leader David Powers in developing the paint course.

The team used technical publications and drawings as guide markers to ensure the comprehensiveness and accuracy of the information contained in the course.

Commander, Fleet Readiness Centers was apprised of the paint training team’s work and
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requested that DeMilio evaluate a 2-D Virtual Reality Paint Training system for applicability to the course.

The evaluation led to information about a 3-D Virtual Reality system developed by SimSpray™ Industrial that accelerated the impact and scope of the course.

Based in East Hartford, Conn., SimSpray™ Industrial was in the San Diego area and brought aboard by FRCSW’s Chief Technology Officer Gabriel Draguicevich to demonstrate the unit and its potential to support the training course lab requirements.

A progress review meeting was held to request support and funding for the 3-D Virtual Reality Paint Training system. Pictures and a video of the demonstration were presented which clearly displayed how the units would enhance the course’s content.

The 3-D system reduced a variety of waste factors including over production, unnecessary motion, material movement, and inventory.

Artisans performed lab training without moving into paint bays, waiting, or using materials. This reduced the indirect cost and time to complete the course from five to four weeks.

All current artisans will attend the training course to ensure a baseline of knowledge is established. The SimSpray™ system has the capability to teach several different skills in a virtual environment including de-paint, or blasting operations, and paint and powder coating operations.

Through the virtual reality headset, and given the appropriate device for the training session (blast hose, paint gun, etc.), artisans are transported into a virtual paint booth setting with a 360-degree view of the project in front of them.

When the artisan uses the device (hose or gun), the system provides haptic feedback and sound simulating the process. Direct feedback is provided at will showing any damage, overspray, drips/runs/sags, and where the coats may be too heavy or too light.

In addition, the SimSpray™ can show the “orange peel effect” and “dry spray,” which are the leading causes of damage work orders (DWO). These are correctable in the lab without wasting time or material, and the artisans can see their improvements as the course progresses.

Significantly, the course is designed for FRC-wide implementation, and is based on advanced skills management collaboration for painters, with a focus on DWOs to ensure a broad-based approach affecting paint quality and speed to the customer.

The FRCSW Total Force Strategy and Management training department provided guidance and support in creating, updating and transferring lesson plans to the appropriate format for instruction.
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A pilot class was held in October 2017 to test the instructional material, readiness of instructors, and every functional area of the training course. After compiling the results of the pilot, the team made the changes necessary to provide results by the established timeline.

To ensure the first official class kicked off in adequate facilities, engineering technician Bethany Harris added her support by refurbishing the former Fleet Training classroom in Building 466.

A Grainger® 4PL contract was used to purchase the SimSpray™ units, and during FRCSW’s reduced operating period in December, DeMilio received them while the rest of his team continued fine-tuning the course content.

Instructors received Sim Spray™ factory training on Jan. 5, and the first FRCSW depot-level paint course was set three days later.