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MANUFACTURING EDITION

The Parliamentary Review

A YEAR IN PERSPECTIVE

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Foreword

The Rt Hon George Osborne MP

Chancellor of the Exchequer

The UK grew faster than any other major advanced economy in the world last year, and is set to do the same again this year. Over the past 5 years we created two million new jobs. And the deficit – now 3.7% of GDP – is a third of what we inherited in 2010.

But all that progress could be put at risk if we don't continue with the plan that is delivering for the working people of this country.

Economic security is at the heart of that plan. It's not enough to simply eradicate the deficit – we have to reduce our unsustainably high level of national debt. At the Budget I published a revised Fiscal Charter that commits us to running a surplus in normal times to bear down on debt. In the autumn the House will vote on that charter and I hope it will mark the start of a new settlement for Britain's public finances.

Improving productivity – the amount that British workers produce for every hour they work – is the key route to making the UK stronger and families richer, and it's the greatest economic challenge of our time. We've set out concrete steps that we're going to take to improve the infrastructure, education and skills of the UK – and to make sure that this time it's a truly national recovery. Some of the biggest reforms include setting up a new roads fund to pay for the sustained investment our roads so badly need and introducing a radical new apprenticeship levy on large firms. We're also devolving even more powers to local areas over things like planning, skills and Sunday trading rules. And to back British businesses and encourage them to invest we're setting the annual investment allowance at £200,000 and cutting corporation tax to 18% by 2020 – making it the lowest in the G20.

The final part of the plan is to make sure work always pays, so at the Budget I announced a new national living wage, reforms to our welfare system and lower taxes for working people so we move Britain to being the higher wage, lower tax, lower welfare economy we want it to be.

> "Improving productivity is the key route to making the UK stronger and families richer, and it's the greatest economic challenge of our time"

Foreword

The Rt Hon Anna Soubry MP

Minister for Small Business, Industry and Enterprise

The UK economy continues to grow, faster than that of any other G7 country, and manufacturing has an important part to play to secure the continuing economic success of the UK. In welcome news, a recent EEF investment survey showed that Britain's manufacturers are planning to invest across a range of areas in the next 2 years in a drive to boost productivity.

Boosting the UK's productivity performance is a top priority for the government's long-term economic plan. And there is a clear sector story to the UK's recent productivity performance. The aerospace and automotive sectors, for example, have continued to perform well post-crisis. Outperforming much of the rest of the economy, manufacturing productivity has increased by 3.8% since the first quarter of 2008 and the potential for future productivity gains is substantial. The digitisation of manufacturing will see the adoption of new smart technologies and processes, radically changing product design and production, and driving improved performance and productivity throughout the supply chain.

That is why we have been encouraging the uptake of innovation in manufacturing, by ramping up activity in the Catapult Centres and across Innovate UK's portfolio more widely. The Catapults are increasing the scale, speed and scope of commercialisation, and anchoring jobs and investment in the UK that would otherwise be lost overseas.

However, the best way that the government can support advanced manufacturing is by creating the right business environment for free enterprise and remove barriers to productivity and growth within sectors, including deregulation, promoting fair competition and a simplified business landscape.

We will continue to speak to and work closely with industry and businesses to understand their needs and what more the government can do to retain the UK's competitive position within the global economy.

> "the best way that the government can support advanced manufacturing is by creating the right business environment for free enterprise"

Review of the Year

The Conservative election win

Manufacturing was a key priority on the post-election Conservative agenda

The Conservatives' surprise election victory in May brought a fresh impetus for their business plans for the next 5 years. With Chancellor George Osborne looking to make good on his vow to create the march of the makers and rebalance the economy, the Conservatives' election manifesto had a heavy manufacturing slant, with a commitment to champion, exports and apprenticeships, support the life sciences, grow the automotive sector, and invest in robotics and nanotechnology. With this in mind, the government has set some ambitious targets for some of the components driving the UK manufacturing sector over the course of this term.

Post-election, one major change is the absence of Vince Cable, who up to the election had been secretary of state for business, innovation and skills. Losing his Twickenham seat, Dr Cable was viewed by many in manufacturing as being one of the sector's biggest advocates during his 5-year tenure. Dr Cable was replaced by the Conservative MP for Bromsgrove, Sajid Javid, previously the secretary of state for culture, media and sport. While it is still early days, the approach Javid would take to manufacturing left some guessing. Shortly after his appointment, the *Financial Times* speculated that the industrial strategy might not be at the forefront of Mr Javid's business plans and his approach may differ somewhat from that of Dr Cable, whose tenure was best characterised by the many industry–government joint-funded partnerships he implemented. In response to the report, Mr Javid's department said the new business secretary was still assessing his plans.

The first show of the government's hand in its new term came in July's summer budget. The Chancellor introduced a raft of policies that will affect industry. Mr Osborne's decision to set the annual investment allowance (AIA) at a permanent £200,000 from January 2016 won plaudits. While currently set at a higher rate of £500,000, the Chancellor said this amount was expected to fall to just £25,000 by the end of the year. Intended to increase firms' cash flow and help businesses plan their spending on long-term investment, the rise in the AIA was regarded as a logical step by manufacturing businesses both large and small.

Brian Holliday, managing director of Siemens UK and Ireland, predicted that setting the allowance at the £200,000 mark would help stimulate manufacturing plant and equipment investment. This view was also echoed by David Nicklin, managing director of Birmingham-based mid-sized firm Nicklin Transit Packaging, who told *The Manufacturer* that the AIA policy along with a further reduction in corporation tax were the summer budget's stand-out announcements. 'Both represent welcome news and should help stimulate the essential investment Midlands' manufacturers need to make to remain competitive in a globalised and highly competitive economy,' he said.

The introduction of a new national living wage starting at £7.20 an hour by April 2016 for the over 25s, and increasing to more than £9 an hour by 2020 was also welcomed. Ian Wright, director general of the Food and Drink Federation, which represents the interests of the sector in the UK, said the reduction in corporation tax and national insurance contributions will go some way to aiding food and drink manufacturers in managing the transition to a living wage.

Industry was less receptive to the introduction of a compulsory training levy imposed on all businesses as a means of funding apprenticeships. The Chancellor, who has committed to three million apprenticeships by 2020, reasoned that, while many firms did a good job in workforce training, too many large firms 'leave the training to others and take a free ride on the system'. Under this policy, the UK's biggest employers will be compelled to offer training while maintaining direct control over it.

The CBI said the introduction of the apprenticeship levy would do little to aid the smaller firms it was set up to help, or address the UK's shortage of high-skilled workers. With the summer budget held during the time of Wimbledon, Terry Scuoler, chief executive of manufacturers' organisation EEF, chose a tennis metaphor, stating that the government had 'double faulted' with the levy and that it was unclear to manufacturers what its benefits were.

Another of the Chancellor's policies where manufacturing is certain to play an integral part is in the projected 'northern powerhouse. initiative, which aims to establish the north of England as an economic rival to London and the South East. Sheffield's advanced manufacturing industry was one of the sectors highlighted as a driver of the North's economy, alongside Hull's energy sector and automotive vehicle production in the North East.

Arguably the biggest challenge facing the government is improving the UK's woeful productivity levels, which have fallen sharply in the past 3 years. Manufacturing productivity rose in the first 3 months of 2014 before declining by 0.2% in the final quarter. As 2015 began, manufacturing productivity levels fell further into the negative. While this has made for a glum outlook, some are predicting a turnaround in years to come. A June study by Oxford Economics commissioned by the International Festival for Business 2016 predicted that UK manufacturers will increase their productivity by 15.5% over the next 5 years, which in turn will help increase the country's export value by 35%.

There have also been some exceptions to the so-called 'productivity puzzle'. The automotive industry further improved its productivity levels in 2015, with each industry employee generating £100,000 in added value, well above the manufacturing-sector average of £62,000. The car-making industry's productivity has now increased by 35% since 2010.

While the envy of many sectors, tackling productivity in manufacturing will be high on the agenda for many businesses in the coming years. A study published in July by the EEF alongside Lombard Asset Finance found that 95% of manufacturers surveyed intended to prioritise productivity-related investments by buying new machinery and equipment.

Attempting to tackle the lull, the government also unveiled its new productivity plan in July. Revealed just days after the Chancellor's summer budget, it based many of its key components around the announcements made by Mr Osborne, including the championing of long-term business investment by cutting corporation tax, utilising the AIA, skills investment through the apprenticeship levy, investment in the northern powerhouse initiative and continuing investment in the UK's network of Catapult centres to the tune of £6.9 billion.

Industry opinion divided over Brexit

Britain's fate in the EU will be largely down to the Prime Minister's ability to renegotiate terms of membership

The referendum determining the future of the UK's EU membership draws a step closer after the Conservatives' election win. Prime Minister David Cameron pledged the in/out vote by no later than 2017, which will come after he attempts to renegotiate the terms of the UK's membership.

While many prominent CEOs have tiptoed around the question, some of manufacturing's biggest names have voiced their opinion about a so-called 'Brexit'. UK manufacturing trade association EEF, which last year conducted a poll showing that 85% of British manufacturers wanted to remain in the EU, said it would be 'a bad day for the UK' should it opt out. Terry Scuoler, EEF chief executive, echoed the wishes of many by calling for an earlier vote, as the UK 'simply cannot afford to prevaricate on an issue of such importance'. The CBI, meanwhile, was more adamant. It said the UK should 'remain in the EU no matter what', warning that a potential exit would threaten sustained growth and job creation within manufacturing.

A number of manufacturers with vested interests in the UK have also backed Britain remaining in the EU. French-headquartered aircraft-maker Airbus, one of the biggest foreign manufacturing employers in the UK, made its pro-EU views known in May. Paul Kahn, the UK president of Airbus, told Sky News that the country needed to remain in the EU in order to maintain its competitive edge on the world stage. He also said an exit could damage the UK as a destination for future projects while harming the career prospects of the country's young engineers.

It was reported that Airbus, which employs more than 16,000 in the UK and has testing and assembly sites in Bristol and Broughton, North Wales, said it would reconsider its investment in Britain should it leave the EU. While Kahn stressed that the firm would not just pack up and leave in the event of an exit, greater clarity on its stance was confirmed just 1 month later. Airbus chief executive Fabrice Brégier told the BBC at the Paris Air Show that he had 'no intention' of pulling manufacturing from the UK should it leave the EU.

The thoughts of Airbus were not as defined as those of Nissan, whose CEO Carlos Ghosn stated explicitly in 2013 that it would reconsider its UK investment in the event of an exit. Regardless of this, it was clear the uncertainty surrounding the issue was unsettling.

While the views of Airbus made the headlines, the thoughts of the thousands of UK small and mid-sized manufacturers have gone under the radar. Nick Brainsby, a director at business investor Pemberton Capital, told *The Manufacturer* in July that it will not be long before the issue begins to affect the decision-making of UK manufacturers and their customers, impacting on investment and hiring decisions well before any vote. 'For UK manufacturers, membership of the EU matters, and although membership has its burdens, they are outweighed by the many advantages of being in the EU "club", which gives us direct access to the vast market on our doorstep. We would be foolish to underestimate the benefits that come with that access,' he said.

Despite the prominent voices indicating that UK industry is embedded in the 'in' camp, some equally big names have come out in favour of an EU exit. Lord Bamford, chairman of JCB, told the BBC in April that the UK should not fear a possible exit from the EU, arguing that it would mean the UK 'could negotiate as our own country rather than being one of 28 nations in Brussels as we are today'.

Airbus, which employs more than 16,000 people in the UK, is in favour of Britain remaining in the EU

Lord Bamford also said that such a move would free companies from the red-tape regulations that he claimed are strangling UK business.

The views of Lord Bamford echoed those of Sir James Dyson, founder of Dyson, who last year told BBC Radio 4's *Today Programme* that he was in favour of a Brexit. Sir James said the move would allow the UK to escape from the dominance of large German companies, which, he argued, set the standards and ensured 'old guard and old technology' is supported at the expense of new technology.

While the subject of the UK's EU membership has divided industry to date, a more coherent argument is the backing for a reformation of Britain's membership, seemingly reflecting the views of the Prime Minister. Katja Hall, deputy director general of the CBI, said on the issue: 'a significant majority of businesses are clear that they want to stay in a reformed EU'.

Skills shortages and manufacturing's gender gap

The UK's skills shortage, one of manufacturing's most enduring challenges, garnered a lot of attention this year as both the government and specialist skills organisations sought ways of bridging the gap. Off the back of announcing that more than two million apprenticeships had been

Nick Bowles with an apprentice at Toyota's manufacturing plant in Burnaston, Derbyshire

formed during the last parliament, the Conservatives began life without their Liberal Democrat coalition partners by stating that apprenticeships remained a priority for their next term in office.

With a commitment to start three million new apprenticeships by 2020, one of the new government's first acts was to protect the term 'apprenticeship' by law through June's Enterprise Bill, which skills minister Nick Boles said gave the government the power to intervene when the term is misused to promote what it deems low-quality courses. The legislation also gives apprenticeships equal legal treatment as university degrees.

The introduction of a compulsory apprenticeship training levy in the Chancellor's summer budget was significant yet divisive, leading to many in the industry voicing their scepticism over the policy. Paul Raynes, the EEF's director of policy, said: 'Manufacturers will be sceptical about a training levy, especially as their financial investment in high-quality apprenticeships already far outweighs the public subsidy available to them.' The proposal was also questioned by the CBI, which said it was unsure that the scheme would produce the desired results other than fund more apprenticeships. Katja Hall, its deputy director general said: 'The new levy announced in the budget may guarantee funding for more apprenticeships, but it's unlikely to equate to higher quality or deliver the skills that industry needs. Levies on training already exist in the construction sector, where two-thirds of employers are already reporting skills shortages.'

Such is the urgency with which the skills shortage needs addressing it is feared that the £139 billion which manufacturing contributed towards the UK's economic output could decline if measures to effectively tackle the problem are not implemented. A report in January from insurance firm Zurich said that eight out of ten UK manufacturing firms questioned stated they are unable to source UK talent with the required skillset. Family-owned firms, which have struggled against their foreign competitors in recent years, were most affected, but would also be more willing to look abroad for staff. Matt Hartigan, Zurich's head of UK corporate insurance, said in the report: 'Skills gaps continue to put British manufacturing under huge pressure. Almost all mid-sized businesses share concerns about increased risks because of a shortage of qualified workers, which is clearly hindering overall growth.'

Further highlighting the issue, the CBI, in its annual Education and Skills Survey alongside education company Pearson, showed the concerns of employers in industries such as manufacturing, engineering and technology. More than half of employers feared they would not be able to recruit enough high-skilled workers. Another study carried out by recruitment consultancy JAM showed the food and drink industry to be in the grip of a skills shortage. As the UK's largest manufacturing sector with a £70 billion annual turnover, the industry said it fears that the skills gap could curb the UK's competitiveness. Two-thirds of the 750 UK manufacturers questioned felt that the government should do more to tackle the skills shortage. While apprenticeships were suggested as a means of achieving this, other proposals included the provision of funding for training in manufacturing subjects at school level.

