AkzoNobel

Benefits at a glance

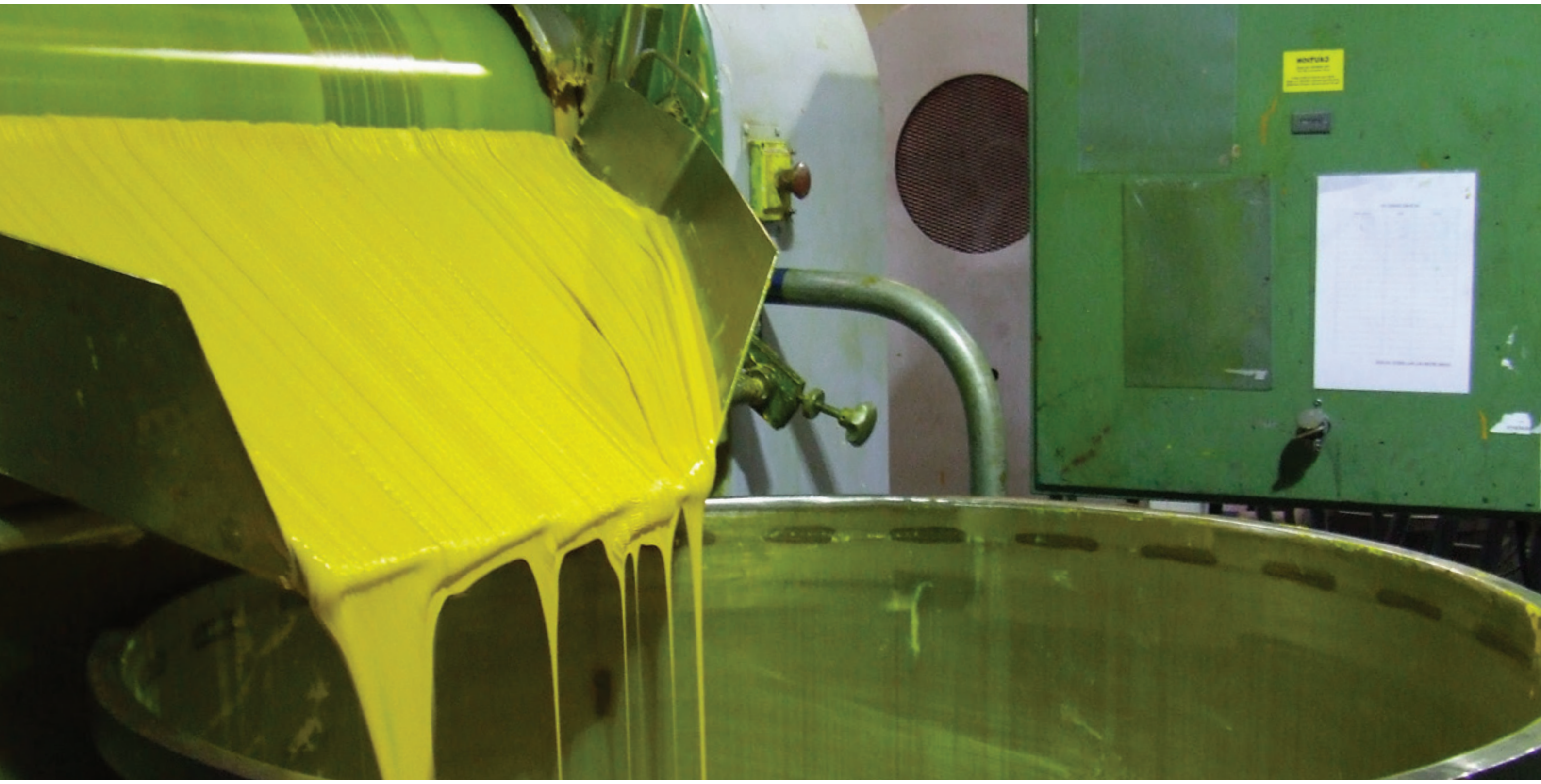
- *Operating costs cut by €1 million*
- *Inventory reduced by €1 million*
- *Customer service levels improved dramatically*
- *Production volume doubled with no temporary labour or subcontracting*
- *Plan adherence and service levels raised to consistently over 95%*
- *Demand planning process implemented, eliminating forecast bias*
- *€400,000 more savings identified*
- *Awarded Class A for Planning and Control in just 12 months*

