

## Press Release

# Eliminating the pinch points



Fero, a new brand formed last year by the joining of companies TradeTech and Wire Solutions, recently embarked on a bold strategy to streamline operations and boost production flexibility and capacity. At its heart is a visual-based system that turbo-charges productivity. Expectations have already been exceeded, as Glenn Baker reports.

There's a good deal of local electronics manufacturing history behind the company name Fero. Derived from the Latin phrase *In Caelum Fero* (roughly translated 'We Make Our Mark'), Fero was launched in April 2010 by the joining of two well-established companies: TradeTech and Wire Solutions. The former is an importer and distributor of electronic parts and components for the manufacturing, audio-video and service industries. The latter provides wire, terminal and assembly engineering, including low-pressure molding products.

TradeTech had been purchased by brothers Roger and Greg Fulton in 2001. Roger, a consulting engineer and small business owner, brought a fresh approach to management. Greg, an ex-farmer, saw the growth opportunity and the synergy with his own appliance parts company Prime Distributors.

2001 was to be a watershed year for the Fultons. It was also the year Greg sold Prime to Fisher & Paykel and, together with technician Grant Holmes, established Wire Solutions – a response to the growing demand for

power cables, looms and wire harnesses.

Synergy would eventually drive TradeTech and Wire Solutions under the Fero Group umbrella in 2010. "There was this huge synergy between the two companies," recalls Roger. "Our manufacturing clients required the electronics and they required the connectivity – boxes, a bit of assembly, wires, and so on." Greg also had customers that just required the connectivity products. "Between us, we had a large spread of knowledge, power engineering, accounting, virtually every process."

It also made sense to bring the two companies together from a geographical perspective – with TradeTech based on the North Shore and Wire Solutions in South Auckland – and both requiring bigger premises.

It was at the launch of Fero at the new Mt Wellington premises, that the Fultons were introduced to the 'Theory of Constraints' (TOC) – a system that can address the production 'pinch points', or constraints within a business.

Roger immediately read up all he could on the subject and subsequently got in touch with Peter Thorby at ViAGO, a Christchurch-based company specialising in the TOC process. "We decided to just go for it," says Roger, "and committed to a very rapid implementation."

### Reducing lead times

"Our manufacturing is geared for shorter

production runs, which is typical of many smaller New Zealand companies," says Greg Fulton. "Large local manufacturers also have a requirement for short production runs, because every time they make a design change on whatever they're building, there's always a modification of wires. This is where we have the upper hand over Asian companies.

"When we first considered TOC, we were very mindful of how it could help keep New Zealand manufacturers looking to onshore suppliers like ourselves. The key to this was keeping lead times to a minimum," he says.

"We already had excellent lead times by New Zealand manufacturing standards at 15 days. Our goal was seven days and we saw TOC as a great mechanism for doing this."

The ViAGO implementation began on February 14, 2011, with Peter Thorby instructing the Fultons to "cut all schedules, cut all batches and empty this place out!"

"Just like Lean Manufacturing and Six Sigma, the outcome of TOC is to implement a process of ongoing improvement," explains Thorby. However, it's the journey that differs – in particular the speed of implementation.

Other processes can take considerable time to implement fully, he says, so there's the danger of being "beaten up" by environmental factors, such as new technology, exchange rates, new governments, and other distractions that come along.

"Rapid implementation is what we are about," says Thorby.

The pinch point at Fero was clearly batching – aggregation was blowing out lead times. But it wasn't a case of running the manufacturing processes faster; rather a case of getting rid of the 'sitting time' – "the time that [excess inventory] is just sitting on the floor, waiting for things to happen," Thorby explains. "Hence my instruction on that first day to cut batches in half."

Not surprisingly the TOC process challenged the mindset of management – it was a paradigm shift in thinking, requiring real discipline (which is probably why many



companies don't take it on). Greg Fulton admits that for them "it was a leap of faith".

Speed of implementation is important, says Greg. They know of other companies going down the TOC path, but because they're taking so long about it, the doubters step in, the non-followers have their say, and so it doesn't work.

Roger admits to "much pain" adopting the system. "But Peter implemented the programme with absolute authority. There was no doubt in his mind and this allowed us to go at it with a great deal of belief and trust."

So was it just a matter of educating staff as to the benefits of TOC? "Education in itself is not the whole answer. In order to go fast, the more you educate people the worse it gets – because people are looking for the evidence where it won't work. "They'll even use referee businesses to look for evidence of why it won't work. Education is necessary, but not sufficient. We educate enough just to get to the next step," says Roger.

Wendy Fulton, Fero's marketing manager, points out that although TOC can be likened to "ripping off a band aid" – there was a background of care for the people involved and a lot of general education such as 'Psychology 101'.

Buy-in from staff comes quickly once they realise the positive changes, and those 'oh wow!' moments arrive, adds Thorby. "So that leap of faith gets smaller."

### Rapid change

The Fultons can't believe the rapid change in just a few weeks. "We've gone from a system with basically 15 days of production time, with say three-quarters of a month's worth of work on the floor at any one time – to virtually nothing on the floor," says Roger. "We've now got a simple four-day process in which we can easily accommodate urgent jobs." "The customer's tolerance time is now

within Fero's scheduling dynamic," explains Thorby. "Whereas before it was outside that, so the only way they would cope was by buffering it with inventory."

ViAGO's TOC system is visual-based, utilising strategically placed whiteboards. There's no need to install expensive new software or hardware. "It's about putting a manual visible process around what the company does and figuring out how to make it go quickly," says Thorby.

In regard to the sales process, Roger Fulton says it created a whole lot more visibility and exposed the 'log jams'. This is the first stage in what he believes will be a company-wide productivity increase, brought on by the initial elimination of the internal manufacturing 'pinch points'. He's excited about what reduced production lead times can do for the sales process – it gives his sales team a USP it didn't have before.

It's still early days, but much progress has been made – thanks largely to the determination of management. Benefits so far include:

- Manufacture time through the plant down from three weeks to four days.
- Work in progress has been reduced to around one-tenth of what it was, which has helped cashflow.
- Fewer engineering constraints which means that 60 percent of job costings are now engineered within six hours.
- Greater production flexibility – allowing urgent jobs to be easily slotted in and the ability to work in better with clients' requirements.
- Higher plant capacity – freeing up the production manager's time and making supervision simpler.
- Greater staff empowerment through understanding the process – often allowing staff to come up with solutions rather than relying on management.
- Greater transparency. "I went on holiday for a week and when I came back

it took me 30 minutes to get up to date," says Greg Fulton. "It used to take a day."

Since install week, the focus has been on making the TOC system faster, more stable and reliable. Now that the TOC system is up and running, Peter Thorby is excited about the additional productivity they can extract in the months to come.

"The foundation of TOC is focus and cause and effect relationships – if you can't understand the cause and effect, then don't do it. And when you do choose to do something, then you're doing it because of the cause and effect."

Roger Fulton says they're still only at the beginning of the process. "There're tools we haven't learnt how to use yet, but we already have amazing flexibility and ability to react."

Fero's on a journey, he says. "Here's a process that can benefit Fero, now we're looking forward to seeing how this process can benefit our customers as well."