While larger companies remain well placed to meet yearly apprenticeship intakes, small and medium-sized businesses are often left unable to compete with their larger counterparts in this field. Innovative new ways of addressing this were evident in 2015. Financial services firm Close Brothers formed a partnership with the Manufacturing Technologies Association to commit to paying for 20 apprentices to train at the AMRC Training Centre in Sheffield. The firm will also commit to paying the new recruits' wages for the first year and a quarter of the second.

Another area of disparity in manufacturing is the gender gap, and the lack of women studying science and technology subjects and becoming engineers. Coinciding with National Women in Engineering Day in June, a study from recruitment specialist Reed showed the level of male dominance in the sector, estimating that nearly eight times more men than women were applying for engineering jobs. Out of the 1,197 engineers questioned, this represents an 87% gap, down just 1% since 2013.

However, the pay gap between male and female engineering staff has reduced slightly, the disparity in earnings between the genders narrowing by 6% in the past 2 years. Yet the level of male dominance in the sector was also revealed: 97,681 women applied for UK engineering jobs in 2014 compared with 753,263 men. In executive roles, manufacturing is above Lord Davies's target of a minimum 25% female representation on FTSE 100 boards set in 2011. EEF's *Women in Manufacturing* report showed 28% of FTSE 100 manufacturing companies are at or above the target. The likes of GlaxoSmithKline, Unilever and Diageo were all highlighted for bettering this, with five female board members each.

The gap between men's and women's pay has been reduced by 6%

Exports continue to stop–start

The UK's export market has so far failed to get going in 2015. While the domestic market has ensured that the manufacturing sector remains in growth, albeit at a meagre 0.1% in the first quarter of 2015, the export-led recovery the Chancellor had hoped for appears a long way off. There is also the Chancellor's ambitious target to double the country's export value to £1 trillion by 2020. Mr Osborne even admitted in a live television debate in March that the UK still does not export enough, with small and medium-sized companies bearing the brunt of the struggle in comparison with their larger peers.

While export numbers fluctuated for most of 2014, before petering out in the final months of the year, 2015 saw the added factor of the strength of the pound – at a 7-year high – take its toll on companies. *The Telegraph* named GlaxoSmithKline, Burberry and Rolls-Royce as some of the large manufacturers feeling the effects of the strong pound. A growing number of manufacturers surveyed in reports cited the strength of sterling as an increasing hindrance to exporting, adding to existing challenges, including firms struggling to gain access to finance, weaker investment spending

An increase in the pound has led to a tricky period for UK exports

and ongoing issues in the Eurozone. In July, Simon Wells, chief UK economist at HSBC, warned that, due to factors such as sterling's strength hindering growth, the UK faces a 'lost decade of manufacturing'.

Viewing the manufacturing export figures on a month-to-month basis throughout 2015 told its own story. According to the Markit/CIPS report for April, the UK's manufacturing growth fell to a 7-month low – largely due to to a slump in exports. While domestic demand remains steady in the UK and has contributed to consistent if unremarkable growth, the export shortfall highlights the lack of balance. In exports, the UK also remains too reliant on EU member countries, with nine of its top-ten export destinations located within the EU. However, not all industries had fallen short in 2015. The UK automotive sector increased exports by 28.3% up to the halfway stage of 2015.

A number of initiatives and reports into the UK's ongoing export woes were carried out this year. In March's budget, the Chancellor gave more funding to UK Trade and Investment (UKTI) to back firms engaging with China. Shortly after the election, the Cole Commission – an independent review body set up by Labour to suggest policies for tackling the UK's trade deficit – proposed a public procurement strategy to to help small and medium-sized UK businesses set up export operations.

The British Chambers of Commerce (BCC) was typically vocal on the issue throughout 2015, and called for further government action to encourage exports. John Longworth, the BCC's director general, conceded that the UK has 'a mountain to climb' in order to meet the projected 2020 exports target, and said that, if Britain hopes to do this, a cultural change is required. 'Politicians, business people, banks, schools, everyone needs to think of the world as our marketplace, not just our country,' he said in June. Mr Longworth also encouraged the government to adopt some of the recommendations of the Cole Commission.

The person charged with overseeing the encouragment of UK exports also changed in 2015. Francis Maude, the former Conservative Party chairman, became the new minister of state for trade and investment following May's election, taking over the role from Lord Livingston. Shortly after his appointment, in an interview with the *Birmingham Post*, Mr Maude said that, alongside aiming for the £1 trillion export figure, he wants to raise the number of firms exporting from 200,000 to 300,000. One course of action in working towards this was the launch by the UKTI of its First Time Exporters initiative, which is designed to give training and advice to companies selling overseas for the first time. As part of the scheme, companies will be given opportunities to take part in trade missions and to build contacts with foreign buyers and companies utilising the latest technologies.

While the government is intent on getting a higher number of small and medium-sized firms exporting, a report from logistics firm FedEx

Express suggested that the majority of them already are to some degree. Its *UK Export Epicentres Report* released in April, highlighted cities such as Bradford, Leeds and Southampton as places where small businesses are exporting. Yet the report also gave another insight into some of the problems facing exporters. One-third of businesses said there was insufficient support for exporters, while stating that the UK's logistics network, so vital to manufacturers, needed improving.

Rolls-Royce faces further challenges

The UK aerospace sector, when viewed from an overall perspective, found itself in rude health in 2015. As the world's second largest aerospace industry, the UK is home to firms such as BAE Systems, GKN and Messier Dowty, and has greatly benefited from aircraft demand. Due to factors such as the record commercial aircraft order backlog at industry giants Boeing and Airbus, figures released by trade organisation ADS in February said there is now enough work in the commercial aviation supply chain to keep UK aerospace firms busy for the next 9 years.

Slowing sales of Rolls-Royce's Trent 700 engine have contributed to a downturn in company revenues

Yet it is the dwindling fortunes of another one of its famous names that continue to draw attention. Engineering giant Rolls-Royce – among the UK's biggest manufacturing employers – endured a difficult first 6 months of the year. Long considered one of the UK's industrial shining lights, it entered 2015 hoping for a reversal in fortunes following a turbulent 2014 that saw it issue its first profit warning in more than a decade. This was followed by announcing the axing of around 2,600 aerospace jobs worldwide last November, to coincide with a restructuring. Revenues and profits declined – despite the company's order book, excluding its now divested energy business, hitting a record £73.7 billion.

Rolls-Royce announced in February that its annual underlying revenue was down by 6% to £14.58 billion, while its underlying profit before tax was £1.62 billion, around 8% lower. In March, part of the restructuring began to take effect, with 218 jobs cut at two facilities in Scotland, with plans for further job losses at the sites in 2016.

In July, its new CEO Warren East, the respected former head of technology company ARM Holdings, took over from the retiring John Rishton. There was no honeymoon period for Mr East, as another profit warning – its third in 18 months – was issued just days after he was installed. This profit warning was mostly attributed to the underperformance of its marine division, due to falling commodity prices affecting the oil and gas sector it serves. However, its aerospace arm, which accounts for between 40% and 50% of sales and had helped make the company so profitable in the past 10 years, was also showing signs of vulnerability. Sluggish sales of the Trent 700 engine, alongside a fall in demand for business jet engines, were also cited among the primary factors.

The outlook for the rest of the year is almost certain to disappoint shareholders. A pre-tax profit of up to £1.48 billion is forecast, down from £1.55 billion in its previous guidance. Speculation from analysts JP Morgan about a potential takeover being in the works also added further fuel to the fire. While no prospective buyers are known, names including the US firm United Technologies Corporation and the German conglomerate Siemens were touted in the media as potential suitors.

Regardless of what may occur, the government and shareholders alike will be hoping for a turnaround in fortunes for a firm that remains a crucial employer in the Midlands and the North of England.

Automotive sector accelerates forward

The ascending fortunes of the UK automotive industry continued at pace this year as the sector built on an excellent 2014 with greater output, further investment and more job creation. Figures released in June by trade body the Society of Motor Manufacturers and Traders (SMMT) illustrated its solid foundations while also indicating the scale of the sector's turnaround. In its annual sustainability report published in June, the SMMT said turnover hit an all-time high of £69.5 billion in 2014. The study also

Honda's flagship production facility in Europe will become a global production hub for the next-generation Civic

showed that nearly 1.6 million cars were built in the UK last year – the most in the country since 2007. Based on this trend, the SMMT predicted UK car output to reach an all-time record of 1.95 million vehicles annually in the next 2 years, beating the 1972 record of 1.92 million vehicles.

Perhaps most impressively, the automotive industry is an anomaly as a manufacturing sector, bucking the UK's poor productivity trend, with an estimated average of 11.5 vehicles produced for every person employed in the sector. This is in part due to the industry's adoption of automation and new technologies. Mike Hawes, chief executive of the SMMT, said: 'Productivity figures prove that the UK is not only making a diverse range of vehicles which are in high demand around the world, but that manufacturers, supported by a flexible workforce, are producing them more efficiently than ever.'

TATA-owned Jaguar Land Rover (JLR), often held as a beacon of foreign investment benefiting domestic jobs and growth, continued with plans to invest further in the West Midlands. In March, it committed to a £600 million investment in new R&D and manufacturing operations across three of its sites in the region. This includes doubling the size of its Advanced Design and Development Centre near Coventry, which will develop its new ultra-low emission vehicles, and the building of an aluminium body shop at its Castle Bromwich site to support the introduction of the forthcoming Jaguar XF. It will also invest £150 million in the National Innovation Centre, located at the University of Warwick.

On top of this, it was reported that JLR intended to expand its i-54 engine facility in Wolverhampton. Since opening in October 2014, the site has created 1,400 new jobs, with the possibility of more being added should the expansion be approved. Continuing the trend of investment in the West Midlands was the Chinese-owned London Taxi Company, makers of the London black cab. Having been on the brink of bankruptcy just 2 years ago, the firm announced plans for a £250 million taxi plant on the outskirts of the city, in a move expected to create around 1,000 jobs. The investment is poignant, coming at around the tenth anniversary of when UK car making reached its nadir with the collapse of MG Rover. But ,while the West Midlands is fast re-establishing itself as the home of UK car making, investment has not just been confined to the region. Japanese firm Honda also announced a £200 million investment, to turn its Swindon factory into the European production centre for the Civic vehicle.

Despite an ever-more competitive industry ripe for investment, not all of the news emanating from the sector has been positive. One division of the automotive industry not faring so well is domestic tyre manufacturing. Goodyear Dunlop, based in Wolverhampton for more than 90 years, announced in June that it would cease operations in the city by 2017. The US tyre firm cited the strength of the pound and a fall in sales as factors behind a move that will result in the loss of 330 jobs. While Goodyear no longer makes tyres in Wolverhampton, the city is home to its production of rubber compounds for overseas factories as well as retread tyres. Prime Minister David Cameron, who pledged to help those affected by the closure, even suggested to Wolverhampton's *Evening Star* that Goodyear was a victim of the success of UK automotive, due to JLR buying up nearby land.

But, while the UK car industry's future is looking promising, future opportunities could lie in engine production, according to the SMMT. Despite UK engine making taking a hit this year, falling 7.1% year on year in May, there are more engine sites in Britain than any other European country except Germany. The belief that the UK is well placed to become a hub of engine production is supported by strong overseas demand, with 80% of all production exported. This belief is underpinned by the likes of JLR and other manufacturers making engines in the UK, including Volkswagen, BMW, Ford, Nissan, Toyota and Honda.

UK plays catch up on automation and robotics

The issue of robotics in manufacturing is a divisive one. While the advent of advanced machinery enables firms to become more efficient and increase productivity, the arguments against have ranged from their implementation coming at the expense of manual jobs to a lack of trust in machines making decisions.

The UK has sought to reverse its woeful record on automation and robotics investment – an area where it has lagged behind competing economies in the past 10 years. According to data from the International Federation of Robotics, the UK has 27 robots per 10,000 employees – seven below the global average, and ranking it 19th globally. To put this in perspective, Germany had 137 robots in the same study, while Europe's other largest manufacturing economies, France and Italy, had 113 and 59, respectively. The most recent data from the British Automation and Robot Association showed sales of industrial robots fell by 7%, to 2,305 units.

However, with productivity firmly on the agenda, manufacturers appear to be prioritising automation and robotics investment this year. In the Manufacturing Advisory Service barometer, 95% of small and medium-sized businesses surveyed said they would be investing in new machinery in the 6 months from April to September.

The LUTZ pod will be trialed on the streets of Milton Keynes and Coventry in 2015

The government has also sought to address the shortfall by investing in numerous initiatives. With the global industrial robotics market estimated to be worth in excess of £17 billion, its growth is forecast to reach £25 billion by 2018.

In a bid to kick-start the sector, last year the government allocated £150 million as part of an overall £400 million fund to the Technology Strategy Board. In March, in response to the Robotics and Autonomous Systems 2020 Strategy, the former coalition government committed to furthering investment in the sector.

The impact of robotics does not just extend to improving companies' production efficiency. One area the government has invested in is driverless cars. The UK Autodrive consortium, a 3-year initiative led by engineering firm Arup, was the recipient of £19 million in government funding and backed by automotive firms including Ford and Jaguar Land Rover. The aim of the consortium is for the UK to emerge as a world leader in the autonomous vehicle sector.

The initiative led to the launch of the UK's first driverless car in February, with further trials taking place throughout the year. Designed and manufactured by Coventry-based engineering firm RDM Group, tests of the LUTZ pod vehicle will be undertaken on public roads and pedestrianised areas in Milton Keynes and Coventry.

In July, the government also earmarked a further £20 million for a research and development fund to build this burgeoning industry. Given the market is predicted to have a value of around £900 million by 2025, it is clear why the UK is seeking to become a world leader and usurp the likes of the USA and Sweden, which have also trialled autonomous cars. Further pinpointing its value, accountancy firm KPMG, in research carried out earlier this year, said autonomous cars could create as many as 320,000 jobs by 2030, while having the potential to contribute £51 billion to the economy.

Takeover speculation turns to GSK

The biggest story in the UK's pharmaceutical sector last year was undoubtedly US drug manufacturer Pfizer's unsuccessful bid to take over AstraZeneca. Following much public scrutiny and calls for the then business secretary Vince Cable to intervene in the matter, Pfizer, the world's largest drug maker, was ultimately unsuccessful in its protracted £69 billion bid.

The speculation arose shortly after another US pharmaceutical firm, AbbVie, unsuccessfully bid to buy the British drug-maker Shire following fears over a US regulatory clampdown on corporate tax avoidance.

From April, there were suggestions in the media that Pfizer could make a fresh attempt for another UK pharmaceutical giant – GlaxoSmithKline (GSK). In a move referred to by Germany's Berenberg Bank as Pfizer's 'plan B' after its failed bid for AstraZeneca, it was no secret that Pfizer was on the lookout for an acquisition to boost its sales. Indeed, CEO Ian Read had hinted as much at the beginning of the year.

Given the importance of GSK to the UK economy – it employs around 16,000 staff in manufacturing and R&D roles in the UK – the prospect of

Pfizer was eventually unsuccessful in its £69 billion bid for AstraZeneca

Pfizer looking to buy into the UK once again put the spotlight on foreign takeovers of British businesses.

