

42Q

**SMART CONNECTED
MANUFACTURING**

A SANMINA DIVISION

Case Study

Weir Increased Throughput by 53% and Reduced WIP by 37% in their facility in Todmorden, U.K.

“With our previous system, approximately 230 work order tickets per month failed to scan. I had to manually resolve all those issues. When 42Q was implemented, this manual intervention was no longer needed.”

Tracy Mayoh, Manufacturing Coordinator.

“42Q has become a fundamental part of the way we work. It is the central nerve system of our operations and it continues to evolve as we find more ways that it can improve our business. Our customers, auditors and shareholders have been very impressed when they see the way we utilize the platform and maximize the benefits of a digital system.”

Lee Jenkins, Director of Operations, Weir

About Weir:

Weir is a mining technology company. Their systems help customers in mining and end to end processing industries to operate with the highest productivity and lowest environmental impact. Customers rely on Weir's solutions and services to keep their mission-critical operations running efficiently and improve their sustainability footprint.

Goal:

Weir Minerals European Manufacturing Headquarters is located in Todmorden, U.K. The facility specializes in the manufacturing and assembly of specialist and high duty pumping systems. The product portfolio ranges in weight from around 3kg up to 19,000kg and when fully assembled can be in excess of 45,000kg. These products are made in a range of proprietary controlled alloys and service a global market.

Weir needed to significantly improve manufacturing performance, and increase asset utilization. Their vision was to align value streams to enable a lean manufacturing philosophy. To do this they needed real-time data availability to enable critical decision making. They decided to digitally transform the management of their manufacturing operations from a mix of manual and paper-based processes as well as outdated systems to a cloud-based MES solution that could support the company's Industry 4.0 strategy.

Different manufacturing operations: foundry, machine shop, laser cladding, assembly and a digital additive manufacturing center, needed the same MES solution to provide real-time data visibility, process and quality control. They also needed seamless integration with the ERP system and manufacturing equipment.



Why 42Q?:

Weir was looking for a partner that could not only solve their existing manufacturing problems, but also support their global deployment strategy. After an extensive vendor selection process, 42Q was chosen as the new MES for Weir's facility in Salt Lake City, U.S.A.. Implementation of 42Q's Digital Factory Starter Kit at the facility enabled significant operational improvement including lead-time reductions of 30% for some products. As a result of the positive impact of 42Q on Weir's manufacturing operation in Salt Lake City, the company decided to roll it out across all plants worldwide.

Approach:

- The 42Q deployment team spent a week reviewing and understanding the production process as well as Weir's requirements.
- Lessons learned from the deployment in Salt Lake City were evaluated.
- A Statement of Work (SoW) was developed and reviewed on-site with Weir Minerals.
- A solution design mapping the features of 42Q to Weir's production process was developed and validated with Weir.
- Manufacturing process walkthroughs were conducted with Weir to verify the solution design.
- Weir super-users were trained and a conference room pilot test was executed.
- User acceptance testing was completed on the production floor.
- The 42Q team worked closely with Weir employees to ensure they became competent in using the system prior to and after the Go-Live milestone.

Results:

- Increased foundry throughput by 53%
- Reduced WIP inventory by 37%
- Quality First Past Yield improved from 90% to 99.1%