Customer profile

A colourful journey to business excellence

AkzoNobel Packaging Coatings Inks (ANPG Inks) is a leading global manufacturer of printing ink and UV varnishes for the metal packaging market. When the Hull site acquired Lindgens' ink business, production demand doubled almost overnight and, struggling to keep up, the company embarked on a business improvement programme with Oliver Wight. In less than 12 months, it had dramatically improved customer service levels and made savings of more than two million euros. As a result, ANPG has received not just one Oliver Wight Class A award, but two - for Planning and Control, and Integrated Business Planning.

OLIVER WIGHT



ANPG Inks and its parent business AkzoNobel Packaging Coatings are part of AkzoNobel NV – one of the world's largest coatings company. The ANPG Inks plant in Hull is the central manufacturing location for the global supply of printing inks and UV varnishes for the metal packaging market and the headquarters for its Research, Development and Innovation (RD&I) facilities. With colour-dedicated mills and over 120 employees producing more than 600 finished items - from beer, beverage, food and aerosol cans, to caps and closures - ANPG Inks provides some of the most advanced packaging coatings and inks on the market.

In 2010, AkzoNobel Packaging Coatings acquired the global assets of a Swedish metal decorating coatings and ink business, Lindgens, practically doubling demand on the Hull site overnight. Unsurprisingly, the business was finding it difficult to maintain standards: In 2011 service level performance dropped from 95% on-time and in-full (OTIF) to sub-80%; inventory levels rose significantly and forecasting information was simply 'non-existent'.

The Hull plant was having to subcontract work, pay over-time, and take on temporary labour in an effort to keep on top of things, substantially raising its costs. Struggling to meet customers' service expectations at the same time as battling supply issues and cost pressures, the company's growth ambitions were constrained. The ANPG Inks Management team knew something had to change, and fast.

In November 2011, Michael Snape was recruited as the Supply Chain Manager for ANPG Inks, tasked with leading a change programme to address the weakness in the supply chain. Snape describes the culture in the business when he arrived: "The site had struggled on for a year after Lindgens takeover. There was a lot of pressure from customers and the distribution points in terms of supply. They were working silly hours and essentially living from order to order, scarcely

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>
> Michael Snape
> Supply Chain Manager