The Telegraph, in an article pondering if Pfizer was 'plotting something even more bonkers' than its failed bid, suggested that GSK's perceived vulnerability could make it ripe for the overtures of the US firm. This weakness, it said, lay in GSK's share price, which had been affected by factors including the firm being embroiled in a corruption scandal in China last year, the threat of competition from generic drugs and slower than expected demand for new products. GSK also begun a restructuring of its manufacturing last year in what CEO Sir Andrew Witty described as a 'painful 2014'.

But while some in the media questioned the wisdom of a potential Pfizer takeover of GSK, Bloomberg reported that investors were open to the idea, paying record prices for GSK options despite the firm dropping $11 billion in value between February and May. Meanwhile, Gregg Gilbert, a Deutsche Bank analyst based in New York, told clients in a research note 'Introducing PfizerKline' that the US firm would stand to benefit from a takeover of GSK. Later in the year, it appeared other pharmaceutical giants could also be eyeing up GSK. In June, a report in the *Daily Mail* suggested Swiss company Roche or US-based Johnson and Johnson, the world's largest pharma firm, could also be interested in GSK – which it estimated was valued at around £90 million.

Takeover rumours aside, 2015 was a mixed year for GSK. Sir Andrew hinted at further restructuring after announcing last year's fall in revenues and earnings, including a 'rescale' of its UK manufacturing operation. Among the firms triumphs this year were gaining approval from the European Medicines Agency for the world's first malaria vaccine, which it had been developing for more than 30 years. A decision on how the vaccine should be used will be made by the World Health Organization by the end of 2015.

The resurrection of British shipbuilding

The UK shipbuilding industry, long considered one of the country's traditional but most heavily declining manufacturing sectors, showed new signs of life in 2015. Following a lengthy review process, BAE Systems decided to retain its shipbuilding work in Glasgow's historic Govan shipyard after fears it would move all activities to nearby Scotstoun and close the Govan yard. Both shipyards will be the location for the building of the Type 26 Global Combat ships. Building is expected to begin in 2016, with entry into service scheduled for the early 2020s.

BAE Systems committed to investing more than £100 million in expanding both the Govan and the nearby Scotstoun sites over its other option of a £200 million single site at Scotstoun.

Delivery of the bridge for HMS *Prince of Wales* at the Govan shipyard

Shortly after announcing its intention to keep building ships on the River Clyde, the Ministry of Defence signed an £859 million initial development deal to support progression of the Type 26 from the development phase into manufacturing. The government said the contract would secure around 1,700 UK jobs, including 600 in Scotland, at both BAE Systems and in its supply chain.

There were also hopes of renewal for the industry in Portsmouth, another of the UK's traditional shipbuilding cities. Last year, when the last block of the newly built HMS *Prince of Wales* left the city, it signalled the end of shipbuilding in Portsmouth after more than 500 years, as BAE Systems confirmed it would move projects to Scotland in a decision resulting in the loss of more than 1,000 jobs. But it was reported in February that shipbuilding activity would return to the city, with BAE Systems and Magma Systems confirmed as the preferred bidders to begin activities in the vacant shipyard. BAE will work on counter-mine warfare in Portsmouth while Magma will build composite ship structures. The news also meant that the shipyard's workforce would no longer be reliant on Royal Navy contracts alone.

The Portsmouth confirmation followed Chancellor George Osborne's announcement of the formation of a new national shipbuilding strategy that aims to build the most modern navy in the world. Mr Osborne said part of the strategy will explore the building of a new complex warship every 2 years while maximising export opportunities.

Another maritime sector, the yacht-making industry, which has been boosted in recent years by overseas demand, showed signs of slowing down this year. According to figures released in January by the British Maritime Federation, domestic demand increased the value of the UK's leisure, superyacht and commercial marine sector to £2.93 billion in the year ending April 2014, with the growth driven by mid-market firms. But its findings also showed that exporting firms were being challenged by the weakness of the Eurozone, with the number of exports in the year falling by 8.7%. However, demand for British-manufactured superyachts remains robust – around 400 were built in the UK last year – with demand driven by China. Trade association Superyacht UK valued the industry at around £492 million for the financial year ending 2014.

Essilor

The Protectors at Leicester Racecourse during the 2015 solar eclipse – Essilor's mascots tour the UK as part of our Think About Your Eyes eye-health awareness campaign

Mike Kirkley, Managing Director

Essilor Ltd is a premium ophthalmic lens manufacturer serving the UK and Ireland. It supplies spectacle lenses to over 1500 independent opticians on a daily basis.

Essilor Ltd is a subsidiary of Paris-based Essilor International, which can trace its origins back more than 160 years. Today, Essilor International enjoys global success and is listed on CAC40, the French stock exchange. The group has a presence in more than 100 countries, dealing with the design and manufacture of both spectacle lenses to protect eyesight and ophthalmic instruments.

Until 1975, Essilor Ltd was based in Hatton Garden, London, and was operated by a relatively small number of staff. One of the business objectives at that time was to promote varifocal lenses. Although these had been invented in 1959, they were seldom recommend or used by UK opticians. At that time, little did Bernard Maitenaz, inventor of varifocal lenses and Essel (soon to become Essilor) employee, know that the lenses would eventually go on to take the world by storm!

Essilor's varifocal lens design was marketed under the brand name of Varilux. As the brand grew in popularity, the lenses were heralded as a triumph by UK opticians. The growth in demand meant the business had to grow to enable efficient supply, and it soon became evident that the UK business needed its own manufacturing plant. In 1975, Essilor proudly relocated its business operation to Thornbury near Bristol where its first on-site laboratory was opened.

Today, Thornbury is still Essilor's commercial and manufacturing headquarters for the UK and Ireland but the premises have expanded considerably during the past 40 years. The laboratory is barely recognisable from the early days. It has become a Centre of Excellence and operates on a shift system using digital manufacturing processes.

ABOUT ESSILOR

» Laboratory and commercial operations in Thornbury, Gloucestershire, with satellite offices in London and Manchester

» Employs 350 people in the UK and Ireland

» For 3 years running it has been listed in the top 30 of the Forbes annual list of the World's Most Innovative Companies

» Turnover £60 million

» Specialises in the supply of premium-quality spectacle lenses and ophthalmic instruments to over 1500 independent opticians

» Campaigns tirelessly to create consumer awareness of the need to protect eye health

The first lenses to be made after we became a Centre of Excellence

> "over the past 8 years, through marketing investment, our Transitions photochromic brand has become a household name in the UK"

The Essilor team

Essilor employs over 350 people in the UK and Ireland, with many of these living and working in Thornbury. We are the biggest employer in the area, and our team consists of 25 field-based sales, customer services, marketing, finance, ophthalmic instruments and production staff. In addition, we have two laboratories servicing local markets in London and Manchester. The business regularly invests in staff training, including professional qualifications for employees who wish to further their careers within Essilor.

Our mission

Essilor's mission is to 'improve lives by improving sight'. Globally, Essilor invests more than €188 million in research and developing new products. In the UK and Ireland we major on eye health, and one key area of our local investment goes into publicity campaigns to educate consumers. Providing education on eye health is a responsibility we take very seriously. As a nation we neglect our eyes, yet as a business we see the terrible impact that blindness can have on a person's life. If we educate just one person and prevent one person from losing their sight then we know our investment has been justified.

Lens products and brands

Essilor has a portfolio of high-performance lenses that can be totally personalised to the wearer. Among its key brands are Varilux, Crizal UV and Transitions.

Many consumers are under the misapprehension that all lenses are the same, when in fact they differ tremendously in both performance and health benefits. All Essilor's lenses conform to European regulations, and many are covered by additional 'no quibble performance guarantees'.

Unlike the chains, our customers – who are independent opticians – have the freedom of choice to recommend the best solution for the patient. They understand more than ever that one lens does not fit all! Most independent opticians cannot and do not want to compete with the chains on price. Having branded products at their disposal helps them to differentiate themselves on the high street and give their patients the peace of mind that they are getting a product with added health benefits.

In addition to lenses, Essilor distributes a range of instruments used by opticians in their practices for testing sight, taking personalised measurements, and cutting and mounting lenses.

Marketing strategy

Because consumers are reliant on their dispensing optician to prescribe the best lens for their prescription, it is understandable that consumer knowledge of ophthalmic products and brand recognition of spectacle lenses is low. However, over the past 8 years, through marketing investment, our Transitions photochromic brand has become a household name in the UK. In 2014, Essilor embarked on a new brand-building journey for its Crizal UV lenses (which protect against the enemies of clear vision: scratches, smudges, dust, glare, water and protection against harmful UV rays). In 2015 we have invested £2 million in brand building, including a 4-month sponsorship of the ITV national weather.

Essilor's marketing programmes not only give consumers exposure to the product benefits and the brand they also support independent opticians, who are generally too small to do any marketing of their own.

Customer service

Since 2012, Essilor has been an accredited member of the Institute of Customer Service (ICS). The standards for accreditation are very high, and our services are constantly monitored to ensure we maintain our position and the quality of service we deliver to our customers. In the latest ICS report, Essilor is ranked fourth in the retail non-food sector, and is hot on the heels of John Lewis, which is the leading organisation, with a margin of less than 4 points. This is a great achievement for the business.

40 years of local manufacturing

In July 2014, the business celebrated 40 years of local manufacturing in Thornbury. The occasion was marked by visits from local dignitaries, customers from the UK and Ireland, and a visit from the highly respected inventor of Varilux lenses – Mr Bernard Maitenaz. The staff also celebrated with a fun day, at which all departments competed against one other to win prizes.

It's a sad fact that in the ophthalmic lens market today, many of Essilor's competitors outsource their lens supply to overseas organisations, mainly in Asia, but Essilor is proud to be able to offer lenses that are made in Thornbury. This UK presence is important to everyone – our staff, customers, consumers and the local community – and it is because of our success to date and the ongoing commitment of our customers and staff that we are still thriving 40 years on.

Essilor customers join its 40th anniversary celebrations

The future

Essilor has a number of high-profile initiatives planned for next year, and our brand-building investments will continue. We have exciting new innovative products built on new technology to launch on the market. We will also continue to invest in the Centre of Excellence, securing jobs for our employees while delivering the very best products and service to our customers. That makes us truly world class!

Phillip Hammond visiting the Essilor laboratory and commercial centre earlier this year

Heat Trace

Neil S. Malone, Chairman and Founder of Heat Trace Limited

The world's first electrically heat traced reeled subsea pipe-in-pipe system being loaded aboard a Pipelay Vessel

I witnessed the demise of large UK manufacturing companies during the 1960s and 1970s. Industries that had been the backbone of the UK's economy, such as shipbuilding, steel making and car manufacturing, saddled with pre-war plant and a labour force in a union straightjacket, competed with countries such as war-defeated Germany and Japan, which had invested in modern equipment operated by a flexible and often lower cost workforce.

Clearly, the company that I established in 1974 needed to be:

» niche, founded on innovation, and

» for longevity, innovation had to be continuous.

This has become the Heat Trace mantra and, although embellished along the way, it remains over 40 years on, enabling us to remain successful in a competitive environment.

History

The activity chosen was electric trace heating, an industry in its infancy in 1974. Electric trace heating involves the heating of pipelines and equipment with electric cables to, for example, prevent water from freezing, or to keep bitumen flowing.

By 1980, we had patented, developed and launched the world's first cut-to-length, flexible, electric heating cables. Throughout the 1980s and 1990s, through continuous innovation we introduced more unique heating cables and novel control systems, winning the Queen's Award in 1987.

ABOUT HEAT TRACE

» Technical leaders in electric heat tracing

» Innovation-led SME with a large intellectual property portfolio

» Over 40 years under the same independent ownership

» 90% of sales exported

» 13% of sales revenues expended on R&D

» Sacrosanct independence – private-equity resistant!

» Sees social capitalism as an alternative way forward

In 2000, we entered, somewhat belatedly, the field of semi-conductive self-regulating heating cables, which are much safer. These had first emerged in the 1980s but had not achieved their full potential. We set ourselves the objective of becoming the best in our field technically, and over the next 10 years we achieved this goal, surpassing all competitors worldwide on every measure of performance.

The result is that, as older products are copied and come under pricing pressure from, mainly, competitors in the Far East, our new superior, innovative high temperature products maintain the company's margins, and thus continue to fund our R&D. At Heat Trace the R&D spend accounts for more than 10% of our sales, in a market sector having an average R&D spend of less than 3%. This regime won for us the Queen's Award for Innovation in 2014.

We have become experts in our chosen niche market of electric trace heating, exporting 90% of our production. Sales are through distribution channels or as bespoke designed heating systems that are provided for engineered projects. New technology is communicated to our overseas sales offices at biennial conferences – this year's is in Tuscany!

Of course, for continuous innovation it is necessary to attract qualified staff. Our experience is that this is best achieved through our own youth academy. Here, talented young people are recruited through strong school and university links.

A highly successful apprenticeship scheme has been established, fed by schools local to our facilities in Helsby and Stockport, Cheshire. We have been successful in attracting the cream of the crop each year, resulting in teams being strengthened in the areas of R&D, design, production and marketing.

Heat Trace has also successfully utilised the Knowledge Transfer Partnership (KTP) initiative with local universities. In these 2- or 3-year projects, graduates (known as Associates) are supplied by the universities and, on completion of the project, we have the potential to employ them directly. The KTP scheme is proving a means of attracting highly talented young engineers.

A selection of electric heat tracing applications

The continuous introduction of new blood into the company has resulted in a balanced employee age-spread. This will help ensure continuity within the company when my time as the custodian of Heat Trace inevitably draws to an end! A plan to transfer our debt-free company to the existing management structure is in place, retaining a Malone family connection through my daughter Suzanne and her partner Dan Berrisford.

Throughout the company's history, I have played a leading role in the development of national and international standards for trace heating. These days, my colleague and Vice Chairman Jason O'Connor is the most visible member of the august standards-making committees – innovation continuing, across all areas of the company!

HRH Prince Edward Duke of Kent Presenting the 2014 Queen's Award for Enterprise (Innovation) to Neil S. Malone, Chairman of Heat Trace Limited

“Our business model of a niche market, continuously innovating SME has become recognised by successive governments as a viable template for other SMEs”

The future

For the future, we are looking to transfer our semi-conductive technology into other applications and market sectors via partnerships in such fields as automotive, rail, nuclear, aerospace as well as space heating of buildings. Our extensive patent portfolio enables such business to include licensing of manufacture. So, after more than 40 years, innovation continues.

The Heat Trace culture – social capitalism

Our business model of a niche market, continuously innovating SME has become recognised by successive governments as a viable template for other SMEs. Progressively enticing tax incentives have been provided through:

» R&D tax credits
» the Patent Box
» accelerated investment allowances (first-year allowances).

Such incentives minimise corporation tax liability, assisting finances and permitting greater reinvestment back into the company. More projects can be undertaken (often in partnership with universities), creating employment opportunities.

The concept of the Heat Trace business model is different from that of most large companies, for which money is the driver. At Heat Trace, R&D, which produces innovation, resulting in novel products that create the wealth to fund the enterprise, comes first.

