

# Increasing Coverage to Rapidly Clear Production Bottlenecks



Aviation Engine Repair Facility



Connecticut, USA



300 - 500 Workers

## Key Results

- » **2X** increase in productivity within a critical work cell
- » **175%** increase in average NDT inspector coverage capacity per shift
- » **60%** increase in qualification coverage across workforce

## THE CHALLENGE: Uptick In Demand

This aviation engine facility is responsible for the repair of jet engines for the largest airline companies in the world. In response to a quality incident, this facility was awarded the primary work-orders to repair and re-certify a significant number of engines for use. This sudden increase in demand put particular pressure on the non-destructive testing (NDT) inspection processes. Initially, there were not enough qualified NDT inspectors per shift in any given cell, resulting in the operation suffering a backlog of inventory, jeopardizing work-order completion times.

*"Bottlenecks slow down processing time, promise dates are pushed back, and money is lost because we can't guarantee more parts due to lack of man-power. It also causes spatial issues due to more parts in production that are waiting for the next NDT process"*

**- Senior Manufacturing Supervisor**

## THE GOAL: Clear Inspector Bottleneck to Clear Increasing Backlog

In partnership with Covalent, plant leadership stepped into action to prioritize and remove this bottleneck to increase operational capacity. First, using the Covalent Workforce Intelligence, the facility deployed a shift gap analysis report which armed cell-leaders with a real-time view into qualification gaps by shift and allowed for accurate prioritization of training resources. Then, using Covalent's qualification management solution, the team focused on qualifying new and existing NDT inspector candidates on specific processes to efficiently increase coverage per cell and optimize NDT inspector allocation per shift.

## THE RESULTS: Increased Coverage and Production Across Facility

### Outcome 1: Increased NDT "Bench Strength" Leading to Increased Overall Productivity

Since identifying and prioritizing this NDT bottleneck, the repair shop significantly increased the NDT qualification levels. The average NDT inspector **coverage per shift increased by 175%** in just three months. With this additional capacity, inventory was inspected consistently across both shifts instead of being put on hold overnight. In one critical work cell, this improvement was responsible for a **2X increase in overall productivity**.

### Outcome 2: Increased Qualification Coverage by 60%

In eight months, this facility increased their qualification coverage by 60% across their workforce: resulting in a more flexible workforce and employees that can work on a more extensive set of processes across different cells. With this new flexibility, plant leadership can more rapidly respond to changes in demand by reallocating their workers as needed and reducing the probability of future bottlenecks.

## SELECTED CLIENT QUOTES

*"The data visibility offered with Covalent has put everyone on the same page about training across the plant. We've never had operators be able to see what they are qualified in at glance"*

**- Manufacturing Engineer**

*"The Covalent training Matrix has been a one stop shop to see exactly who is qualified in which skill. It has also helped to identify whose training is up to date in the system. I have used the matrix to identify our training shortfalls, that way if we hire more employees, we know exactly what training is needed in order to fill the gaps of areas we might not have much coverage on"*

**- Cell Leader**