**Company**
US Navy

**Business Challenges**
• Declining throughput
• Frustrating bottlenecks
• Maintenance inefficiencies

**Solution**
Realization

**Benefits**
• Balance resources across projects
• Accelerate project completion
• Reduce a culture of finger-pointing
• Forecasted potential bottlenecks
• Optimized resource utilization

**Results**
• Expanded engineering and support capacity to maintain 30 aircraft per year
• Reduced WIP from 36 aircraft to 17 aircraft
• Increased annual throughput 81% (from 6 aircraft to 11)

# Execution Intelligence Accelerates Navy's F-18 Repairs by Over 40%

## BUSINESS CHALLENGES

For over four decades, the F/A-18 Hornet has dominated the sky and ruled the roost of Navy flight decks.

From shooting down enemy fighters and bombing enemy targets in Operation Desert Storm to taking over precision strike missions in Bosnia, Kosovo and Operation Iraqi Freedom, this legendary twin-engine combat jet's battle capabilities and versatility consistently broke all tactical aircraft records for reliability and maintainability.

But in 2015, the US Navy began to overuse the multi-mission strike-fighter much like a hardnosed baseball manager burns out his star pitcher with too many starts in too little time.

The reality for the Navy was that a couple of years ago the increased global demand for aircraft carriers turned into excessive flight hours for the F/A-18. Soon afterwards, 50% of the fighter jets became grounded for maintenance issues.

"When we opened up these F/A-18Cs, we found that there was corrosion and too much engineering work to be done," said Navy Rear Admiral Michael Manazir. "We had pushed the jets way past the 6,000 flight-hour service limit."

With delays in the delivery of the F-35, which are scheduled to replace the aging F/A-18 by 2020, Real Admiral Manazir needed to accelerate repairs on the worn and torn F/A-18s. With the clock ticking, the Navy no longer had the time or budget to hire skilled artisans or add hangars, tools and equipment. The situation had become critical.

## SOLUTION

The Navy realized a monthly planning and review process was not sufficient to handle the constant changes that define aircraft maintenance repair and operations (MRO). Rear Admiral Manazir also recognized that archaic labor-intensive planning tools and spread sheets was com-pounding scheduling problems.

**REALIZATION**
Execution Intelligence for Complex Projects™

In a last ditch effort to leverage existing resource capacity to meet project demands, the Navy turned to Realization and its execution intelligence software. Based on the Critical Chain concepts, the execution intelligence solution not only automatically balanced workload and capacity across projects for all departments, but also kept their schedules synchronized.

As the MRO market leader for execution intelligence software, Realization immediately recognized that — while 80% of the approximately 25,000 hours of total effort can be planned — the remaining 20% is revealed only after you the aircraft are opened.

Ideally, all this extra work must be planned and executed without changing the fly-out date of the aircraft; however, the depots were constantly negotiating new fly-out dates creating gaps in fleet availability for the warfighter.

Although built on theoretical averages, the actual plan was constantly in flux, including the number and hours needed of specialized mechanics workload on back shops, engineers and procurement. "Changing all these schedules and keeping them synchronized within and across aircraft is humanly impossible," said Realization CEO Sanjeev Gupta.

Not only did Realization's execution intelligence software ensure that resources were shifted to the right tasks at the right time, it also changed management focus from backward looking reports to forward-looking delay or bottleneck alerts. Even the supply chain benefited because vendors were now working to synchronized schedules and real need-dates.

## BUSINESS RESULTS

Realization's analysis showed that by solving the scheduling problem, depot production could be increased by 25% or more and aircraft turn-around times reduced by 50% or more. It took the depots about four months to implement the plan and start seeing improved performance.

"We've been using (Realization) for a year and have already increased the depot throughput by 40 percent," RADM Manazir reported to US House of Representatives Armed Service Committee in late 2015. "We expect to get even greater than that to where we have delivered somewhere along the lines of 30 airplanes from the depot a year ago; in fact, we're looking to deliver 104 airplanes a year from now.

Realization is proud to have helped the Navy and more than 350 other organizations around the world, including more than 25 aircraft MRO's in finishing their projects faster and increasing their project completion rates. All of them have achieved results that are as impressive as the mighty F/A-18.