Myriad Engineering Limited

Manufacturing and Assembly Specialists

CASE STUDY
Network Site Visit

POWERED BY

CallaghanInnovation
New Zealand's Innovation Agency

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INDUSTRY 4.0 Network

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Background:

Myriad Engineering is a precision engineering organisation based in Petone, Lower Hutt, New Zealand. The company has been in operation for over 50 years, offering a full solution engineering capability, including CNC machining, welding, fabrication, pressing, drilling, tapping, and more. Despite their established presence in the market, Myriad Engineering was facing challenges with their scheduling process.

Opportunity/Problem:

In a fast paced, short lead-time environment, schedules require updating constantly. At Myriad Engineering, the existing scheduling process involved printing job cards on paper; cutting off a small slip containing key information; transferring these to a magnetic strip and placing them on a whiteboard aligned to each machine after the material was cut. The actual schedule was short

Old System NB: Picture of PowerBI system required

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term focused, looking at daily capacities, not taking the bigger picture view to combine orders for shipment.

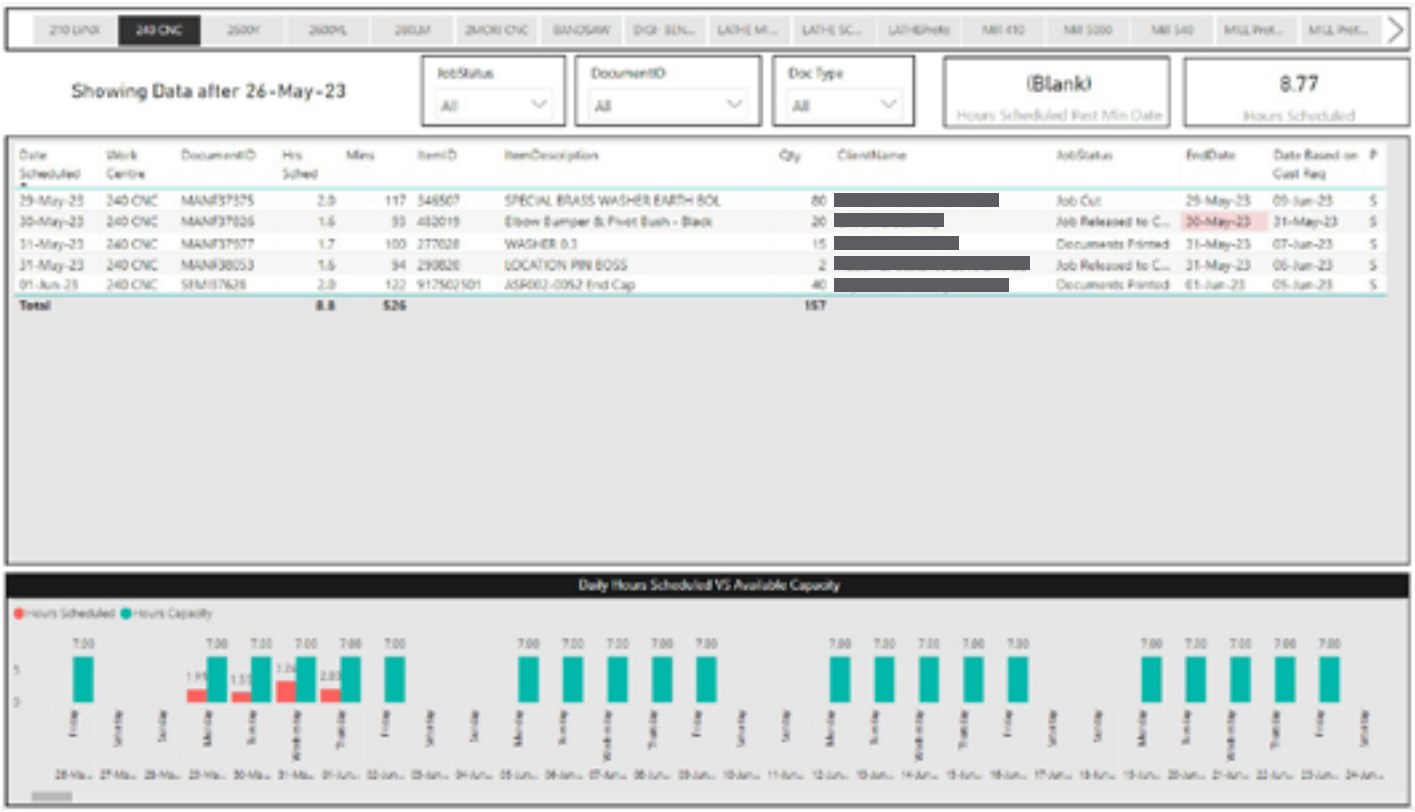
With the extensive manual intervention required, the whiteboard did not match the schedule in the ERP system, causing confusion and inefficient communication for purchasing running the MRP process, as well as hindering clarity around exact delivery dates. The latter causing phone call and email clarifications and updates to be provided regularly to customers.

Solution:

By listening to feedback from the team and monitoring KPIs related to delivery, it was apparent improvement was needed. After Mark, the managing director of Myriad Engineering, got some first-hand experience of the process, he quickly drove the team to make a step change and encouraged the use of technology as the enabler to facilitate this.

Building on the use of their existing system, they moved to one source of the truth by scheduling only in the ERP system (Abel). The key challenge was then how to clearly communicate this real-time information to the team. They elected to connect the ERP software's database to PowerBI and generate a summary view of the schedule for each work centre.

Installing a large screen and attaching a small computer allowed this Dashboard to be viewed in the factory any time. Training the team was identified as a critical risk to the success of the trial. Starting with a couple of full team sessions, followed up by 1:1's where needed, the initial teething problems around adhering to schedule were addressed.



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To successfully transition to scheduling solely on the system, some process changes needed to occur, for example, visibility of the initial cutting operation which makes material available for machining and fabrication needed to be improved. Providing training for the material handling team to update job routings after completion of tasks created this visibility.

It's estimated that the change in processes reduced at least one hour of admin time a day for the production leadership team, and scheduler with reduced phone calls as delivery in full on time (DIFOT) increased and accurate dates could be provided to customers. With this reduction in admin and double handling, combined with fewer phone calls, the virtuous circle of continuous improvement has started. High value tasks aligned to annual strategic goals and quarterly plans are now realistic aspects of roles that previously struggled with business as usual demands.

The cash investment required to achieve the above solution was minimal compared to the time saved by the team in asking questions and/or working on the wrong job.

Key Takeaways:

- A process that 'provided substantial frustration' is now part of BAU. The next step change is coming into view following a SIRI assessment completed on site.
- The open communication and feedback with the team about 'what's in it for them' helped people 'stick' with the change and work through any initial challenges.
- Communicating the 'why' can be significant. Working with the team to link the impact between adhering to the schedule and the KPIs and associated discussions had a positive impact.

About the site visits and Industry 4.0

The purpose of the Demonstration Network is to drive uptake of Industry 4.0 technologies among New Zealand manufacturers with the aim of increasing their productivity and global competitiveness. The Network of Site Visits (NSV) are part of the Industry 4.0 Demonstration Network, which also includes a mobile showcase and smart factory showing cutting-edge Industry 4.0 technologies in action. The NSV takes selected companies through a fully-funded assessment process to help them accelerate their own journey towards Industry 4.0, and sees them share their knowledge with other manufacturers.

Further questions?

To find out more please contact

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