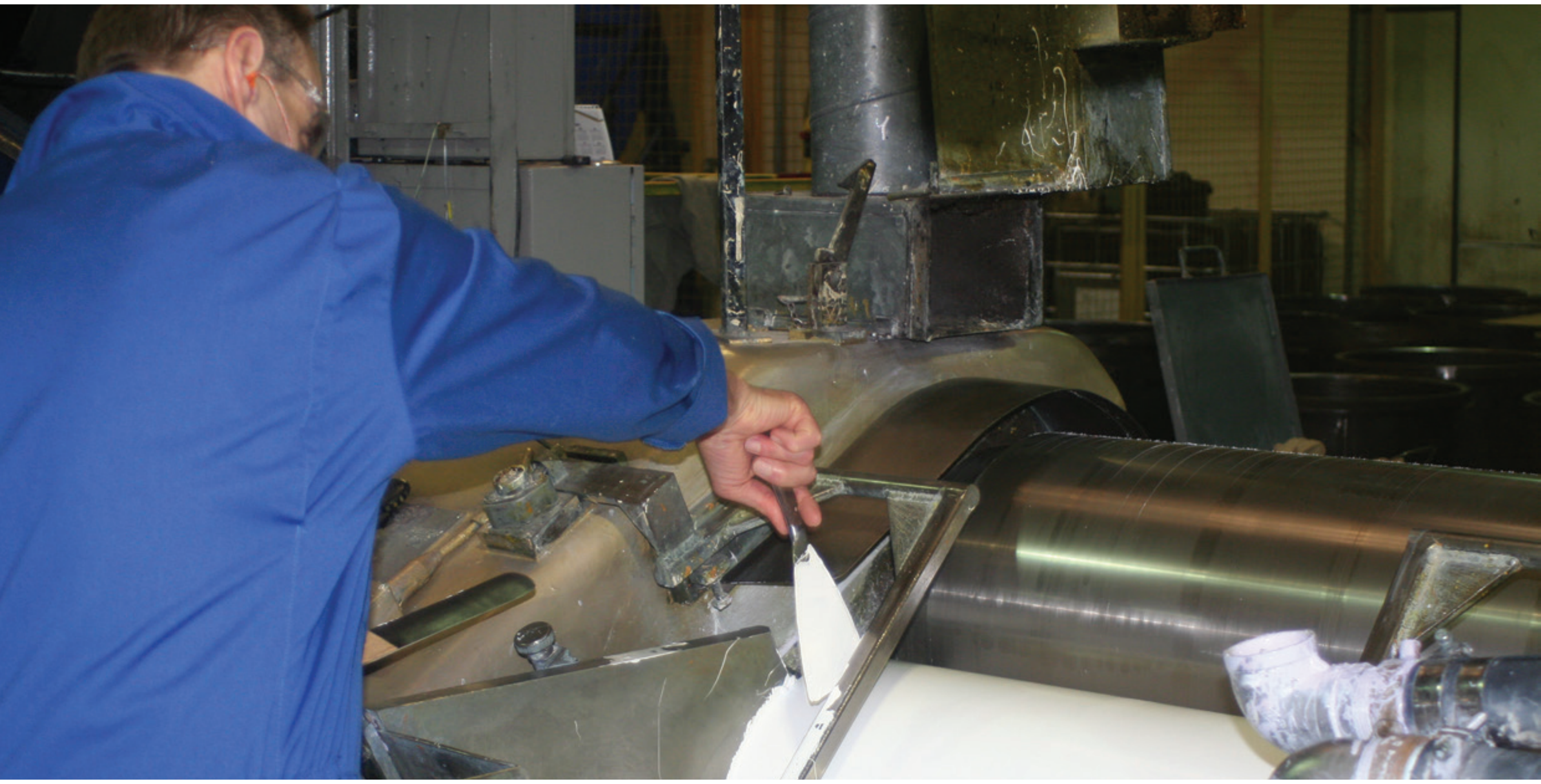
getting through one problem before the next one started." Production moved from a single shift to a three-shift pattern in an attempt to absorb the additional volumes, but without a process change in place this proved ineffective. "The business all of a sudden had to deal with changing to a 24 hour operation," says Snape. "Whilst all workers were incredibly willing, and took a lot of pride in their work, they didn't have the processes in place to see their way out of the day-to-day fire fighting; they were trapped in a cycle of reactivity. It was like Groundhog Day"

As the plant fought to keep on top of customer orders, there was a reaction from the ANPG Inks distribution points around the globe, as they started to increase safety stock levels, calling off more product than they needed and earlier than they wanted.

"This was putting even more pressure on the plant," says Snape. "We couldn't see what was customer demand and what was stock; at least not until later when the distribution centres asked us to take back stock because they'd ordered three times what they needed. At one stage, the plant had 100 tonnes of ink on back order."

Oliver Wight Integrated Business Planning was identified as the ideal framework for driving improvement towards operational and business excellence. Oliver Wight was well known to AkzoNobel Operations Management team from other successful projects in different business areas, and its Class A Integrated Business Planning programme was recognised as providing the breadth and depth the company needed for planning and execution across the entire business. Integrated Business Planning aligns company plans each month and enables the allocation of critical resources – people, equipment, inventory, materials, time and money, to satisfy customer demand in the most cost effective way.

