From his office in Building 378 aboard Fleet Readiness Center Southwest, quality manager Adam Kimmerly is assembling Integrated Quality Teams (IQT) at the command as part of the FRC-wide Quality Management System to improve production and delivery of products to the fleet. (U.S. Navy photo)

NAVAL AIR STATION NORTH ISLAND, Calif. - Production quality throughout the Fleet Readiness Center (FRC) domain will undergo a transformation through a concerted effort from artisans to senior leadership by the end of this year.

Fleet Readiness Center Southwest (FRCSW) Quality Manager Adam Kimmerly said that a COMFRC policy (COMFRCINST 48855.1) released late last year directed the formation of Integrated Quality Teams (IQT) as part of the FRC-wide Quality Management System (QMS).

The QMS targets production quality and delivery of products to the fleet.

“IQTs are an integrated product type structure which brings people from different competencies together to fulfill a specific task. And the task is to enforce quality in our industrial production shops,” Kimmerly said.

“That will encompass everything from new item manufacturing to basically all of the depot-level production that we do here (maintenance, repair, and overhaul),” he added.
Tiers and Teams

The IQTs will be divided into three tiers:

The Tier 1 team is at the COMFRC level and manages the overall program.

The Tier 2 team is located at each FRC and is led by the quality manager and consists of top-level leadership across the production industrial spectrum, including engineering, logistics and industrial operations, industrial production and COMFRC’s industrial production, and safety and environmental compliance.

“These are the members that will manage the implementation of the COMFRC quality policy at the FRC level,” Kimmerly noted.

The Tier 3 team is aligned to the production integrated product teams.

“For example, here we’re going to have 11 IQTs. The first three we established are aligned to the processing and manufacturing side of things that includes plating, paint, machining, NDI, and heat treat --- kind of building our foundation and getting our QMS implemented,” Kimmerly said.

Three IQTs were formed during the spring to manage component overhaul including avionics, hydraulics and dynamic components.

By the end of June three IQT leads will be assigned to the aircraft production lines: F/A-18 legacy, Super Hornet, and EA-18G, the E-2/C-2 and Vertical Lift.

Lastly, two IQTs will be established during the summer for all engines, the test line, voyage repair team, and FRCSW detachments.

All IQTs should be fully operational by Dec. 31, 2018.

“Each of the Tier 3 IQTs is led by an industrial engineer who has a background in process control, quality management, and continuous process improvement,” Kimmerly said.

With a focus on Lean and Six Sigma, the foundations of AIRSpeed, the engineers hold Green and/or are working toward Black Belt certifications, Kimmerly added.

Operational Targets

The IQTs will target four operational areas identified by COMFRC to enforce production quality: personnel, technical publications, work documentation, and tooling and equipment.

Personnel issues will address staffing and training needs, and ensure artisans have the appropriate certifications and proficiency levels required for their jobs.
“We need good technical publications that are clear in what they are requiring, are available to the people who use them so they have access to the most current version of the tech pub, and are up-to-date with the latest and accurate processes,” Kimmerly said.

Creating work documentation that accurately reflects the processes in tech pubs and provides artisans with clear instructions on what they are supposed to do, will provide traceability to what work was done.

“When an operation is completed it needs to be clearly documented on paper, or electronically, in the future. This way we can tell if a landing gear component was inspected properly and what the results of that inspection were, for example,” Kimmerly said.

Reliable machinery and equipment must consistently be available to artisans for them to perform their work.

“How each of the IQTs focus on these things will probably vary a bit depending on what the major problems are on their areas of focus, and what’s hindering production and impacting quality,” Kimmerly noted.

An Overhaul On How We Do Things

“In the past, the FRCs relied strictly on our industrial quality department to manage quality,” Kimmerly said. “It was decided that we need some degree of engineering involvement or oversight with respect to quality.”

“Typically, in the aerospace industry, there is a quality engineering department and we haven’t had that until now. So this is really a new structure and new alignment of quality to engineering.”

Kimmerly stressed that the existing Quality Assurance (QA) department will not be altered.

“We need their support more than ever to help implement this quality management system, and provide their expertise in audits and in QA and product conforming verification,” he said.

Getting a jump on the official release of the COMFRC policy, FRCSW established the first FRC IQT in June 2017 at its canopies and windscreen and flight controls shop. Since then, the shops have already seen benefits.

“In one case, the IQT identified a need for a design change to a part on an F/A-18 windscreen. The design was a little too thick causing the windshield assembly to delaminate and fail prematurely. The artisans knew that and often saw it, but that feedback never got back to engineering to trigger that change to happen. So the IQT helped to facilitate that feedback loop and helped to initiate that design change,” Kimmerly explained.
“Also, some of the windshields were getting dented because the work stands they were being stored on didn’t have the right padding in the right places. So we were causing discrepancy work orders to fix a problem that we were causing because our work stands were insufficient. That triggered a change to the work stands to reduce damage and improve the overall quality.”

Kimmerly said that IQT leads will routinely walk through the shops to identify issues and problems the artisans may be experiencing and review quality data on a monthly basis.

“This whole structure is new and it is within industry standards to have quality engineers to manage this stuff,” he said.