The Thatcher government quelled the union stranglehold and produced an incentivised environment, which was good. The flip side of that coin was that the changes also resulted in greed and huge disparities between the ‘haves’ and ‘have nots’, which is clearly not good from a social standpoint. At some stage the government simply must address the ‘fat-cat’ culture.

In Heat Trace’s model, the workforce is the company’s most valuable asset, whereas in many large businesses the employees are purely numbers. Thus we treat our workforce with respect, generosity and compassion, and this is reflected in bonuses from profits, and wage increases above the RPI or inflation. Emphasis is placed on delegation and empowerment of individuals within a framework.

This form of social innovation relies entirely on the independence of the company. Were Heat Trace to be acquired by another organisation – we receive approaches on a regular basis from competitors, almost all of which are owned by private equity funds – it would, no doubt, market our current technology, dispense with R&D, the cost of which would transfer to the bottom line, and sell the company on within a couple of years, thus creating a few more ‘fat cats’ at the expense of creative jobs.

However, in this same environment, some of our biggest competitors who spend nothing on innovation have become the best customers of Heat Trace, who do! Therefore, our independence is sacrosanct.

This then is the Heat Trace mantra – our form of social capitalism and innovation.

Some of the heat trace workforce at the 2014 Queen’s Award presentation

Gabriel-Chemie

Gabriel-Chemie's UK production site in Paddock Wood, Kent

Insulation boards manufactured using the new masterbatch comply with new EU fire safety standards

Gabriel-Chemie specialises in the development and production of additives and colourings for the plastics industry. Established in 1950, the company is today one of Europe's leading masterbatch producers. Masterbatches – concentrated colours and additives – are mixed with virgin polymers to give them the required colour and performance characteristics. The independent, privately owned group has its headquarters in Gumpoldskirchen, Austria. Its UK production site in Paddock Wood, Kent, is one of six across Europe.

The potential of plastics

Plastic's out-dated reputation as a cheap and low-quality replacement for other materials is now being swept away as highly innovative and technical applications as diverse as medical devices and performance packaging are developed. These solutions are playing a vital role in supporting the health and diversity of UK manufacturing. The trend towards off-shoring plastics manufacture to the Far East to reduce cost is now being reversed with the help of Gabriel-Chemie's masterbatch technology.

The company's masterbatch products bring additives and colour into the world of plastics. Its extensive product range includes additive masterbatches, colour masterbatches and combination masterbatches. Its additives provide a wide range of properties for plastics, including antistatic effects, flame-retardant effects, counterfeit protection, laser marking, UV resistance and metallic effects.

ABOUT GABRIEL-CHEMIE

- Develops and produces additives and colourings for the plastics industry
- Independent, privately owned group headquartered in Austria
- Employs 450, with 40 based in the UK
- Its products are used in plastics for construction, agriculture, consumer products, medical devices, food packaging and cosmetics packaging

Smart colour indicators to show when food is no longer fresh

From its UK production plant Gabriel-Chemie provided the masterbatch for the seats at the Olympic stadium at London 2012. The masterbatch was required to optimise colour and combination additives to meet some exacting performance specifications.

The company strives for constant optimisation of its business relations through strong partnerships with product designers, moulding companies, product manufacturers and brand owners. It aims to structure its activities to generate clear technical and commercial benefits for its partners. As an independent group, it has the maximum flexibility and scope to shape its operations to meet its customers' needs, and it is this philosophy that guides the company's expansion strategy towards a global presence in plastics innovation.

> "As an independent group, it has the maximum flexibility and scope to shape its operations to meet its customers' needs"

» WHERE YOU WILL FIND OUR PRODUCTS

Gabriel-Chemie products can be found in many everyday items ranging from skin cream tubes and soft drink bottle tops through to swimming pool covers, artificial turf and even medical syringes.

Research and development

The group's sites are networked and share a database containing several thousand successful recipes. This means that when customers approach the company for a solution, there is often one already available. If not, the R&D department works together with the raw materials industry and customers to produce technically demanding and economical solutions that satisfy innovative requirements.

R&D at Gabriel-Chemie is a certified process that is not limited to its own sites. It extends to cooperation with international customers and suppliers, as well as private and government organisations. The company's goal is constantly to optimise product performance, while also offering new solutions to customers.

Smart food packaging that changes colour to ensure freshness

Gabriel-Chemie has worked closely with Insignia Technologies to help it develop smart colour indicators to show when food is no longer fresh, helping to reduce food waste and enhance food safety. The innovative labelling solution clearly highlights to consumers and businesses the quality and freshness of products. In order to do this, intelligent plastics are used to produce an after-opening freshness timer and a food-fresh deli timer.

The freshness indicator used on sliced meat, cheeses and salads changes colour to indicate whether the pack has just been opened, the contents need to be used soon or the contents are past their best. The indicators are formulated to change colour over 1, 2, 3, 5 or 7 days. Gabriel-Chemie worked with Insignia Technologies to develop masterbatch compounds for the colour-changing label, which works in response to exposure to carbon dioxide in the atmosphere after the sealed packet has been opened. The first examples of these labels can now been seen on items on the shelves of a well-known UK supermarket chain.

The cool label confirms that foods have been kept at the required temperatures to maintain freshness throughout distribution and storage. If the

Masterbatch pellets

package is exposed to unauthorised temperatures for more than 2–4 hours it changes colour from grey to dark blue. The ripeness indicator is designed for fruits that do not change in appearance as they ripen, and enables householders to see when they are ready to eat by means of a clear colour change in its label.

New greener alternatives

The additive traditionally used to provide flame-retardant characteristics for two widely used plastic insulation products, XPS (extruded polystyrene) and EPS (expanded polystyrene), is due to be banned from use by the European Union (EU) with effect from August 2015. This is because the chemical hexabromocyclododecane (HBCD) has been identified as having persistent, bioaccumulative and toxic properties, relating to its effects on aquatic organisms and its presence in the environment, and its potential to cause harm.

Gabriel-Chemie has developed a new flame-retardant masterbatch offering the same performance and cost benefits but based on a new active substance called POLY-FR. It was able to bring this to market fully 6 months before the EU deadline, allowing manufacturers time to switch production and ensure continuity of supply.

To achieve this, the company started working several years ago in close cooperation with the manufacturers of the active ingredients of the new masterbatch and with the makers of the XPS and EPS insulations products. After extensive and time-consuming testing and processing experiments, Gabriel-Chemie was able to finalise the new POLY-FR-based masterbatch by the end of 2014.

Insulation boards manufactured using the new masterbatch comply with applicable fire safety standards in Europe. The formulation of all other components used in the manufacture of XPS boards and the setting parameters of the manufacturing equipment can be kept unchanged as well.

Colour ideas for the future

Gabriel-Chemie's Colour Vision service offers colour concepts that embrace and anticipate the latest trends. The company's experienced 'scouts' and innovative colourists are constantly developing new colours, effects, surfaces and polymers. Innovative products are brought to life with expressive colours, interesting surfaces and special materials that allow product designers and brand owners to achieve innovative and exciting products and packaging solutions.

» ACCREDITATIONS

BS EN ISO 9001:2008. Quality management systems

BS EN ISO 14001:2004. Environmental management systems

BS EN ISO 13485:2012. Medical devices. Quality management systems. Requirements for regulatory purposes

Henry Squire & Sons

John Squire, Managing Director at Henry Squire & Sons Ltd

Many of Squire's recodable combination padlocks are patented, with unique design features to maximise performance and security

ABOUT HENRY SQUIRE & SONS

- » A heritage of 235 years in British lock-making
- » A progressive, independent, family-owned business spanning eight generations
- » Manufactures one of the largest and most comprehensive ranges of locks for home, work and leisure in the world
- » Focuses on innovation, quality, service and performance, 'made in Britain'
- » Globally recognised, with Sold Secure, LPCB and CEN European accreditations
- » A 30,000 ft^2 production and new product development centre in the West Midlands, with a joint-venture production facility in China
- » Over 40 trading partners worldwide

Through eight generations, the Industrial Revolution and both world wars, British lock-making pioneer Henry Squire & Sons Ltd has been testament to the bulldog spirit. The Squire name has been at the forefront of international lock-making for 235 years. Now it is reinventing itself as a niche manufacturer, with a focus on being as successful overseas as it is at home.

The company was established near Wolverhampton in 1780 at the time of the Industrial Revolution – which drove the demand for locks – and has remained a Black Country based company ever since. Squire has unrivalled experience in lock-making. It survived both world wars and the flood of cheap foreign imports in the 1980s, and is the only independent, family-owned British lock manufacturer in the UK.

Technological innovation is the company's trademark. It produces some of the most advanced lock designs on the market for homes, businesses, leisure and cycle markets – cylinders, padlocks, combination locks, luggage locks, multi-purpose lock and chain sets, security cables, bolts, hasps and staples, and security accessories.

Today, the Squire brand is recognised globally in its industry, producing the highest quality security solutions to world-class manufacturing standards. The company manufactures one of the largest and most comprehensive ranges of padlocks and two-wheel locks in the world, selling over one million locks annually.

Squire employs 50 staff at its state-of-the-art, energy-efficient 30,000 ft^2 production, research and design centre in the West Midlands, and it has a joint-venture factory in China.

Setting standards

All products are made using superior design capabilities and the latest production methods. The result is a range of top security products tested to Sold Secure, LPCB (Loss Prevention Certification Board) and CEN European standards to ensure the finest tolerances, reliability and outstanding performance. Importantly, Squire's patented designs have given the company a lead in the UK's combination lock market.

'By protecting our own unique designs, we can command better prices in the UK and generate profitability,' explains eighth-generation Managing Director John Squire. 'We've achieved leading accreditations across our top range of Stronghold padlocks, which are recognised globally, enabling us to market products to a global audience.'

The company's quality and environmental practices are recognised too, having achieved ISO 9000 and ISO 14001 accreditation.

It has always been company policy constantly to improve its products, production methods, packaging and advertising. Squire was the first hardware manufacturer to present its products in heat-sealed blister packs, winning the Starpack award for packaging in 1968 and a Merit Award from the Packaging Institute of America in 1969.

The company's focus on continuous improvement and investment in new production technology is as important today as it has ever been. By restructuring over the past 4 years, Squire has seen sales grow by 40%, and it is making strong profits.

Global focus

Squire recognised that it had to create the right structure for improvement by selecting a highly skilled team led by an expert in world-class manufacturing. This approach is enabling the company to compete more effectively and to expand its export range of bespoke products that meet the security needs of today's customers.

'We've gone through significant restructuring to develop a platform for growth. Our UK manufacturing is very much focused on added-value, service-led products and realising our ability to research and develop new products to generate growth,' says Mr Squire. 'Continued investment in state-of-the-art manufacturing technology is critical to the design of our new products. It complements our ongoing investment in innovation and training to maximise the skills of our production staff.'

Many companies that import from the Far East are tainted by cost, poor-quality production and timing issues. However, Squire is able to apply the same rigorous standards at its Chinese factory as it does at home. 'We're investing considerable time and money in developing new markets abroad, and because we have ownership of our manufacturing in China, we are able to engineer products specific to those markets,' says Mr Squire.

> "We've achieved leading accreditations across our top range of Stronghold padlocks, which are recognised globally, enabling us to market products to a global audience"

Padlocks are assembled by hand, with an unrivalled skill base of knowledge and expertise passed down through generations

The solid hardened steel lock body of Squire's WS75 Stonghold container lock is machined using state-of-the art production methods

In the UK, Squire is able offer innovative products in line with market needs, because it is close to the market and can react quickly. Its joint venture in China enables the company to focus its skills on world-class manufacturing in the UK, and create a platform for research and development to secure the future of the company. 'Innovation and flexibility of service is what you can expect from the UK,' says Mr Squire. 'Products which typically take 8 to 12 months to produce in China, we can turn around in just 2 to 3 months.'

British made

Support for Squire's products being manufactured in the UK has risen dramatically, as customers increasingly demand products that are bespoke and personalised to their individual requirements.

For Squire, the benefits are about quality, performance and environmental impact. Products made in Britain are not only better quality, they are also renowned for better performance. 'We generate far less waste because we manufacture according to customer requirements rather than specific stock, so we're not wasting packaging or energy,' explains Mr Squire. 'Most of all, we are committed to reducing energy consumption and we're taking practical steps to ensure our carbon footprint is minimised.'

Achieving internationally recognised accreditations for its top of the range Stronghold padlocks has enabled Squire to market products to a global audience

'Toughness guaranteed'

Squire's plans involve moving from a UK-oriented company to one with far greater exposure in overseas markets, by embracing high-level technology that customers look for at a cost that people will pay. 'We are a company with a unique history. We've reinvented ourselves to a modern company with a modern structure. We don't try to be a main market player, we look to niche markets with excellent growth prospects which generate excellent sales,' says Mr Squire.

Now Squire is looking to expand significantly its UK base in terms of design, engineering and manufacturing capacity to meet the growing demand for its products and allow it to manufacture new products. This includes the introduction into locks of advanced electronics, ensuring the highest security levels, and at the same time giving the user greater flexibility when using the product. Mr Squire adds: 'Our mantra is to provide the toughest possible locks at the greatest convenience to the user. By combining "toughness guaranteed" with convenience gives us the best strategy.'

Manufacturing skills

Increased government support for products manufactured in the UK is welcomed by Squire, as is its support for innovation and investment in manufacturing skills and training. Mr Squire says: 'It is vital the government continues to support the future-generation training to ensure we retain the skills of the lock-making industry as an important part of British manufacturing.'

Russell Finex

Russell Finex headquarters and manufacturing hub based outside Heathrow

Russell Finex's innovative patented clamping system for vibratory sieves

Sieves and filters are used to remove oversized contaminants from liquids and powders and play a vital role in industry. From the bread that we eat to other everyday items such as toothpaste and cosmetics, almost everything we consume or use will pass through a sieve or filter at some stage to ensure we receive the quality we expect every time.

Established in 1934, Russell Finex is a global leader in the manufacture of high-quality sieving and filtration solutions. With its manufacturing hub to the south-west of London and unique business structure, Russell Finex has enjoyed 80 years of steady growth and, by remaining focused and close to its core values, has become an international leader in the market.

The ownership structure of the company has played a significant part in its success. Russell Finex is owned by the employee benefit trust, making it a very stable working environment for employees while allowing for the making of longer-term business decisions. This stability is evident in our continuation of a non-contributory final salary pension scheme, which is now provided by only a handful of companies in the UK.

Even companies with the most resilient of business models encounter challenges that need to be overcome. The reason why some companies stand out during hard times is because challenges are recognised early on and acted upon quickly. Russell Finex has overcome numerous challenges in the past few years, including managing growth spurts and shifts in business culture, and has stayed strong through recent economic difficulties.

When the world economy went into recession in 2008, business levels were relatively unaffected. Despite the continuing world downturn, sales levels started to increase again from 2010 onwards, together with year-on-year increases in net trading profit.

ABOUT RUSSELL FINEX

Russell Finex is a leading specialist in the manufacture of high-quality sieving and filtration solutions used throughout a wide range of industries. Established in 1934, Russell Finex has enjoyed 80 years of steady growth to become an international leader in the market, directly employing over 200 staff. Having maintained a customer-oriented business with innovation and design at the core, Russell Finex strives to offer the best and widest range of separation equipment in the market anywhere in the world.

