



Caterpillar Europe



Benefits at a glance

- ▶ *KPI performance increased to 95%+*
- ▶ *Unified European operations: Switzerland, France, Italy and Belgium*
- ▶ *Customer service levels improved*
- ▶ *Inventory reduced*
- ▶ *Sales revenues increased*
- ▶ *Reduced materials and freight costs*
- ▶ *Improved decision-making*
- ▶ *Cultural change embedded in the company*
- ▶ *Oliver Wight Class A certification for planning and control*

Customer profile

Caterpillar meets Class A challenge with unified European organisation

When Caterpillar Chairman Glen Barton challenged his divisions world-wide to implement a massive change programme, the European businesses seized the chance to unite and integrate its geographically diverse organisations. They aggressively implemented Class A performance standards that not only broke down barriers between marketing and manufacturing, but also delivered reliable and believable demand and supply plans across the region. These resulted in enormous and sustainable performance improvements in virtually all business areas.

Inspiring
Business
Performance

Oliver Wight

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For more than 75 years, Caterpillar Inc. has been building the world's infrastructure and, in partnership with its worldwide dealer network, is driving positive and sustainable change on every continent. With 2002 sales and revenues of \$20.15 billion, Caterpillar is a technology leader and the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines and industrial gas turbines.

More information is available at www.cat.com

In 1999, Glen Barton tasked all divisions to achieve Class A certification in Planning and Control to the Oliver Wight ABCD Checklist in Operational Excellence. Class A was considered key to establishing effective planning and control, integrating the business processes, driving effective management processes and breaking down barriers both internally and across the business.

One of the first component plants to take up the challenge was Caterpillar Mec Track in Italy. It employs 300 people at two locations, is dedicated to the production of rollers and is the world-wide roller source for several Caterpillar models. The division started to follow the Oliver Wight Proven Path of assessment, education and training, project team creation, process design and implementation.

Raphael Zaccardi was Managing Director of Caterpillar Mec Track at the time of its Class A implementation. "We first started thinking about Class A around two and half years ago. We were seeking a major cultural change agent, not just the financial benefits, but we didn't realise how broad or large the programme was going to be. We looked at the Class A implementation in our Brazilian plant where the management recommended that we used Oliver Wight consultant Daniel Araujo, who subsequently played a key role as a coach and mentor." The ABCD Checklist was developed to ascertain whether companies really improved or just implemented systems. To achieve Class A, companies are assessed against the Checklist which includes Key Performance Indicators (KPIs) to ensure they have not only implemented the processes, but are

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Thomas Zihlmann
Manager
Core and Growth Industries



consistently attaining stringent performance measurements of between 95-100% in key business areas, such as planning & control, data integrity and customer service.

Raphael Zaccardi says: “We adhered to the Checklist and started measuring a number of KPIs, including the performance of suppliers, customer service, delivery, master production and manufacturing schedules. However, we concentrated on three main ones - Bill of Materials, inventory and routing accuracy. We previously hadn't measured many of these and when we started in July 2000, they were very low - barely Class 'D'.

“We realised that to achieve Class A in all the planning and control KPIs, and also undergo cultural changes in behaviour and thinking, we would have to place a great emphasis on educating and training our staff. We invested heavily in these areas, using a mixture of Oliver Wight and APICS education and training, as well as in-house training by experts from other Caterpillar plants. We also understood the need for ensuring that everyone in the plant was fully involved in the programme and that we were communicating with each other.” By focusing on just three KPIs it took just six months to drive Bill of Materials, inventory and routing

accuracy up to Class 'B' levels - a quantum leap. This had an almost immediate and visible benefit due to more efficiency in delivering parts. With a great deal of effort, education and training, by early 2002 most of the KPIs were approaching Class A levels of 95-100%, and in August the plant achieved full certification.

“Our search for excellence reaped major benefits,” says Raphael Zaccardi. “These included integration across company functions, our ability to make better decisions with reliable data, the effective use of software tools and continuous improvement of our processes. These were major cultural changes and enabled performance levels not thought possible before. Tangible benefits included increased revenues, labour effectiveness and reduction of inventories, material costs and freight. The increased reliability of Mec Track in the value chain is also quoted as having been a factor in maintaining our current activities and gaining new business. “If I had to do anything differently, I would place much greater emphasis on making sure that the top management is fully committed to the programme and understand in depth what the Class A journey really entails. I would also try harder to understand and identify factors relating to intangible benefits, such

as commitment, common goals and directions and key behaviour indicators.”

Caterpillar Grenoble in France (CFSA) employs around 2,200 people and achieved Class A in November, 2001. Jean-Mathieu Chatain, now General Manager at Mec Trac, was the co-ordinator of the benefit analysis for CFSA at the time of the Class A certification. He comments: “CFSA was in the first wave of European Class A implementations so we received a lot of support and commitment from senior corporate management and the CFSA Managing Director, which was key to our success. Initially, there was some hesitation until people started to see the benefits coming through which triggered motivation, particularly in the area of routings and inventory accuracy. Then we saw results very quickly which turned the key indicators green!