With the Integrated Business Planning programme up and running, the management team decided to address the fundamental planning and control processes as a priority: "It was March and with our busy period starting in May, we had to get some big wins to get us through the season. In addition, there was an SAP enterprise resource planning transition on the horizon, so we wanted to be in good shape. You don't want to be moving to SAP with poor processes in place," explains Snape.



As well as sorting out the immediate issues, the business also set itself an ambitious twelve-month target to reach Class A status for Oliver Wight Planning and Control and Integrated Business Planning. “The general view on the plant was that this was a ridiculously short period of time to turn things around, and we must be mad,” laughs Snape. Nonetheless the team’s eagerness to improve coupled with Snape’s previous experience to guide the implementation, provided the momentum to drive the improvement and indeed triumph. A year after work with Oliver Wight began, the plant was awarded Class A for Capable Planning and Control, followed a few short months later by Class A for Integrated Business Planning.

The improvement journey was given a boost in March 2012 with a Process Acceleration workshop led by Oliver Wight, and involving a cross-functional workshop with more than a dozen employees - managers and staff - from right across the business: office, production, warehouse and labs.

“People were struggling to see a path forward; the purpose of the Process Acceleration workshop was to increase engagement and engender greater empowerment within the team to let the guys see they could fix these things quickly on their own.” Snape explains.

The workshop quickly identified the bottleneck as the plant’s mill room: “There was a lot of work in progress and half-completed jobs of big steel mixing vessels of ink, filling the factory; we clearly lacked the order process controls and disciplines needed for effective production. The mill wasn’t being fed because the ink wasn’t always mixed in time, or the wrong ink was mixed first. Time lost in the mill room is time you never get back, so it was important the bottleneck was resolved.”

A Kanban system, developed by a team from the Process Acceleration Workshop, was put in place to ensure the mill room was always ticking over with the right products flowing through it at the right time; work in progress was reduced and order restored to the liquids storage area: “Instead of taking an hour to locate liquids needed for a batch of ink, it was only taking five or ten minutes,” says Snape.

“The workshop also highlighted a known weakness for the business - that there was no forecasted demand. We didn’t

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Andy Sharpe
Demand Manager

know when a lot was coming, and all orders appeared on the face of it, to be urgent. Plus, with no KPIs in place and poor data in the system, the planners didn't have the information they needed."

So the ANPG Inks plant moved on to get the right metrics in place and aligned across the business. "We knew the data wasn't great and the first thing we wanted to do was put this right," explains Kevin Whitham, the Hull site's Planning Manager. "We set about making sure the routings and bill of materials were correct, and the capacity planning data was accurate."

ANPG Inks then began to analyse KPIs on a weekly basis, and due dates and master schedule performance on a daily basis, with a focus on resolving performance that wasn't up to scratch.

"We identified a number of reasons why we weren't meeting due dates. One was down to data – work was scheduled in batches of ink rather than hours capacity – so we weren't scheduling based on how long an order would take and as a result, too much was being planned on the factory. The team was also using start-dates rather than due-dates, wrongly assuming that if they started on time they would finish on time. We also noticed a pattern emerging from due-date failures as a result of equipment breakdowns. Insufficient training meant operators were overheating the mills and tripping them out. So we got the mill manufacturers in to do a training session to ensure the operators were running the mills as they were designed to be run. Straightway we saw a huge improvement," explains Whitham.

Switching to due-dates rather than start-dates, the team started to plan to realistic capacity and service levels immediately shot up from 80% to 88%. Plus, with accurate measures in place, the plant was now able to understand previous inaccuracies. "We started to see we were hitting due dates fine, but we were often slightly short on quantity, which was leaving us unable to complete some customer orders. While customers were tolerant if orders were a few kilos short, we were determined to put it right," enthuses Snape. The solution was to be more accurate in planning for yield loss by building the process loss into each SKU routing. It was a simple solution that was previously impossible because of the lack of data transparency. With

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Graham White
ANPG Inks Business Director

accurate data now in place, the Hull site had the control it needed over scheduling and production. As a result, the plant's due date MPS and service levels started to hit 95%.