> “significant investment is continuously made in R&D programmes to ensure that market-leading, innovative separation solutions can be offered in a highly competitive marketplace”

To maintain its core business strategy, it is essential that Russell Finex’s two business values of organic growth and positioning at the premium end of the market are embedded in every part of the organisation. Knowing who you are as a business ensures that customer expectations are not only met but exceeded.

Russell Finex has adopted a ‘less is more’ approach by remaining specialists in the industry and has not attempted to diversify for the sake of diversification. Instead of providing a varied portfolio of process equipment, significant investment is continuously made in R&D programmes to ensure that market-leading, innovative separation solutions can be offered in a highly competitive marketplace.

A large proportion of the company’s success in both domestic and international markets is down to it having a strong and loyal customer base. Considerable investment is made in maintaining and building relationships with customers across the world. Along with a well-developed sales and marketing strategy and strong after-sales support, customers are involved in market research and new product development, and are invited to training days for new operators, where new equipment is showcased. This also gives a level of transparency to customers, exposing them to new technologies early in the product development process and providing them with the opportunity to give their input to help ensure products of the future meet future needs of the industry.

Winners of a Hounslow Chamber of Commerce business award 2 years running

As well as capitalising on the globalisation of world markets, where businesses are seeking standardisation, effective cross-pollination of business across the world has been, and remains, a key part of the success of Russell Finex in the international arena. This is achieved through the continuous development of sales channels, communicating business intelligence via clearly defined business-development programmes, and using latest technologies such as global customer relationship management (CRM) and enterprise resource planning (ERP). The success of Russell Finex is illustrated by the numerous awards it has received, including Best SME in 2013 and Best Business in 2014 from the Hounslow Chamber of Commerce. It was a finalist in the HSBC Global Connections in 2013 and, most recently, was awarded Best Exporter of the Year 2015 by SHAPA (Solids Handling and Processing Association), a leading UK association for the process industry.

One of the biggest challenges faced by Russell Finex has arisen from its success over the past few years, which has seen turnover increase by more than 50% overall, against a far more modest planned increase of 5% year on year. There are a number of factors that caused the actual growth to be underestimated, a few of the main ones being ‘growth spurts’ caused by large orders being won within concentrated periods of time, higher yields from marketing initiatives and the speed at which the business became established in new markets.

This has led to the business investing significantly in new manufacturing equipment and techniques such as lean manufacturing. This investment has not only improved productivity and the repeatability of products being manufactured but has also established a great foundation, future-proofing the business for further growth.

In addition to growth in turnover, the company has increased its workforce by 30% in the past few years. The increase is in all areas of the business, including graduate placements and apprenticeships, which help young people get into employment and learn a trade. Such opportunities are now scarce in the UK due to offshoring of manufacturing by many businesses over the past 20 years. During this period Russell Finex has maintained and expanded its manufacturing plant and capabilities on the outskirts of London, near Heathrow.

A secondary challenge has been faced as the company has moved from a small–medium enterprise, with its dominant market in the UK, to a medium-sized international company, with 80% of its products being exported directly to its customers or via its overseas subsidiaries. This transition has not only resulted in the need for improved communication across the business but it is also evident that the business culture has started to shift as the company grows.

Good communication is always key to a successful business, and many practical steps can be taken to help develop it. Russell Finex has always made, and continues to make, considerable effort to achieve good communication across the entire organisation about business strategies, core values and goals. In addition, investment in new systems such as a global CRM and ERP and a global intranet has assisted in the company achieving more effective communication.

Identifying and managing a shift in culture within a business is more subtle and requires a more holistic approach. At Russell Finex a top-down approach is adopted. First, each level of management is made aware of and accepts changes before they are rolled out in the departments they manage. The next stage is to look at ways that will help the changes be embraced throughout the organisation. A common technique for achieving this is to look at ways in which creativity can be stimulated in the workplace. One way in which this is achieved at Russell Finex is during the implementation of lean manufacturing, where events are arranged to bring together a variety of employees from different parts of the organisation to develop a lean strategy for a particular part of the business.

Being a leader in the industry has its challenges but without leaders advancement is slow, if it is achieved at all. Russell Finex has always striven to be a leader in the industry, on many occasions over the years being the first with inventions and filing patents. This has the added benefit that, when new industry standards are introduced, Russell Finex is often approached to assist with best practice.

For UK manufacturing to survive into the future, more businesses need to step out into the unknown to lead industry forward. As long as they are able to maintain a strong foundation and a clear vision, then many other companies could be rewarded with the same returns experienced by Russell Finex.

High-quality separation solutions for a wide range of industries

» KEY MILESTONES AND PRODUCT INNOVATIONS

1938 Introduced first gyratory sieving machines

1950 Released first 3500 rpm high-speed sieving machines

1980 Introduced patented Russell pneumatic Airswept Sieve

1984 Celebrated 50th anniversary

1986 Introduced first patented ultrasonic deblinding system

1987 Launched self-cleaning liquid filter range

1990 Introduced first high-capacity in-line sieves

2002 Launched first high-performance grading sieves

2005 Introduced patented Russell Compact Airlock Sieve

2009 Celebrated 75th anniversary

2012 Launched 900 mm diameter Compact Airlock Sieve

2014 Celebrated 80th anniversary

Calder

Lord Jones of Birmingham (left), Jilly Calder-Potts and Ian Calder-Potts (Chairman and founder of Calder Ltd) at the opening of Calder's new facility in Worcester in 2011

A 2,500 bar high-pressure water jet cutting through 100 mm high-strength steel plate

ABOUT CALDER

- Located in Worcester, UK
- Revenue of £25 million in 2014–2015
- Team of 85
- Specialising in the design, build, installation and servicing of high-pressure pumping equipment
- Markets include oil and gas, nuclear, petrochemical, automotive and civil engineering
- Delivering equipment to customers around the world
- Owned and managed by the four directors

Calder was born in a hole, installing a high-pressure pump in a very deep hole, almost 2 miles down, near the bottom of the Western Deep Levels gold mine, one of the deepest mines in the world. This experience confirmed the need for high-pressure pumping equipment that will work safely and reliably in some of the most inhospitable, technically challenging and potentially dangerous environments on Earth. Forty-one years later, Calder's early primary focus remain unchanged

Starting a company in Worcester in the teeth of the early 1980s recession was considered by many to be lunacy, especially our new-found friendly bank manager. Finding potential customers was relatively easy, but finding companies actually prepared to place orders with an unknown supplier proved far more challenging. In a crowded marketplace of 17 competitors (the majority of which were not making a profit), we had to find a way to differentiate ourselves.

One option was to buy market share by undercutting the competition. However, that would inevitably have led to a swift and painful demise. Initially we had no choice but to sell at low margins in order to keep cash flowing. The traditional market for high-pressure pumps was oversubscribed, but this market was the fastest route to generating cash. When our first customers discovered that we were true to our word, delivering on our promise of 'safety and reliability', with a resultant dramatic drop in their running costs and assured trouble-free continuous operation, we won a few friends. Many more have followed.

As the company's finances improved, we focused on new opportunities, particularly in areas that involved difficult and innovative processes. This required knocking on a lot of doors, some of which opened to reveal exciting, and sometimes ground-breaking, applications. Two new and unrelated technologies were emerging, both of which were totally reliant on high-pressure pump technology:

- » The pumping of seawater through membranes at high pressure to produce drinking water – the scaling up from development-scale equipment to industrial-sized machines was accelerated by an urgent need to deliver drinking water to the British forces during the Falklands crisis.
- » The injection of ground-up stone and rock waste material back into a deep oil well – an environmentally sound method for disposing of oil and gas drilling waste.

Converting both opportunities into profitable repeat business established Calder as a world leader in both fields.

Standards, specification and compliance

Building on our success in the oil and gas industry, we sought out applications that had highly demanding industrial and consumer standards. Like so many companies attempting to participate in this market, we tried unsuccessfully to ignore or short-circuit the onerous compliance requirements. Sharing our frustrations over a beer with a supportive customer, he advised: 'If you are serious about entering the oil and gas market you must invest time and effort, immerse yourselves in the standards, don't just pay lip service, understand and assimilate them; understanding "why" will help you to deliver the safest, most innovative and reliable solutions, not only meeting but exceeding your customers' expectations and enhancing your reputation.'

Acting on this advice we set about enabling all sections of our business to understand the applicable standards and the actions needed to comply with them. We quickly realised our worst fears – the non-refundable costs of preparing proposals are significant, regardless of project size and value. Winning the order is the critical first phase, which must be followed by timely and efficient project and cash management.

A 850 kW high-pressure pump unit on test in the Calder test bay

The expertise gained over this period changed our customers' perception of Calder from one of 'excellent suppliers of high-pressure pump packages' to 'experts in the supply of hazardous-area machines built to almost any global specification'. This fact is largely responsible for the recent growth of the company. It has driven product diversification and created a new worldwide marketplace.

Today, the supply of bespoke machines and services to the oil and gas industry is the backbone of our business. We have built our reputation by understanding all aspects of our customers' requirements, and engineering solutions that exceed their expectations. The disciplines our team have learnt by supplying into such a demanding market serve us well in all other sectors, ranging from nuclear to automotive.

> “We have built our reputation by understanding all aspects of our customers' requirements, and engineering solutions that exceed their expectations”

Managed growth, investment and improvement

We believe that careful investment is the key to continued growth. Since moving to the new Worcester facility in 2011, we have invested over £2.5 million in improvements. The most recent is a state-of-the-art test facility that allows us to test large (up to 2000 kW) electric- and diesel-engine-driven machines in a temperature-controlled environment.

A 1.2 MW high-pressure pump unit during build

As with most successful companies, our customer is king – without customers we would not have a business. To serve our customers properly we need first-class, self-motivated team players with drive, initiative and courage who share our passion to deliver high-quality, reliable, safe, innovative equipment and services. Our policy of developing good people in house through providing constant, focused training means we have retained and grown a highly skilled and motivated team. Building an international reputation in high-specification, high-compliance industries such as oil and gas has been a slow and sometimes frustrating process. Perseverance and investment have delivered 260% profitable sales growth over the past 5 years, with exports to 35 countries.

Our focus is to expand our established market while actively seeking out new customers and opportunities. To achieve this we must:

- retain, train and recruit the best people
- deliver added value, product and services ahead of the competition
- communicate effectively with our team, getting them fully involved in meeting the challenges we face in expanding the business
- promote the principle that the lifetime costs of ownership are more beneficial than purchase price alone
- build quality, value, safety, reliability, environmental responsibility and service into every machine we produce, finding challenging and unique solutions to our customers' problems (our added value)
- ensure we remain financially strong, delivering on the commitments we make to our customers and to our people.

Abacus Lighting

Iconic sports floodlight installation at Edgbaston Cricket Ground

Founded in the Nottinghamshire town of Sutton-in-Ashfield in 1958, Abacus' headquarters remain there to this day, now proudly employing 150 people with a combined length of service of over 3,000 years.

With a successful apprenticeship scheme and graduate-trainee programme, Abacus is considered one of the 'go to' employers in the local area. Many apprentices and trainees have stayed with Abacus through to retirement, which is testament to the employer–employee relationship that Abacus seeks to nurture.

For 15 years, Abacus has held the Investors in People accreditation. Acknowledging that our people are our greatest asset has helped build a strong and loyal workforce who, when the economic downturn came, were willing and able to weather the storm with a combination of expertise gained from training and the loyalty built as a result of Abacus' investment in its people. A culture of continued innovation, improved efficiencies and commitment to our customers ensured that Abacus did not just survive, it thrived and continues to do so.

What we do

Abacus stands out among its peers in the exterior lighting industry with its offering of a complete lighting package. From initial concept, through planning, design (mechanical, structural and electrical), manufacture, installation and maintenance, our specialist in-house teams are on hand to ensure that every project exceeds customer expectations.

Our manufacturing plant in the UK is geared up to produce lighting columns, masts and structures ranging from 3 m to over 70 m in height. With an inventory as diverse as standard street-lighting columns to bespoke telescopic masts holding over

ABOUT ABACUS LIGHTING

- **1958**: Founded by Jack Pratt to repair damaged lampposts for Ashfield District Council
- **1960s**: Developed the raise and lower column, with a design so good it has barely changed since
- **1965**: Switched on the UK's first photosensitive, dusk-to-dawn lighting – a revolutionary energy-saving technology
- **1972**: Launched the first illuminated anti-vandal bollard
- **1979**: With the University of Nottingham, created the first lighting-design software of its kind, which allowed the customer to see the spread and brightness of light at any point on the ground
- **1999**: Developed the Orion amenity luminaire and Challenger range of floodlights

Fabricating a mast base section for Yorkshire County Cricket Club – when completed the mast will reach 56 m to the top of the headframe

"Abacus is known and trusted worldwide for its quality products and willingness to take on a challenge"

LED bollards installed at Reading Train Care Depot

100 floodlights on each, our skilled workforce is able to quickly adapt to the demands of our order book.

In addition to producing fixed masts and columns, Abacus leads the market with its base-hinged products. Designed to be lowered using a hydraulic or spring counterbalance device, this enables installation and maintenance to be carried out safely by personnel at ground level.

Our firm commitment to energy efficiency and reducing the environmental impact of lighting is represented not only by a comprehensive range of LED lighting and intelligent lighting-control systems but also our expertise in containing light pollution and light trespass, two often-overlooked factors of energy usage in lighting. Wasted light is wasted energy.

Brand recognition

With a strong business-to-business brand built on many years of successful national and international business, Abacus is known and trusted worldwide for its quality products and willingness to take on a challenge.

Outside of business circles our reach is wide but understated. A common requirement is for lighting to blend into the built environment and be sympathetic to the surrounding area. In the UK alone, our products have touched the lives of almost the entire population, without necessarily being noticed. For example, next time you are on a rail platform, take a look at the lampposts, they are probably Abacus' raise and lower columns.

Markets

Within each market sector Abacus has designed, produced and installed some of the most iconic lighting installations around the world.

With a mix of 30% export sales against 70% domestic sales, Abacus needed to put a robust infrastructure in place to service effectively and efficiently the majority of our international markets. A network of local representatives and strategic partnerships has been deployed, each one backed up and

Key market sectors and sample customers

Sport – West Bromwich Albion, Kempton Park Racetrack, Yorkshire CCC, The Oval, Lords, Trent Bridge, Edgbaston, Faldo Golf Course (Dubai), Manuka Oval (Australia), Liberec Ski Jump (Czech Republic)

Road – St Petersburg Ring Road (Russia), local authorities throughout the UK

Rail – Network Rail, London Underground

Ports – Hidd Port (Bahrain), Callao Port (Peru), Port of Cardiff, Suez Canal Container Terminal (Egypt), Rosyth Port, Redcar Bulk Terminal

Airports – Liverpool John Lennon Airport, Shanghai Pudong (China), Leeds Bradford, Mauritius Airport, Entebbe Airport (Uganda), Jersey Airport, East Midlands Airport

Car parks – Tesco, Asda, Morrisons, Fitness First, East Midlands Airport

Amenity lighting – The Barbican, Pizza Hut, Ikea, McDonalds supported by head office. Experience has shown that with cultural diversities, differing time zones and languages, this approach delivers a level of customer service that our customers expect and deserve, wherever they may be.

