

New Age Caravans – Combining Industry 4.0 and Lean manufacturing

New Age Caravans operates out of two closely situated sites in the Northern Melbourne suburb of Epping in Victoria, employing 170 workshop staff manufacturing caravans that are proudly Australian-made.

You don't compete successfully at Bathurst unless you understand performance and reliability. The Walkinshaw Automotive Group, the new owner of New Age Caravans, is famous for its design and production of high-performance and luxury GM Holden vehicles. Walkinshaw is an Australian icon and has integrated its automotive expertise in engineering, design, manufacturing, field testing and quality control to introduce a new level of innovation to New Age Caravans. New Age Caravans uses all of Walkinshaw's expertise and know-how in rough durability testing, robotic welded chassis and clay modelling for prototype design, resulting in a highly engineered and durable product.

New Age Caravans uses the latest in Industry 4.0, digital manufacturing and Lean manufacturing data collection, with tablets on the workshop floor and job, task and individual workshop staff tracking, and scheduling software to drive production. This technology enables New Age Caravans to deliver caravans of the highest quality while at the same time minimising costs to achieve highly competitive caravan pricing for the Australian marketplace. To achieve these gains, New Age Caravans turned to Empower Workshop Productivity & Job Scheduling software.

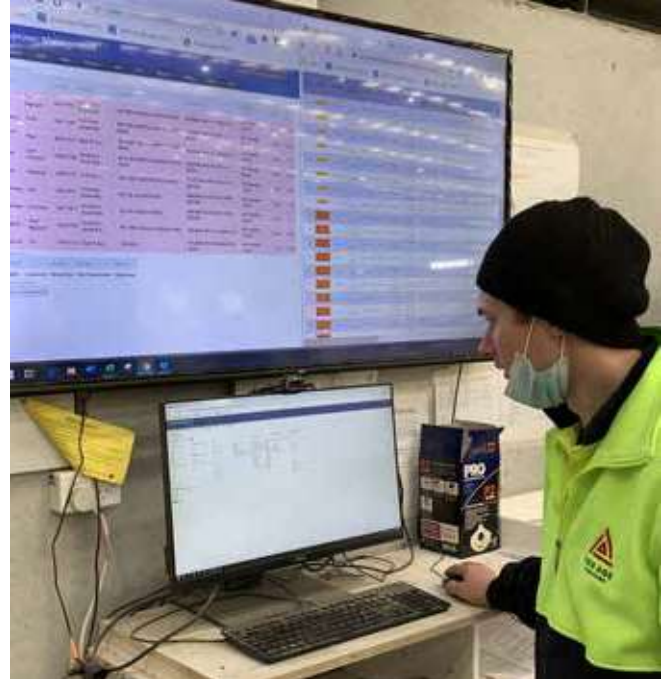
"You need the right software tool to manage your greatest resource: your people," says David Lawrence, Site Manufacturing Manager at New Age Caravans. "A staggering 90% of Australian joiners and cabinet manufacturers and engineers today still either use paper based manual time sheets to record their workshop staff times on their jobs or no time sheets and no recording of their time on their jobs at all. This results in management knowing little or nothing about any of the key performance indicators (KPIs) of the workshop floor – job times, task times, staff times, downtime time and manufacturing productivity, and they attempt to schedule jobs manually, which is 'manufacturing blind'.

"Manual time sheets produce a single job cost report for labour, total time to each job – this information that is too little, too late, and too inaccurate. And manual time sheets do not in any way motivate workshop staff to work more efficiently. Also, manual time sheets are very costly – they cost approximately \$70 of working time per workshop staff member per week, for staff to fill in daily, and administration staff to then enter the times into their costing program daily to produce a 'single and poor' report. In contrast using the full technology of Empower Workshop Productivity & Scheduling costs as little approximately \$7 per workshop staff member per week, on subscription.

"Empower Software is viewable to workshop staff on their workshop floor tablets and allows workshop staff to see their job list, task priorities, budgeted time at job start, and actual time at job end. Using this technology New Age Caravans' workshop staff have certainly 'stepped up to the plate' and are now meeting their job times constantly. There is certainly a new positive culture on our workshop floor – staff meeting job times is the core focus."

For Lawrence and the management team at New Age, not tracking staff time on jobs at all was unacceptable and not an option. Lawrence needed to know exactly what was going on, on the workshop floor.

"Using Empower I now know exactly what's going on the workshop floor without ever leaving my office," he says. "Even if I am away from the business, I can see what's going on the workshop floor on my tablet. If we make a change to our processes, we can evaluate



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The Empower software provides Lawrence the ability to fully understand the current and accurate labour cost to manufacture every single part of a caravan. He needed to know the job times, task times and manufacturing productivity of individual workshop staff weekly, which Empower reports comprehensively.

Moreover, David uses Empower to schedule all jobs and to track and report all workshop downtime daily and weekly, plus staff reasons for each rework, which enables him to see the magnitude of rework and root causes to employ continuous improvement processes. Using the Empower software, Lawrence expects to achieve a reduction of at least 40% in labour times on jobs, and therefore 40%-plus reduction in labour cost on jobs.

"Previously we had no time on jobs information, so we had no technology," he adds. "Using touchscreens on the workshop floor and the Empower software with real-time reporting of jobs, parts of jobs and individual staff we are now a high-technology business".

New Age has invested in 50-inch TV screens on workshop walls and office walls that display key data from Empower detailing current jobs, tasks, and individual staff times actual to budget. This enables all workshop staff, management and administration staff to see all current jobs and staff times from the workshop floor, in real time continuously throughout the day. All management and administration staff now also have a real job times and productivity culture and focus. "There are four major influences on any manufacturing plant," advises Lawrence. These are your materials, your equipment, your processes, and your labour. Of these four, labour is the most difficult to keep track of and to utilise effectively, that is why you need the help of software like Empower."



Empower allows Lawrence to see what's going on on the workshop floor. It offers instant feedback and changes can be made based on real-time information that is always accurate and reliable.

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In a previous business and role, Lawrence took an Australian cabinetry business with 18 workshop staff down to six workshop staff and achieved the same output. Now the business is profitable and has a long-term future.

His work in New Age Caravans' CNC department and cabinetry assembly areas has yielded such substantial increases in production and productivity, and therefore reductions in labour cost per caravan, that Empower software and tablets have been rolled out on the workshop floor across every New Age Caravans manufacturing department.



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Lawrence uses Empower Scheduling to ensure that forward jobs are scheduled with minimum downtime to optimise and maximise production and to ensure workshop staff work as close-knit teams where each person's unique skills are utilised to the full advantage of the company. For New Age Caravans, Empower Software delivers additional production, revenue and profit that justifies pay increases for workshop staff and substantial investment in new CNC machinery and other technology.

Lawrence has also upgraded the company's main machinery, including CNC board material stacking and management machine feeding materials into larger CNC high performance routers. Lawrence has reduced CNC routers from six to two to save machine maintenance, floor space and labour cost whilst at same time significantly increasing machining capacity. **AMT**

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