At the same time the site started processes to collect a meaningful demand plan (previously, none had existed) and within three months was able to load its first forecast onto the system. Buy-in was needed across the board; where before the global sales teams had been overcompensating on orders to get what they needed, they now needed to have confidence they would get what they wanted based on accurate numbers.

"We present the financial results to the Sub Business Unit leadership team every month and this includes a view of the following month's forecast. For each of the past four months we have achieved what we said we would, which gives the leadership team more confidence in our business - it makes my life easier too," laughs Sophie Smith, financial controller for the ANPG Inks Business.

With Oliver Wight's Integrated Business Planning model providing the necessary framework, the Hull site was able to instil a passion and commitment to deliver excellent data from the top down, so everyone was working to a single set of numbers. With the new demand process in place any ongoing discrepancies were quickly identified and forecast bias eventually eliminated. Communication played a key role in the process, explains Demand Manager, Andy Sharpe. "When you start talking to your customers and distribution points you begin piecing together your demand plan quite clearly and you can anticipate what's coming in. Where before, everything appeared urgent, with the demand plan in place we are able to prioritise and schedule orders. Everything became really predictable."

Less than a year after Hull manufacturing plant embarked on its journey to operational excellence with Oliver Wight, it was producing the metrics required for the Class A standard. Inventory on the Hull site has reduced by a cool million euros and perhaps even more impressively, operating costs are down by another million euros due to avoidance of subcontracting, reduced express freight costs and the greatly increased efficiencies of the plant. And it doesn't stop there; the Hull team has its eye on a further 400,000 euros of savings in the next 12 months.

So what's the culture of the plant like now? "It is quiet, very quiet. Where before there was shouting and noise when things were going wrong, now I suppose you can say it's just boring!" Snape chuckles. "We're able to produce everything required of us on site, with no temporary labour or subcontracting, so our costs have come right down. Following the Oliver Wight programme, the three-shift pattern now has the right culture and processes in place and is working as it should be. We're producing double the volume, yet everything runs incredibly smoothly; it's getting made and getting shipped."

And on the prospect of something or someone upsetting the status quo, "No chance!" assures Snape. "Given our attention on KPIs, checking on them daily, if something is going even slightly wrong, it's done and dealt with that day, so things never get into a state any more."

"For me," says ANPG Inks Business Director, Graham White, "the greatest benefit about this journey is being able to have your finger on the pulse daily, so you always know what's going on. The results have come very quickly but the best thing about working with Oliver Wight is that the change is sustainable. Not only have they been a great inspiration, but the knowledge transfer is good; their knowledge has been passed onto our people, rather than someone coming in and when they go away it all goes back to how it was."

Class A is also helping the company's SAP implementation. "Implementing new technology is never plain sailing and naturally causes some disruption but a better understanding of planning and control means we are focused on establishing the right processes and behaviours beforehand, and that certainly makes things a lot easier. In turn the system will radically advance the benefits we get from Integrated Business Planning by providing credible information to support timely decision-making within the business."

Oliver Wight Partner Stewart Kelly, lead consultant on the project, says, "Inks production is obviously a very manually-oriented process and this is an excellent example of a traditional factory suddenly put under huge pressure, transforming itself into a top performer and making some massive savings. It's a great story."

The company is not one for resting on its laurels. Globally, AkzoNobel launched a broader performance improvement programme in 2011, making savings of €381m within two years, and in early 2013 it launched a new company strategy aimed at delivering leading performance by building on its leading market positions in paints, coatings and specialty chemicals. So the Hull site is looking to the future, equipped with the knowledge and processes it needs to deliver its growth strategy. The market is expanding, with increased demand particularly in the Asia Pacific region, as its taste for carbonated soft drinks and beer increases.

Now ANPG Inks has secured the double Class A award, other AkzoNobel divisions are following suit. "Class A is our preferred operational model and other parts of the organisation are becoming active with it too. Integrated Business Planning gives us a business level view over the ANPG Inks operation and provides us the framework we need to deliver our ambitions over the next five years, which is to grow the business through winning market share," concludes White.

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.

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