A future for Abacus

The ongoing success of a company cannot be left to chance – a successful past by no means guarantees a successful future. With this in mind, our aim is to not merely satisfy customer expectations but to always exceed them. Customer satisfaction is no longer enough – the bar has been raised.

How is this achieved?

Taking ownership of each and every stage of the customer order life cycle, we call on the skills of our trained workforce, we take pride in our work, we look for any opportunity to innovate, we do the very best we can and, importantly, we listen.

This is easier said than done, as this level of commitment to being a customer-focused organisation often requires a sea-shift from the existing corporate culture. At our disposal and at the core of our culture is Listen – Lead – Excel, the Abacus mantra.

» **Listen** to our markets, our customers and our people.

» **Lead** by innovation, by example and through our work ethic.

» **Excel** in everything we do.

» ABACUS INNOVATIONS

» LEDs incorporated in the anti-vandal bollard

» Invented and developed the world's first telescopic mast – no one else in the world manufactures them

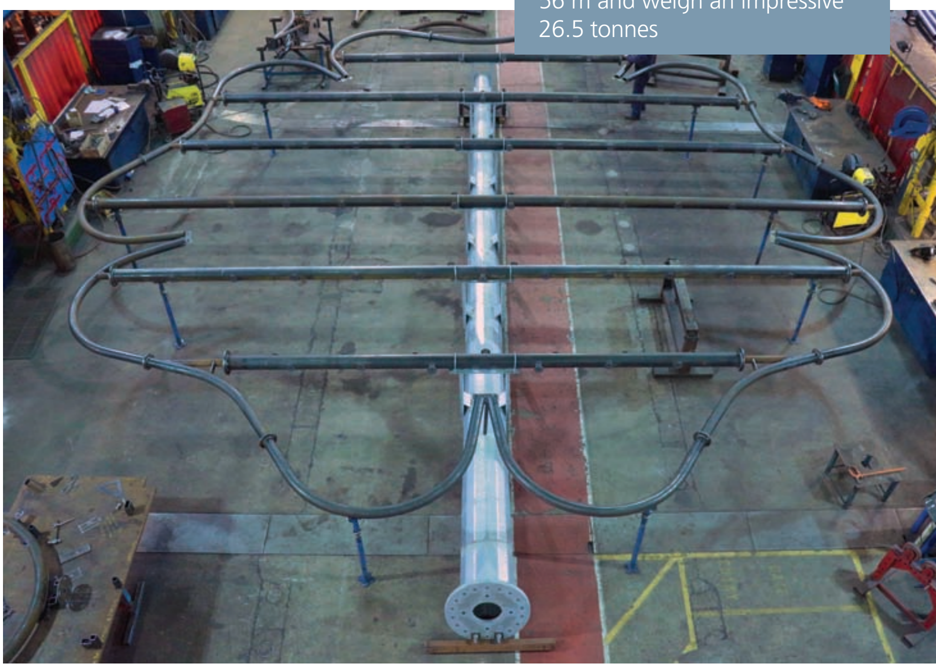
» Developed the dual-hinged mast to address issues where space for installations is limited

Lighting maintenance carried out safely at ground level using the Abacus raise and lower column

The outcome

Experiencing year-on-year growth both in the UK and internationally, with continued investment in our people our plant and machinery, excellent customer retention combined with new customer acquisitions, Abacus, a manufacturing company in a small town in the East Midlands, is flying in the face of media preconceptions, armed with the mantra Listen – Lead – Excel.

Bespoke headframe for Yorkshire CCC depicting the White Rose of Yorkshire. Holding 108 Challenger floodlights, when assembled the mast will reach a height of 56 m and weigh an impressive 26.5 tonnes



Thomas Dudley

Martin Dudley,
Joint Managing Director

The foundry team after scooping the Cast Metals Federation's Company Achievement Award 2014

ABOUT THOMAS DUDLEY

- » Founded in 1920 and still owned and managed by the Dudley family
- » A member of the Thomas Dudley Group of companies
- » Based in Dudley in the Black Country – passionate about manufacturing in the UK
- » The bathroom products division engineers time-, water- and money-saving solutions
- » The foundry division produces high-quality iron castings for customers in a diverse range of industry sectors
- » Turnover of £28 million – a 34% increase since 2010
- » 275 employees

Thomas Dudley has changed dramatically as a business in recent years. Three members of the board who had collectively served us for well over a century retired within a relatively short period of time and were replaced with a younger management team. In addition, the bathroom products division presided over an ageing product range and faced increased competition following the 2001 Water Regulation changes that opened the door for overseas manufacturers to market their products in the UK.

Our foundry division meanwhile was presented with equally demanding challenges. Loss making for a number of years, its plant was outdated and inefficient, and many high-volume casting users were increasingly turning to China, India and other emerging economies to support low-cost sourcing objectives.

Doing things differently

Five years ago, we sat down with the senior management team to devise a strategy for success. This strategy was built around three core components: investing in cutting-edge manufacturing technology, investing in the capabilities of our people, and offering a level of quality and service that set us apart in our chosen markets. Robust business plans were put in place with the target of increasing turnover to £50 million by 2020. In addition, business plans and key performance indicators were introduced for each department and each individual, and these are monitored and reviewed on a monthly basis.

The resulting investment programme has seen £14 million spent on revolutionising our engineering facilities since 2010. This gave us market-leading Disamatic moulding lines in the foundry, a new Advanced Centre for Engineering, new Battenfeld injection plastic moulding machines, and 3D printing and scanning capabilities. As a result, our equipment is now state of the art, and we have also developed a new visitor centre and quality suite.

Every director was enrolled with Vistage, the leading executive coaching group, to exchange ideas with like-minded organisations and ensure that we are able to continually adopt best practice methodologies.

We also put together our SPECIFIC TEAM initiative to reinforce core values of:

Safety first—Partnership—Ethical—Customer focused—Investing—Family—Innovative—Continuous improvement—Teamwork—Enjoyable—Achieve our goals—Market leading

To keep these values at the forefront of our thinking, they have been printed on graphics panels erected throughout the business and on the back of everyone's clock cards.

The bathroom products division was strengthened with the appointment of a new divisional director, a new design and development team, and new branding and product packaging. We also added eight people to our sales and marketing team and successfully opened up a number of new markets, including the DIY market and exporting to the Middle East, Far East and Europe.

The greatest changes, however, have taken place within our foundry, where we have invested in the development of a world-class manufacturing facility. In response to customer requirements for complete casting solutions, we are able to provide a true end-to-end, single-source service, from design and development to in-house patternmaking, core making, manufacturing, finishing, warehousing and distribution.

Unusually for a foundry, we have embraced the latest marketing techniques and have a strong online presence underpinned by strategic search-engine optimisation, pay-per-click advertising, e-mail and social marketing, and continual communication campaigns.

Impressive results

The turnaround in performance has been dramatic. Thomas Dudley has always been a profitable organisation and, despite the continued challenging economic conditions, we delivered record turnover and profitability during 2014. These figures have again been surpassed in our current financial year. In addition, the company was voted Black Country Chamber of Commerce

> "Unusually for a foundry, we have embraced the latest marketing techniques and have a strong online presence"

(Left) One of the plastic division's new Battenfeld injection moulding machines and (right) The foundry division's new Disamatic 131Z moulding line

Our new packaging and retail display

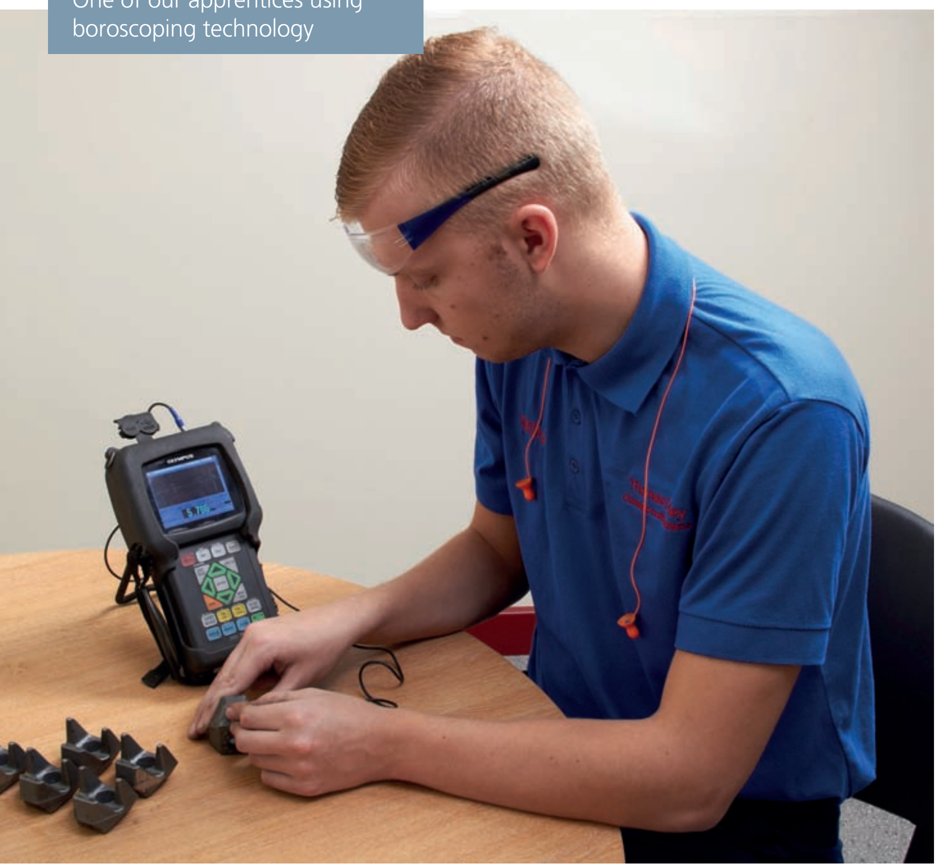
Business of the Year in 2013 and received the Cast Metals Federation's Company of the Year Award in 2014.

We have worked extremely hard to make sure that our workforce is highly motivated and engaged, and genuinely believe that providing a great workplace and a people-driven culture offers a significant competitive advantage. To support this commitment, we have introduced initiatives including flexible Friday finishes, open days for employees and their families, family cinema and theatre days and, most important of all, a profit-related bonus scheme. Furthermore, personalised uniforms have been provided free of charge to over 250 employees, and we have a fantastic company-wide team spirit.

The future

We embarked on a drive to upskill our people. Between August 2013 and July 2014, we provided 244 external and over 200 internal training days. Twelve senior managers also underwent a 12-month Managing for Success training programme. In addition, we have recruited eight apprentices and graduate trainees since 2012, and have worked in partnership with Dudley College and The Institute of Cast Metal Engineers to develop a new foundry apprenticeship scheme.

One of our apprentices using boroscoping technology



An interactive visitor centre has also been built within the foundry and, combined with our unique Careers in the Classroom programme, this will help educate local schoolchildren about the career opportunities available within the engineering sector. Furthermore, we are sponsoring the Black Country Living Museum's School Membership Scheme, which will allow around 1,200 youngsters to enjoy subsidised museum visits.

In December 2014 we bought the nearby BCC Foundry. This has provided us with the ability to manufacture grey iron, ductile iron and high-temperature castings up to 80 kg in weight. Our proven approach is already reaping rewards with the new foundry, and in the first 3 months of ownership we secured new contracts worth in excess of £500,000.

We are determined to remain a centre of excellence for British manufacturing, and look forward to offering existing and new customers innovative products and manufacturing solutions.

When my great grandfather founded the company in 1920, he set out to provide customers with high-quality products that were manufactured locally by a company committed to its workforce. In our 95th year these values remain as strong as ever. Although we have implemented widespread change, we are proud to remain a family owned and managed business, and a tenth of our people have been with us for 25 years or more. We aim to continue achieving exceptional results.

Essentra

Our world-class operation in Newport – the latest in digital printing and cleanroom technology

Colin Day, Chief Executive of Essentra plc

Since 2011, Milton Keynes-based Essentra plc has undergone a transformation: it has close to doubled its revenue and has increased its market capitalisation almost five-fold to approximately £2.5 billion. Over and above consistent delivery of its financial targets, a key platform of this success has been the company's rebranding, to create a unified group culture and single identity behind which to go to market and to invest.

Even as a business selling to other businesses – rather than direct to consumers – a strong visual identity and coherent message are critical success factors. Our rebranding to Essentra in 2013 was, therefore, an important milestone for the company, not only in terms of the delivery of our corporate strategy but also of underpinning our growth objectives. Importantly, for the first time, it has provided our employees with a common platform behind which the entire organisation can mobilise, and a vibrant, forward-looking and dynamic brand.

By the time we announced our intention to rebrand in June 2013 – some 8 years to the day after coming into existence as an independent plc – we had become a collection of 14 trading brands. These brands had very little physical linkage between them: we operated independently of each other; we were not coordinated in our communication to customers; and we had different signage, workwear and e-mail addresses. So, although we had started to work together more collaboratively across our businesses, the *status quo* was clearly still inefficient and was likely – at some point – to constrain our growth ambitions.

ABOUT ESSENTRA

- Spun out of Bunzl plc in 2005, as the independently listed company Filtrona plc
- A leading global manufacturer and distributor of high-volume, essential components and solutions
- Diverse product portfolio, serving customers in a wide variety of industries
- Global network extends to 33 countries
- 9,000 employees, 69 principal manufacturing facilities, 64 sales and distribution operations and 5 research and development centres
- Operates through four business units: Distribution, Health and Personal Care Packaging, Filter Products and Specialist Technologies

> “this shift in mindset from ‘I’ to ‘we’ is allowing us to leverage our existing sites in a more optimal way – and saving us money”

Commercial coherence: the ‘essential enablers’

At first glance, each of our businesses manufactures and distributes a diverse range of unconnected products, from plastic caps and plugs to folding cartons and blister foils. However, what unites us is that we are a leading supplier of essential components to our customers, which often play a critical enabling role in their own products. In fact, as an organisation we serve a number of common markets – including health and personal care, food and drink, light and heavy industry, transport and logistics, and point of sale – and can offer a variety of products and capabilities to help meet sector demands.

As ‘Essentra’, our combined reach and collective insight means we are now able to offer a group-wide portfolio of our best products, ideas and distribution in a single package to customers, and to address their specific needs – whether they have a global or local perspective. For example, in health and personal care, we are a leading provider not only of specialist packaging (such as patient leaflets, labels and authentication technologies) but also of fluid-handling components, including porous wipes for contamination control, polyurethane foam for wound care, and lateral flow and absorbent media for diagnostic testing. Our ability to provide an end-to-end service under a single, unified name – from design and prototyping to manufacturing and distribution – is thus increasingly allowing us to exploit cross-selling opportunities, which, as a collection of individual trading brands, were previously either unavailable or challenging to realise.

Operational excellence

Establishing a group culture has also driven a more holistic view of our manufacturing footprint, and is allowing us to realise our strategic objective of focusing on fewer, bigger and better sites. Although the manufacturing process for each of our products is different, in terms of the equipment and raw materials used, there is generally no reason why we cannot co-locate. Even sites that serve the pharmaceutical industry, and are subject to more stringent standards, can be sufficiently well segregated to accommodate other of our products.

