

Supply-Chain Optimisation: Strengthening the Links

STREAMLINING THE SUPPLY CHAIN AND IMPROVING EFFICIENCY IS IMPERATIVE IN TODAY'S MANUFACTURING CLIMATE. GRA DEMONSTRATES HOW THIS CAN BE EASILY ACHIEVED.

BY SARAH BEGG

Supply-chain management is a hot topic in the manufacturing industry. Streamlining logistics, building a strong supplier base, and optimising business relationships are all important considerations for manufacturers. With the Australian economy and industries continually fluctuating, the climate affecting

supply chains also shifts and companies need to remain informed on current matters.

GRA is an expert consulting firm that specialises in supply chain and logistics strategy, planning and execution. Founded in 1997, the company has extensive experience in planning and optimising

supply-chain systems across a broad range of industries. GRA boasts an impressive client base, and has worked with companies including: Wesfarmers, Cadbury Schweppes, OneSteel, Nestle Australia, Amcor Fibre Packaging, Fosters Australia, Super Cheap Auto, QANTAS, Honda Australia, Mitre 10 and Sara Lee

Australia. In addition to consulting with clients, the company also coordinates and delivers master's courses as part of Monash University's supply chain and logistics postgraduate program.

With GRA's extensive experience and expertise in improving supply chains for businesses, the company is well positioned to provide solid advice to clients. "We focus on optimising the end-to-end supply-chain structure in terms of production, inventory, transportation, storage, sourcing and operating policies," explains Carter McNabb, a partner at GRA. "We look at enhancing the operating processes for demand planning, inventory optimisation, replenishment planning and detailed

production scheduling. Typical results that our clients see are inventory reductions of 20 to 40 per cent, supply-chain cost reductions of 5 to 15 per cent, and increased customer service levels. We also work with leading demand-planning, production-optimisation and supply-chain-modelling toolsets."

GRA has created an expert team with extensive commercial supply-chain and logistics experience across both strategic and operational levels of the process. With first-hand insights into clients' requirements and challenges, GRA is uniquely qualified to assist clients in achieving goals – it is the only consulting firm in Australia offering an end-to-end analysis with design and

delivery capabilities.

Carter has identified a number of key factors in the Australian economy that currently affect the supply chains of manufacturing companies. "There is a range of influencing factors that manufacturers need to be aware of in relation to their supply chains," reports Carter. "For example, there is a current concern over demand and exchange rate variability due to volatile economic conditions. As this puts pressure on working capital management and debt facilities, there is an increasing focus on asset utilisation and capital efficiency ratios stemming from the relatively high fixed-asset base and capital intensity of ▶

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arise. "Given the size and complexity of manufacturing supply chains, a common problem is managing the complex trade-offs between manufacturing variance, inventory levels, distribution costs, customer service levels and financial covenants," reports Carter. "It's not unusual for manufacturing companies to run large batch sizes to boost manufacturing variance; however, this can result in excessive inventory levels and greater distribution costs. Conversely, running too many changeovers to improve inventory turns can impact customer service levels, impede manufacturing efficiency, and increase production costs. Despite this, there is an optimal balance between these competing objectives that can be reached."

Optimising companies' supply chains is a thorough process, and GRA has established a range of services and strategies that can be implemented to help. All manufacturers can use these strategies to identify problems and discover where improvements can be made. "Manufacturing organisations need to define the strategies and operating policies that will optimise all levels of the supply chain," notes Carter. "This is clearly easier said than done. These opportunities often exist because of disintegrated functional silos – such as marketing, production and finance – misaligned key performance indicators, a lack of understanding of the dependencies between these functions, and limited sophistication within planning processes and technologies. Often, it takes some organisational realignment, the introduction of integrated business planning processes – such as sales and operations planning – and the implementation of more sophisticated planning toolsets to deliver the results. Change management and practical upskilling are also key ingredients for sustained success."

GRA offers its unique 4C analysis process as part of the company's range of services.

A sophisticated program, the analysis is aimed at identifying opportunities for improvement that can be easily implemented throughout the 'four Cs' of the supply chain: capital, costs, customer service levels, and capacity. The fact-based modelling is designed to determine which products should be stocked in which locations and how high inventory levels should be kept. The overall goal of the analysis is to determine the minimum inventory levels required to meet service levels at the lowest cost, and to highlight potential areas where inventory balance can be improved.

Another important service that GRA offers is the supply-chain strategic review and network optimisation service. By taking a broad look at each client's supply-chain and distribution network, GRA can determine the optimal structure to meet the business's service proposition while minimising capital and costs. The review also takes into account future growth plans and business strategies, and GRA prepares several options for companies to consider.

With a range of other services provided by

GRA – aimed at helping clients improve and optimise their supply chains – the company is dedicated to offering the best possible solutions. As part of GRA's commitment to staying at the forefront in innovation, the company continually watches emerging trends and technologies and identifies how these can be best implemented to help clients. "Over the last two to three years, there have been significant innovations in the technologies available for demand, production and supply-chain planning," says Carter. "These tools can integrate and optimise the complex trade-offs in manufacturing supply chains. They provide both managers and operators with a holistic view of longer- and shorter-term planning horizons. There have been tools promising this capability in the past, but they have fallen short. What is available now is genuinely exciting. With the advent of these tools, and the opportunities they provide for process improvement, we've also seen a few select organisations take their sales and operation planning processes past basic demand and supply balancing and into genuine demand and supply-chain optimisation, including capital

allocation and marketing decisions. However, this requires a greater level of process maturity, knowledge and skill."

Looking to the future, foreseeable challenges are already emerging, and manufacturers need to be well prepared for these before they eventuate. "Energy is often a key cost component in manufacturing operations and, looking ahead, manufacturers will see increasing energy costs on a state-by-state basis across Australia," predicts Carter. "Uncertainty over regulatory frameworks for carbon emissions will also be a concern, as will shorter product life cycles due to technological changes and consumer sentiment."

Other challenges are also abundant, and Carter predicts a lack of scale in the Australian market and other problems. "In terms of viability, labour cost differentials in the local versus overseas markets will be another concern," says Carter. "However, given rising energy and transportation costs, increased funding for inventory for longer lead-time sourcing, and the increase in the standard of living in key overseas markets, this pendulum may shift back in

AUSTRALIAN SUPPLY CHAIN FORUM

In 2009, GRA initiated a new discussion website, the Australian Supply Chain Forum, to support supply-chain and logistic professionals from Australia and New Zealand. Designed as a neutral place for individuals to share knowledge and information, the forum is the ideal place for networking and professional development.

The discussion page has a range of topics for members to jump into, and anyone can create their own discussion theme. There is also a page dedicated to jobs and tenders where companies can list opportunities for people in the industry.

Other features of the website include member group opportunities, blogs, events information, and a page dedicated to videos and pictures where members can upload relevant media. A free forum, the website provides a vital link for people looking to make connections and meet other professionals in the industry.

For more information, see australiansupplychainforum.com

the local industry's favour over time. As mentioned earlier, technologies for genuine end-to-end planning, optimisation and integration are now available – but making effective use of them requires a greater level of process maturity, knowledge and skill. Finding people in the Australian market with the right knowledge and skills remains a key challenge and opportunity."

With competition in the manufacturing marketplace remaining high, optimising companies' supply chains is a key strategy for streamlining business efficiency. It is imperative that manufacturers remain up to date with industry developments and new technologies to remain successful in the fluctuating Australian economy. ●