



Benefits at a glance

- ▶ *Complete machine build increased from 25% to 98%*
- ▶ *On time delivery increased to 99%*
- ▶ *BOM accuracy up from 40% to 99.9%*
- ▶ *Reduced shortages and inventory in the supply chain*
- ▶ *Dealer reliability figures improved*
- ▶ *Oliver Wight Class A certification for planning and control*

Customer profile

Caterpillar wins Supply Chain Excellence Award with Class A performance

Oliver Wight client Caterpillar Building Construction Products has won the supply chain excellence award in the prestigious Manufacturing Industry Achievement Awards (MIAA). The judges recognised the success of a comprehensive programme of supply chain development, including performance benchmarking, factory layout changes and manufacturing process improvements. This achievement depended not just on Caterpillar employees but also on the acceptance by suppliers of a dramatic new way of doing business.



In 1996 Caterpillar Corporation decided that a new range of compact wheel loaders and mini excavators would be built at the Caterpillar Building Construction Products division in Leicester. However, it laid down the challenge that no additional space for assembly lines would be added to the 60,000 square metre facility that has been making a range of backhoe loaders and telescopic handlers for 50 years.

Allan Jenkins, Manager of Supplier Management at the Leicester site comments: "We had to make dramatic performance improvements to meet this challenge and we developed a plan which included achieving Class A, making factory layout changes, manufacturing process improvements and developing a logistics strategy to help release stored inventory.

"We partnered with Oliver Wight, and its Associate Peter Hill helped provide the expertise for the essential Class A benchmarking and to establish the process disciplines for moving towards operational excellence. These would dramatically impact reliability, cost, timeliness and the overall flow of material through our production unit and distribution chain, creating high velocity and improved customer

satisfaction. "We needed to define and action a Right Part, Right Quality, Right Place, Right Time strategy focused to drive competitive advantage throughout the supply chain. The rearrangement of the factory and the manufacturing process improvements required for optimum flow would be of little advantage to us if we did not progress this throughout our total supply chain."

Caterpillar UK Ltd defined four key logistics strategies that would improve the flow of material from suppliers to customers. Employees and suppliers would need to be educated to respond to Just in Time kanban pull triggers, and deliveries would be made in build sequence using actual machine shipping order requirements as the driver. The success of these strategies not only depended on the

acceptance of change by Caterpillar employees but, equally as important, was the acceptance by Caterpillar suppliers to this dramatic new way of working and communicating.

Caterpillar held its first Supplier Day in January 1998 when it introduced suppliers to the new logistics strategies and the four key business processes that it was proposing to implement. Following the initial introduction, the strategies were piloted with several suppliers.

A considerable amount of time was spent visiting suppliers and talking not only to the senior management but also to their workforce - the people who would actually be working the processes. It was imperative that the whole team knew what was needed for this to be a success, and it was important to present data, conduct simulation and training to clearly define requirements.

Simultaneously the company developed a Supplier Community Web Site. The driver was to improve the communications link for the supply chain. The site was to be used for communicating all kinds of data as well as bringing suppliers closer into the Caterpillar community. Most suppliers used the site to get access to the daily build sequences and monthly schedules that are up-dated on the site every day. They also have access to their measures of performance, delivery and production time variances as well as general information that may be of interest to them.

There is also a discussion group forum where suppliers can talk to each other about problems and issues concerning the logistics strategies. The majority of suppliers now use the web site as a day-to-day working tool. "The results of the implementation of our logistics strategies have been resounding, and the process improvements we made have more than paid for the £25 million investment in the new factory layout," says Allan Jenkins. "We achieved Class A in planning and control in June 2000 and our key performance measures are now in the upper 90s. For example, in 1997 when we first started on the journey to Class A, the Leicester plant built 25% of machines complete, the other 75% were stored off-line awaiting retrofit, this having the obvious consequences on quality and reliability. Today 98% of machines are built complete because the right material is in the right place in the right quality and at the right time.

In 1997 we didn't even measure our machines launched to plan and couldn't therefore guarantee on-time delivery to our customers. Today 99% of machines are launched on the day we said we were going to launch them, ensuring that we are able to deliver to customers on time." One of the toughest measurements to achieve was the Bill of Materials (BOM) accuracy. With 12,000 active part numbers and 16,000 actual, BOM accuracy was in the order of 40%. This has now risen to 99.9%. Dealer reliability figures have also improved over the time period since implementing the new strategies, a direct result of quality material being available to ensure machines are built complete.

Caterpillar are not the only ones to benefit from this new way of working; the benefits have been passed down through the supply chain. Its suppliers are seeing tremendous improvements and they have institutionalised the processes within their organisations and are realising similar benefits to Caterpillar. They are benefiting from improved control, reduced shortages, reduced space requirements and reduced inventory. One fabrication supplier has seen its inventory turns improve from 16 in 1997 to 50 in 1999 with more improvements anticipated for this year. The suppliers have become more responsive and have clearer visibility of problems. In addition, they have a constantly conforming product with a reliable delivery schedule and overall improved flow.

To ensure that it continues to operate as the world leader in its market Caterpillar is now embarking on 'supplier status and performance monitoring'. This uses the internet for visibility of suppliers production status, to ensure on-time delivery to Caterpillar. This will give it an early warning of any problems at the suppliers during production that can subsequently be managed to achieve the required delivery date.

Caterpillar believes that sustainability is more important than the initial achievement, as initiatives are not driven on short term goals, although short term benefits have been achieved. The key to success is focusing on the long term view and hence ensuring the sustainability of its processes.



Oliver Wight has a 40 year track record of delivering business improvement to some of the world's best-known organisations. We believe that sustainable improvement can only be made through your own people. So unlike other consultancy firms, we transfer our knowledge to you, which means you can achieve performance levels and financial results that last.

Oliver Wight
OLIVER WIGHT

Oliver Wight EAME LLP

The Willows, The Steadings Business Centre
Maisemore, Gloucester, GL2 8EY

T: +44 (0)1452 397200
email@oliverwight-eame.com

www.oliverwight-eame.com

Oliver Wight Asia/Pacific

131 Martin Street, Brighton
Victoria 3186, Australia

Oliver Wight Americas

P.O. Box 368, 292 Main Street
New London, NH 03257, USA

Inspiring
Business
Performance