First, this shift in mindset from ‘I’ to ‘we’ is allowing us to leverage our

Folding cartons and leaflets are just part of our range of innovative packaging solutions for the pharmaceutical, health and personal care sectors

existing sites in a more optimal way – and saving us money. In Germany, for example, our distribution business required additional warehousing and, by successfully freeing up space at our specialist technologies' facility in Reinbek, we saved €6 million of capital expenditure that would have been incurred in building a bespoke site.

Second, where we are investing in new facilities, we are now ensuring that these provide opportunities to consolidate our various activities under one roof and/or to become centres of excellence for the wider Essentra Group. Our £7 million recently constructed distribution centre at Kidlington not only allows us to deliver a wider choice of standard components next day, it also acts as a hub for servicing our UK and European network. Meanwhile, our new purpose-built manufacturing facility in Newport provides us with a 52,000 ft^2 site from which to meet the growing demands of both existing and new business across our targeted markets. This facility incorporates our latest investment in digital printing and cleanroom technology for the production of primary packaging foils for the healthcare market. As such, it enables us to service our customers even better from a world-class operation.

In 2014 alone, this consolidation and upgrading of our site footprint saw us add seven new manufacturing and distribution facilities, while closing 19 smaller, less efficient sites.

Outlook

Essentra's vision is one of building a leading global provider of essential components and solutions, and our objective remains the creation of sustainable long-term value for our shareholders. Balanced, profitable growth thus remains core to our agenda, and as we become larger we need to continue to evolve, to set ambitious objectives and to broaden our thinking to maximise the opportunities available to the company. As a business selling to other businesses, branding alone does not generate revenue, result in successful new product development or deliver manufacturing efficiencies. However, in our case, rebranding to Essentra has either catalysed or facilitated the necessary commercial, operational and organisational changes that will support the company in the next phase of its growth and the delivery of our objectives under our Drive for 2020 strategy.

Our new warehouse in Kidlington acts as a hub for Essentra's entire UK and European distribution network

Vale Europe

Vale Clydach is one of Europe's largest nickel refineries

ABOUT VALE

Vale is one of the leading mining companies in the world. It is the world's largest producer of iron ore and iron-ore pellets and nickel. Vale is one of the world's largest producers of manganese ore and ferroalloys. Vale also produces copper, thermal and coking coal, phosphates, potash, cobalt and platinum-group metals. The company is actively engaged in mineral exploration efforts in 24 countries around the globe.

In the heart of a small village in South Wales lies one of Europe's largest nickel refineries. Vale Clydach Refinery produces high-purity nickel pellet and powder products for specialist applications such as high-nickel alloys, batteries, nickel plating and automotive components. Our plant, which has been operating since 1902, employs just over 200 people and produces around 40,000 tonnes of nickel products a year. We supply more than 280 customers in over 30 countries spanning Europe, Asia and the USA, and are one of the biggest employers in the Swansea Valley.

Clydach Refinery has been working on continuous improvement (CI) activities through a formal strategic CI programme since 2009. Our programme has been focused around ensuring that the refinery, which has been in operation for more than 100 years, remains competitive enough to secure the future of our plant and people for the next 100 years. Our CI programme started internally, aiming to improve stability and control in our production process. This was key to ensure a predictable and reliable supply of products to our customers. As we have progressed on our CI journey we have brought our supply chain into the process. We are working with both suppliers and customers, such as the Royal Mint, to ensure that we are all winners from the changes we implement.

Initially, our approach to CI work was the implementation of tools such as 5S around the site. 5S is a fundamental approach for productivity, quality and safety improvement in all types of business. It ensures that the workplace has clear visual management – it is easy to see if there is a problem because everything has a place and everything is in its place.

» SHINGO MODEL OF OPERATIONAL EXCELLENCE

SHINGO PRIZE for EXCELLENCE in MANUFACTURING

The Shingo Institute recognises business excellence around the globe. The philosophy is that world-class performance for quality, cost and delivery can be achieved by the application of continuous improvement tools and techniques in core manufacturing and business processes.

Representatives from Clydach Refinery winning the Shingo Silver Medallion for Operational Excellence

We soon realised that tools alone do not generate CI, and we needed to articulate a clear strategic direction with CI at its heart. To succeed on this journey it was extremely important to engage the entire workforce along with the management team. This was achieved with a series of presentations to the workforce, which continue today every 6 months. We also trained up all our staff to understand what CI is about and equipped key leaders with training in business-improvement techniques – a recognised National Vocational Qualification (NVQ). Once this was done, we could work with teams all around the site, in both production and support, to establish which CI tools were relevant to each of their areas; while simultaneously starting to improve our business.

The process industry in which we work is not well known for its application of CI tools and techniques, which have tended to be more prevalent in automotive or production-line environments. Therefore, we could not simply take tools that have worked in other industries and apply them at our site – we needed to customise them to fit our needs. One of our key innovations was the development of 'yellow boards', which ensure that employees understand how they contribute to the success of the refinery. The boards include key performance indicators and action plans, and allow employees to provide feedback and recognise team success.

As we progressed along our CI journey, we realised that we were applying best practice, and our approach was very well aligned with the CI principles set out in the Shingo model of operational excellence. We completed our application to the Shingo team in July 2013, achieved a site visit from the Shingo examiner team in December 2013, and were delighted to be awarded a Shingo Silver Medallion for Operational Excellence in January 2014. This award provides independent validation that our refinery meets the highest international standards of operational excellence.

'The Shingo award recognises many years of continuous improvement work by everyone at the site focused on safety, quality, productivity and efficiency. This not only positions our refinery as a world-class benchmark, but provides a strong foundation for the long-term success of the Clydach Refinery.'

(Mike Cox, General Manager, Vale Europe Ltd)

> "This award provides independent validation that our refinery meets the highest international standards of operational excellence"

Vale employees are committed to continuous improvement

Organisational benefits achieved

Our CI programme has delivered huge benefits to the site and our local stakeholders, including:

- a 92% reduction in lost time due to injuries between 1999 and 2014
- our employees have implemented over 1,500 improvement suggestions since 2009
- our average monthly production increased from 2,770 to 3,532 tonnes per month – an annual increase of over 9,000 tonnes per year

Vale Clydach produces around 40,000 tonnes of nickel products a year

- an improvement in energy efficiency of 16% between 2008 and 2014, a reduction of approximately 7,200 tonnes of CO_2
- zero refinery waste went to landfill in 2014, with 82% of waste being reused or recycled
- a 75% reduction in refinery-attributable customer complaints between 2007 and 2014 through CI work (root-cause analysis, failure-mode effect analysis (FMEA), error proofing, employee quality awareness).

Being awarded a Shingo Silver Medallion was a great accolade for the plant, but CI at Clydach has always been about 'Improving every day to achieve excellence in all that we do'. We believe that we cannot stand still as a business; we must engage all our employees to help us improve our processes and practices and get better at what we do, in order to secure the long-term future of our business. The Shingo operational excellence model is a great driver for further improvement work, and we are busy working on the opportunities for improvement suggested by the Shingo examiner team.

Our future commitment is to work even harder to engage our employees and to involve them in the development of site strategy. Every employee, alongside the management team, has developed new behavioural standards for the site that will support our CI work. This is an exciting time here at Vale, as all our employees are committed to continuously improve the refinery. To ensure these behaviours are naturally embedded into our culture, we are equipping managers with the tools to coach and support their employees. This will help to promote internal customer–supplier relationships and improvement activities, as well as sustain our refinery as a great place to work.

McConnel

ROBOCUT – part of our range of remote-control machinery

Dr Geoff Davies OBE DL FIAgrE, CEO and Managing Director, Alamo Group Europe

McConnel is the world's leading supplier of reach-arm hedgecutters and verge mowers that use power arm technology – the attachments you see on the back of modern tractors. It is a business that exports award-winning green maintenance machinery to more than 40 countries.

The company has annual sales of more than £30 million a year and is a UK manufacturing success story. From a 7-acre production site in Ludlow, South Shropshire, the company designs, builds and tests a comprehensive range of reach arms, mowers and cultivators. It precision engineers most of its components on site and has achieved the UK's ISO 9001:2008 hallmark of quality management.

McConnel is one of South Shropshire's largest employers, with a workforce of more than 160 people, and is committed to supporting their skill, expertise and dedication. It invests heavily in training and development, and supports the engineers of the future with sponsorships, awards and work placements, as well as offering a range of apprenticeships to new recruits. Involvement and investment in people is one of the keys to the company's success, and reflects its culture as a business closely integrated in the community.

Against the tide …

As a manufacturing company and as a business within the agricultural sector, the company's achievements are particularly notable. McConnel has continued to grow its sales and profits for more than 20 years, despite major challenges such as foot and mouth, 'mad cow' disease and fluctuations in the economic climate affecting both the agricultural and manufacturing industries.

ABOUT McCONNEL

- » The world's leading supplier of hedge-cutting and verge-mowing technology
- » Creator of the world's first tractor-mounted hedge-cutter
- » Successfully exporting to more than 40 countries
- » Export partners in more than 30 countries
- » Winner of 33 major national and international awards, including the Queen's Award for Enterprise
- » Multi-million pound investment in production facilities, state-of-the-art machinery and training
- » ISO 9001:2008 accreditation – the British hallmark for quality management

» ALAMO GROUP (EUROPE) LTD

With McConnel as the initial flagship, the UK companies in the portfolio include Bomford Turner Ltd, Twose of Tiverton Ltd, Spearhead Machinery Ltd and Kellands Agricultural Ltd. The common theme of all acquisitions is a great brand and a business model requiring complete overhaul so that production systems, workforce morale and skills, and productivity could all be steadily strengthened.

“the marketing arm of the company is staffed with professionals who have a solid understanding of engineering and manufacturing practices and principles”

In fact, McConnel has been the ‘home of hedge-cutting’ in Ludlow for more than 80 years. In 1991, the company became the first acquisition of Alamo Group (Europe) Ltd, which quickly set about improving its fortunes. Alamo Group (Europe) Ltd steadily progressed, taking over a number of long-established agricultural manufacturing firms in the UK and across the Channel. Led by Geoffrey Davies, all these companies and others acquired on the other side of the Channel have since been revitalised. Broadly similar business principles are used to achieve success.

But with the flow …

A key ingredient in McConnel’s progress in recent years has been its commitment to innovation and quality; it often introduces new products and refinements for the markets it serves. The company has developed state-of-the-art products that have set new standards in the market and helped it win a series of accolades, including the Queen’s Award for Innovation.

Examples of this include McConnel’s award-winning Easy Drive System (EDS) and Twincut, the world’s first dual rotor flail head. In the past 2 years, McConnel has also introduced a range of innovative remote-control mowers that offer exceptional all-terrain capabilities. These are robust machines with a low centre of gravity which operate in a 150-m working range. They can tackle slopes up to 55°, and have enhanced safety and productivity by making it possible to cut and mulch densely overgrown areas that were previously hard to reach and difficult to work, even by carefully equipped individuals.

Another factor in its success is that McConnel sets out to design products which meet practical, individual requirements. Customers are offered exceptional choice, and the company manufactures 12 distinct series of power arms as well as bespoke machines with unique specifications; and there are thousands of different build options.

The PA8085T – the flagship of McConnel’s Power Arm range

Direct to customer needs

This approach reflects a company which, in keeping with Alamo principles, is distinctively market led. The marketers work closely with the company’s design engineers, paying heed to the actual technical and practical requirements of customers in all its markets. To achieve this, the marketing arm of the company is staffed with professionals who have a solid understanding of engineering and manufacturing practices and principles. Their remit is not, as might be the case in traditional manufacturing, simply to promote and sell the products made by the company. They engage closely with the very people who use the machinery and prepare outline specifications for refinements in technology, which they feed into the production process. This system enables a close handshake between customer needs and manufacturer's output.

To develop future talent for this special work, McConnel, as part of the Alamo Group, sponsors graduates studying specifically designed degrees in marketing and engineering.

Sticking to strategy

Another factor in the company's success is its strict adherence to a business plan that is prepared at the end of each year with the full participation of each department. This becomes the bible and benchmark, indicating targets for productivity, the launch of new products, additions to equipment and staff, and other planned activities affecting progress. Each month the management team checks progress against the targets and milestones, and is quick to address production shortfalls or other problems. This disciplined approach focuses both the management and workforce on growth and engages everyone in the company's objectives.

Underpinning this is the direct engagement of the workforce in meeting their production targets and their involvement in suggesting improvements and changes that they may feel are required. The result is a highly motivated workforce that works closely together to achieve their manufacturing quotas.

This recipe has enabled McConnel to thrive in tough economic conditions. It consistently produces machines that deliver the best in durability, efficiency and productivity so that customers can reduce their costs and enjoy superior performance.

The SEEDAERATOR – McConnel's newest, most exciting venture

The future?

Of course, McConnel owes most of its success to its workforce, many of whom live locally, sometimes with successive generations of a family joining the team.

To ensure progress, Alamo has recently invested £5 million in a new production facility in Salford Priors, Worcestershire, which will boost productivity and enable the company to develop new products, providing the much-needed space to manufacture larger products, some of which are up to 18 m wide.

McConnel's plans for growth concentrate on an already thriving export operation, where the company has forged strong partnerships with a network of international dealers. McConnel provides each partner with wide-ranging sales, service, parts and marketing support, and also with eye-catching brochures and multimedia web services, including a full online photo and video library to demonstrate products.

The company is represented at some of the world's largest trade shows, showcasing its machines at prestigious international events such as SIMA and Agritechnica.

Dr Geoff Davies OBE DL has overseen the progress of McConnel and many other agricultural engineering companies since Alamo Group Europe Ltd, under his leadership, took over the company in 1991. Dr Davies is also a Fellow of the Institution of Agricultural Engineers and has been awarded the Queen's Award for Enterprise, a life-time honour. He has two doctorates and two honorary doctorates from British Universities.

Nice-Pak International

Nice-Pak headquarters in Flint, North Wales

Product innovation drives growth in the wet wipes market

ABOUT NICE-PAK INTERNATIONAL

» A pioneer in the wet-wipe category
» Parent company established in New York in 1957
» First UK factory built in 1992
» Now 31 production lines across three European sites (two in the UK)
» 900+ employees
» £210 million turnover

When Nice-Pak International opened its factory in Flint, North Wales, back in 1992 it operated a single production line and employed fewer than 20 staff. Twenty-three years later, the company is Europe's largest manufacturer of wet wipes, employing more than 900 staff across three European sites, two of which are in the UK. Meanwhile, some 80 billion wet wipes are now used annually in Western Europe alone.

Growth market

The UK is the world's largest per capita market for wet wipes. Nice-Pak's influence in this is by no means insignificant. At a very early stage the company identified the perfect coming together of factors all pointing to rapid market development. Specifically, these included the demographic influence of large and increasing numbers of working women living busy lifestyles and having levels of disposable income allowing them to purchase convenience products. In addition, the willingness of major grocery and pharmacy retailers to devote ever-increasing amounts of shelf space to wet-wipe categories and to use these as 'footfall drivers' on the back of sophisticated promotional techniques also played a major part. Third, the opportunity to innovate by creatively combining raw materials, liquids and packaging was quickly identified as a major attraction for brand owners in a number of different product categories.