“Class A has been a major contributor in terms of measurable benefits. The major cultural changes identified as enabling Class A performance levels were integration across functions, better decision making with reliable data, increased discipline in the execution of plans and schedules, and continuous improvement of processes.” The increased velocity (product availability) and reliability of CFSA has also enabled increased volumes and, consequently, increased revenues. Other quantified benefits include labour effectiveness, reduction of inventories and material costs. Not quantified, but considered a major benefit by CFSA, has been the ability to sustain Class A performance through challenging situations, with much less stress in the organisation.

From October, 2000, to November, 2001, the measurable improvements CFSA achieved from Class A performance include:

Customer Services Level:	92%
Average Marketing Product Availability:	33%
Supplier Performance:	24%
Work Order Performance:	240%
Inventory Records Accuracy:	115%
Bill Of Materials Accuracy:	57%
Routings Accuracy:	94%

Jean-Mathieu Chatain concludes: “More importantly, all of these benefits improved customer service and allowed

CFSA to sustain a Customer Services level averaging 98% in the last 14 months. The programme has been highly successful which I attribute to three main factors: top management commitment, understanding the need for strategy at an early stage and teamwork.”

The Caterpillar Gosselies plant in Belgium employs around 4,000 staff making large wheel loaders, hydraulic excavators, engines and components. It is also the largest CAT facility worldwide.

Gosselies started its Class A programme in February 2000. It began with a self-assessment audit which revealed a Class B rating. By August, with the help of Oliver Wight’s Andrew Purton, the Gosselies team was beginning its Proven Path journey by setting up various project teams.

Gosselies concentrated on a number of KPIs relevant to its processes, including forecast accuracy, BOM (bill of materials) and routings, master production performance, customer service and supplier delivery performance.

“We focussed heavily on the three key areas of people, tools and systems,” says Damien Busschaert, Supply Chain Manager at Gosselies. “We also focussed on the people side and towards the end of 2000 we carried out a wave of general education and training followed by more specific training to achieve specific KPIs.”

Early in 2001, Caterpillar Chairman Glen Barton set the further challenge of implementing Six Sigma programmes at all of its manufacturing plants. This was viewed as complementary to Class A and its introduction enabled additional focus.

“Since reaching Class A in October 2001, we have achieved record production and shipment levels.” says Damien Busschaert. “Production performance is 99% with higher volumes than 2001, and a record customer service level of 97.2%. This took place during a period of unprecedented and intense product development activity: all product ranges underwent significant upgrades. These results have never before been achieved.”

In addition to the record production levels, the financial results were also measurable as a result of lower inventories,

warranty expenses, freight and material costs, together with improvements in efficiency and markets.

Damien Busschaert adds: “Class A activity has underpinned and enabled movement towards a unified European organisation, away from plant-based businesses. It has integrated geographically-diverse plants across Europe because it helps us all speak the same efficient business language. All the manufacturing performance KPIs are common and measured in exactly the same way and, additionally, we are sharing best practice methodologies between the European facilities.”

All this became possible through a Sales & Operations Planning (S&OP) process conducted as a key European management review of the business to prompt critical decision-making. Senior business management at all of the CAT facilities have been coached by Oliver Wight into adopting S&OP as the means by which they manage the medium-term (next 18 months) health of the business.

Damien Busschaert adds: “When product responsibility moved to the marketing organisation based in Geneva, the S&OP process was absolutely necessary to sustain reorganisation, help break down barriers and build bridges of trust between Geneva and the manufacturing plants around Europe. Additionally, instead of working with many sets of data across the business, S&OP helps us to work to a single set of numbers. We now have common goals between all partners in the supply chain, such as marketing, purchasing and manufacturing.”

Caterpillar Sales and Marketing in Geneva also achieved its Class A in October 2001. Thomas Zihlmann, Manager of Core and Growth Industries, Medium & Large Size Machines, comments: “It was difficult to get started on our Class A journey because we wanted a very broad-based involvement. Necessarily, this had to include everyone from our head office staff, people involved in taking orders, sales representatives and those out in the field who really understood our business. Once we really got going, the results were good. Improved forecasting, supported by an ‘Assumptions Database’ and performance measurement, linked with the establishment of a robust S&OP Process, has transformed our capabilities to work effectively with manufacturing, dealers and sales representatives in the field.”

The ‘Assumptions Database’ is a web-based repository which enables field-based staff to input their assumptions and improve forecasting. Specialists then use this database; sales and orders plus input from economists to further refine the forecast.

Thomas Zihlmann adds: “It was important for us to look at all the data over the longer term. Oliver Wight’s Peter Hill helped us to look 12-18 months ahead rather than just a few months. Now we monitor the key KPI metrics, such as forecast accuracy, product availability, net revenue yield and percent of industry sales. We then process the information through a series of filters including an internal marketing demand review, a sharing and reconciliation of issues with the manufacturing people and, finally, the most important issues are discussed at the top management S&OP Review to decide a realistic plan. In terms of benefits, Class A has greatly improved customer service levels and the inventory levels.”

The success of Class A in delivering Integrated Business Planning and Planning and Control has led to a second phase of activity focussed on full Operational Excellence Class A at both Gosselies and Grenoble. This includes the development of excellence in the following processes - Strategic Management, New Product Development and Introduction, Lean and Total Quality Practices, and underpinned by excellent People & Team processes. This programme is running alongside a corporate Six Sigma initiative. Oliver Wight methodologies for Lean are complementary to and enhance the corporate Six Sigma deployment.





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