



CASE STUDY Network Site Visit

Unlocking the door to efficiency

POWERED BY

CallaghanInnovation
New Zealand's Innovation Agency

PROGRAMME PARTNERS

Beca



INDUSTRY4.0
Network

How Independent Doors are optimising productivity gains with a manufacturing execution system

About

Since 1994, Independent Doors has been a leading provider of high-quality doors and sliders for residential and commercial construction markets in the Christchurch and greater Canterbury region.

With branches in Christchurch, Timaru and Cromwell, the company offers a wide range of customised doors, including internal and external doors, bi-fold doors, cavity sliders and hardware.

Independent Doors is widely recognised for delivering superior products at a fair price, catering to customer of all sizes, from commercial developers and builders to DIY renovators. The company takes pride in delivering quality, flexibility, and dependability to its customers and has completed projects for some of the South Island's premier properties.

Background:

Despite Independent Doors success, the company has faced several challenges in its manufacturing process. It found it difficult to gain visibility across the manufacturing process from the start of the job through to dispatch.

This made it challenging to identify areas where improvements could be made, to gather information on how effectively people were operating and how productive they were and identify training needs. They also struggled to capture the labour component of each job and understand their margin across the different product range.

These areas of concern impeded the company's ability to optimise their manufacturing process and improve efficiency.



How Independent Doors are optimising productivity gains with a manufacturing execution system

Solution:

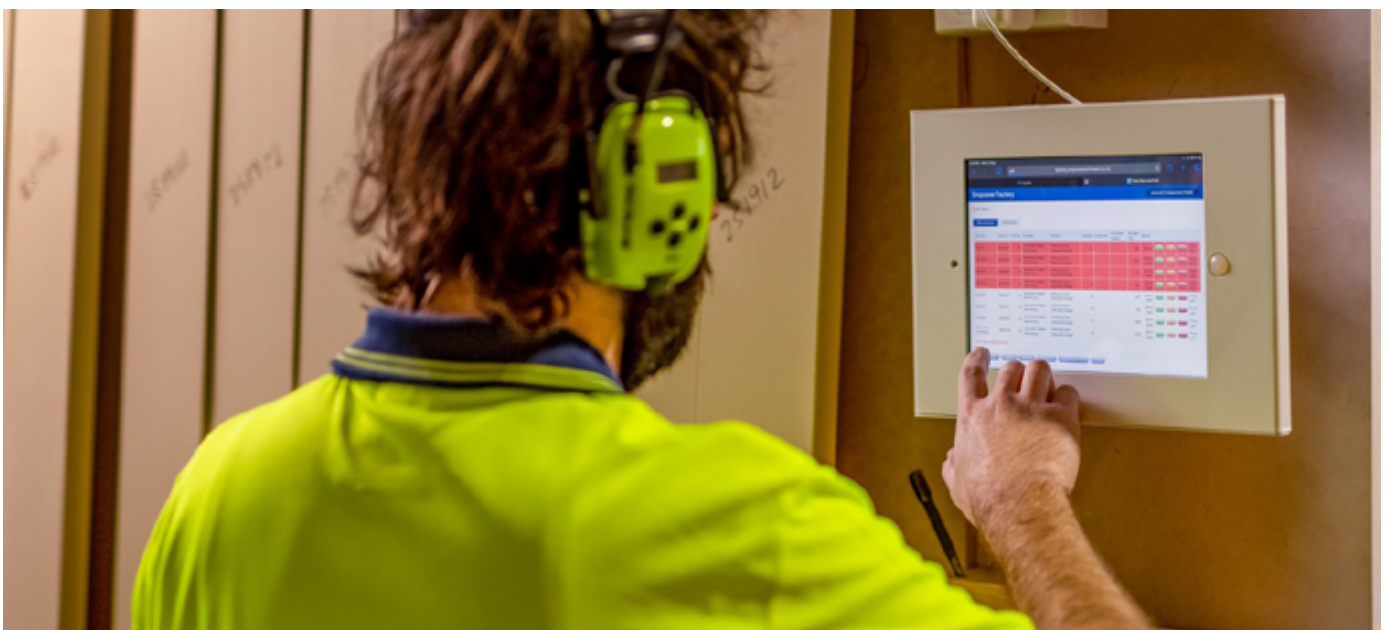
To address these challenges, Independent Doors implemented a manufacturing execution system called Empower. This system allowed them to achieve the following:

- Understand the efficiency and output of each work centre and link it to the output of each person, enabling them to learn from the team members who were performing well.
- Schedule, track, manage, and drive productivity more effectively.
- Provide real-time updates to customers on the progress of their orders.
- Capture real-time data for the time spent on each job, allowing them team to track this against the budget and adjust bill of materials (BOM) times based on actual times.
- Use reporting to identify problems based on actual vs. budgeted times, leading to problem-solving activities.
- Improved planning and scheduling by gathering and analysing actual averaged times.

The next step is to focus on the integration of their finance system with Empower enabling direct up-loads of data while reducing current data entry requirements. They will also focus on best practice day-to-day use of the system as they transition to a paperless environment.

The team will also push the planning and scheduling elements of the software and begin to create enhanced real-time and daily reporting for their teams.

The implementation of Empower has allowed Independent Doors to gain greater visibility over its manufacturing process, identify areas of improvement, and optimise their operations to improve efficiency. Their first customer is already using Empower to track their order's progress. Independent Doors plans to continue integrating the system with their operations to drive further gains in productivity.



How Independent Doors are optimising productivity gains with a manufacturing execution system

Benefits

- Accurate job scheduling based on true capacity and historic records of actual times.
- Intelligent pricing systems now based on more accurate production data.
- Prompt and real time feedback to team members on how they are performing.
- End-to-end management and visibility of the manufacturing process with real time data.

Key Takeaways

- Good information is essential to set up the system effectively. This includes having a clear understanding of the problems the system is intended to solve and the goals you want to achieve.
- A structured roadmap is critical for implementing the functionality needed in an organised and efficient manner. Following the Plan-Do-Check-Act (PDCA) cycle can assist in this process.
- Change management is key to the success of any system implementation. It is essential to involve the team in the process and provide them with the relevant training to support effective utilisation of the system.
- To ensure adoption by the team on the shop floor, it is important to make the system as user-friendly as possible. This can include things like providing tablets right on the line, making it easy for employees to access and use the system in real-time and anything else that takes away the barriers to adoption.



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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