Within a very short time, Nice-Pak had developed an enviable list of major branded and own-label trade customers in its core markets of baby wipes, facial cleansing wipes, household cleaning wipes and moist toilet tissue. Moreover, it has successfully pursued a strategy of differentiating itself from an ever-growing list of competitors through a proposition encompassing market and consumer insight, highly innovative product development, seamless customer service and consistently high quality standards.

Challenges include generating the returns to fund the investments necessary to maintain free capacity in a fast-growing market, as well as juggling the need to keep overheads low while still successfully differentiating itself from a growing number of international competitors. In addition, the fierce rivalry between many of Nice-Pak's own-trade customers requires a diligent and stringent approach to customer confidentiality.

Then there is the question of the North Wales location of the company's headquarters and the problem of recruiting people with the necessary skills. For example, Nice-Pak is a major exporter of products to more than 45 countries. In order to support this export drive, the company has been at pains to recruit staff with relevant foreign language skills. However, over the years it has become increasingly difficult to find these skills among UK school leavers, with the result that the focus has shifted to the recruitment of foreign nationals willing to work in the UK.

Similarly, there have been significant problems with the basic communication infrastructure in the region, especially the roll-out of high-speed broadband, which has significantly hindered Nice-Pak's adoption of wireless systems and state-of-the-art communication platforms.

However, perhaps the biggest challenge facing the company is one that is common to the whole retail sector. In the post-recession era, consumer shopping habits are changing so rapidly and fundamentally that the whole market is being disrupted. As consumers move away from weekly 'big shops' towards more numerous and fragmented smaller purchases across a wider range of retailers, which include hard discounters, many of Nice-Pak's longest-standing customers find themselves in the squeezed middle ground between the likes of Aldi and Lidl at one end and Waitrose at the other. The result is a greater need than ever before for differentiation through innovation and cost efficiency.

Expansion

Nice-Pak's way of responding to this challenge is emphatic. In November 2014 the company announced plans to build a huge new 400,000 ft² factory in Wigan, Greater Manchester, replacing the much smaller facility it already has in the town. The company's aim is not only to fill the factory with the latest state-of-the-art manufacturing equipment, it is also to bring to bear all aspects of the cumulative

“Nice-Pak's way of responding to this challenge is emphatic. In November 2014 the company announced plans to build a huge new 400,000 ft² factory in Wigan, Greater Manchester”

High-speed baby wipe line

Liquids mixing area

learning developed over its 23 years of experience in wet wipe manufacturing.

With first production scheduled for mid-2016, the new factory will be the largest building in the Wigan borough. If all goes to plan, the company foresees a need, in due course, to increase headcount. However, the immediate priority is to manage an ambitious development schedule and ensure the successful migration of all current staff and equipment to the new unit.

Aerial view of site for the new Wigan factory

Innovation focus

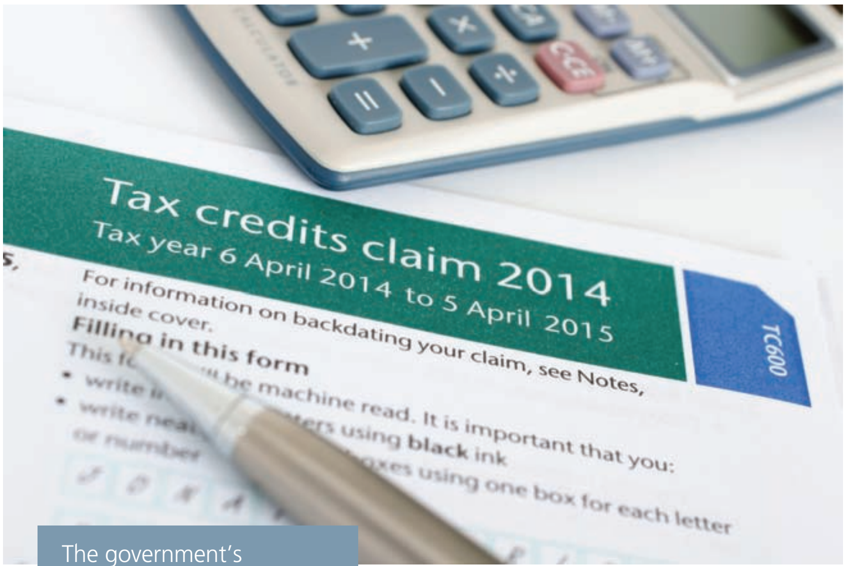
In parallel to this, Nice-Pak is also reviewing its approach to both product and process innovation by opening out these processes to all functions within the business as well as exploring links with universities and academic institutions. Of particular interest within this programme of work are opportunities driven by major demographical shifts, including wet wipe applications for incontinence markets, which are expected to surge due to the rapidly ageing population.

Meanwhile, as the domestic market matures, Nice-Pak recognises the need for the continued development of its sales outside the UK, both in Europe and beyond, and is already engaged in a number of projects to tap into these.

While Nice-Pak has a proud record and reputation for the quality of the 650 million packs it produces every year, the company has successfully reinforced its quality credentials with a number of recognised ISO and British Retail Consortium accreditations, as well as gaining certification against relevant environmental and ethical standards. In addition, in 2014 Nice-Pak became the first company in Wales to achieve the status of Top Employer from the Top Employers Institute, a reflection of the company’s commitment to nurturing talent within the organisation.

The fast-moving consumer goods market in which Nice-Pak operates is both volatile and challenging. However, the company has put in place a robust plan which it is confident will see it emerge from this period of turbulence with its market leadership intact.

Labour MPs rebel over welfare



The government's post election Welfare Reform and Work Bill caused dispute within the Labour party

The package of welfare measures and minimum wage increases at the heart of George Osborne's budget created havoc on the Labour benches. For many Labour strategists, the perception that their party was soft on welfare was an important factor in their election defeat. But faced with the sweeping cuts proposed by the Chancellor, Labour MPs were unable to unite around their acting leader, Harriet Harman, who wanted to abstain on the second reading of the government's Welfare Reform and Work Bill. This lowered the cap on how much a household can receive in benefits and limited child tax credits to two children per family – although it would only begin to apply to children born after March 2017.

The former social security minister, Helen Goodman, led the internal dissent with a 'reasoned amendment' to kill the Bill, which attracted the signatures of 60 Labour MPs. That forced Harriet Harman to propose her own amendment setting out which cuts Labour supported, but also seeking to stop the Bill.

In the ensuing Commons debate, the work and pensions secretary Iain Duncan Smith said his Bill would target the 'five key pathways to poverty that affect children's life chances: worklessness, educational attainment, drug and alcohol addiction, family breakdown and problem debt. The Bill will remove the existing measures and targets in the Child Poverty Act 2010 and introduce a new duty to report on worklessness and educational attainment … Our new approach will drive real action, which will make the biggest difference to the most disadvantaged children now and in future.' He visibly enjoyed the discomfort of Labour MPs.

For Labour, shadow work and pensions minister Stephen Timms supported some sections of the Bill but criticised the government for – as he saw it – dropping the ambition to reduce child poverty: 'Instead of eliminating the scandal of child poverty, the Bill attempts to eliminate the term.'

The other parties in the Commons opposed the Bill outright. The SNP's Hannah Bardell said it would push children and families deeper into poverty, and the Lib Dem Tim Farron, making his Commons debut as party leader, said the government did not have to take £12 billion from the poorest families in the country, but chose to do so.

Another important voice was that of the Labour chair of the Work and Pensions Select Committee, Frank Field. He said Labour should defend the three million 'strivers' who depended on in-work benefits. They were 'walloped', he said, with many becoming £1,000 a year or more worse off.

But there was strong support from the Conservative side, where influential backbencher David Burrowes was jeered when he claimed membership of 'the workers and one nation party.' He said the Bill could also be described as the 'catch you when you fall Bill' or the 'lift you when you can rise Bill'.

Helen Goodman, whose rebel amendment had caused such difficulty for Harriet Harman, said the government had no mandate for the Bill: 'Throughout the election the Tories refused to say how they were going to save £12 billion from the welfare bill, because they knew that the measures would be unpopular and it would hit them in the ballot box.'

Another Labour MP, John McDonnell, was more graphic: 'I would swim through vomit to vote against the Bill … We hear lots about how high the welfare bill is, but let us understand why that is the case. The housing benefit bill is so high because for generations we have failed to build council houses, we have failed to control rents and we have done nothing about the 300,000 properties that stand empty in this country. Tax credits are so high because pay is so low. The reason why pay is so low is that employers have exploited workers and we have removed the trade union rights that enabled people to be protected at work.'

A split of 48 MPs caused Labour's amendment to the welfare bill to lose by 208 to 308 votes

By signalling a major change in welfare policy, the Bill had exposed a serious rift in Labour's ranks. In the end, 48 Labour MPs voted against it.

English votes for English laws

The Scottish independence referendum was a near-death experience for the 300-year-old union of England and Scotland – and after a poll showing the 'yes' side was in the lead, the main party leaders had issued 'the vow', a promise of extensive further devolution. But on the morning after the referendum result, David Cameron had also promised to address the English question – the growing resentment at an asymmetric constitutional settlement that allows Scottish MPs to vote on English issues but does not allow the reverse.

The ramifications of this issue, and the prospect of a minority Labour

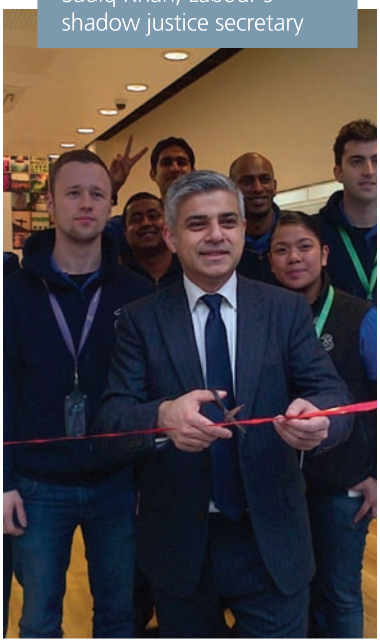
Scotland voted to stay in the UK after voters rejected independence government sustained by the votes of SNP MPs, became one of the dominant themes of the 2015 general election. And the issue was previewed when the Commons debated a government document – a command paper – setting out the options for EVEL, or 'English votes for English laws'.

The options included a total bar on Scottish MPs voting on English and Welsh legislation, allowing English MPs a greater say during the early stages of consideration, and giving English MPs an effective veto at the committee stage of a Bill, and an English Grand Committee of the Commons, again with a veto over England-only legislation.

To the regret of the leader of the Commons William Hague, Labour had not engaged in the debate. 'It is an issue that too many people have avoided for too long and it can no longer be put aside,' he said.

Labour's shadow justice secretary Sadiq Khan warned against hasty action: 'what we must not do, only months after the Scottish people voted to keep our kingdom united, is allow the division of our country by the back door. Nothing we do should jeopardise the future of the Union … uniting our country is more important than uniting the Tory party.' That was a swipe at David Cameron, who faced criticism within his party for making too many concessions to Scottish demands –it had become increasingly clear that many of his troops would not support the promised further devolution for Scotland without action on the English question.

One of the key advocates of EVEL was the former cabinet minister John Redwood, who argued that major constitutional legislation was not needed, and that it could be brought in via a simple change to the standing orders of the House of Commons, on a single vote. He challenged Mr Hague: 'England expects English votes for English issues. We expect simplicity and justice now, no ifs, no buts, no committee limitations, no tricks. Give us what we want … Will he now join me in speaking for England?'


Sadiq Khan, Labour's shadow justice secretary

The Conservative 2015 manifesto included a detailed scheme for those standing order changes, to allow an effective English veto on legislation – and those proposals were confirmed in July. But when the former Scottish secretary Alistair Carmichael, a Liberal Democrat, employed a rarely used procedural device to secure an emergency debate on the proposals on 7 July, it became clear that a number of key Conservative backbenchers were deeply troubled by the implications for the future of the UK.

Mr Carmichael said the proposal was one no Unionist should advance: 'It is perfectly understandable for people in England to identify a national interest in response to the mood of Scottish nationalism forming north of the border, but the answer is not to meet it with more nationalism. The answer is, I suggest a proper federal structure.' He was interrupted by the Conservative Andrew Bridgen, who accused him of 'wanting to have his porridge and eat it'. Mr Carmichael insisted he understood that there was a problem: he simply didn't believe that the answer was 'trashing the Union and the United Kingdom parliament'.

The new leader of the Commons, Chris Grayling, insisted the central issue remained one of fairness: 'If members of the Scottish parliament are in future to decide a Scottish rate of income tax … is it actually unfair that English members of parliament, or English and Welsh MPs, or English, Welsh and Northern Ireland MPs have the decisive say over tax rates that affect their constituencies?'

But perhaps the most influential contribution came from the Conservative ex-minister Sir Edward Leigh, who crystallised the anxieties of some of his colleagues. He said votes on many ostensibly English issues had knock-on financial consequences for Scotland (known as 'Barnett consequentials' in parliamentary jargon). So, he warned, preventing Scottish MPs from voting on those issues would hand the Scottish nationalists a grievance they would exploit: 'Of course the SNP wants independence [cheers from the SNP benches] but why are we making it easier for them? …Why are we giving this gift to the SNP?'

For the SNP, Pete Wishart drew a lesson from history: 'What we are doing is quite extraordinary. We have not done anything like this for centuries. It is of historical significance because it is of such constitutional importance … Back in the days of Gladstone, this was being done in order to curtail the voting rights of Irish MPs, and history is able to judge how successful that was in maintaining the Union.' A point that attracted the support of the Democratic Unionist Ian Paisley, who warned: 'no-one can predict the crisis that could engulf Scotland, England, Wales and Northern Ireland as a result of what is happening here'. This was a crucial intervention because it made clear that the government could not rely on the DUP to bolster its slim Commons majority.

Sir Edward Leigh warned that Scotland must be handed 'home rule' to stop a 'toxic mixture' of circumstances destroying the union

Faced with evidence that a small but influential band of its own MPs would not support its proposals, the government retreated and promised a consultative debate, after which a refined version of the standing order changes will be voted on in the autumn.

Bercow ambush

It was a cunning plan, a last minute ambush, intended to make Speaker Bercow more vulnerable to removal at the start of the 2015 Parliament. It backfired badly.

The final pre-election week of any parliament is usually devoted to legislative loose ends, resolving detailed disagreements between the Commons and the Lords about Bills still in the legislative sausage machine. This often involves motions being tabled and debates being scheduled at short notice – and so few eyebrows were raised when ministers pushed through a procedural motion allowing them to put new business before MPs, at short notice.

But in the early evening of the penultimate day of the parliament, the leader of the Commons, William Hague, visited the Speaker's office to inform John Bercow that the government intended to use those powers to debate changing the way that the Speaker was re-elected at the start of a new parliament. The current procedure is for MPs to shout 'aye' or 'no' to the motion that the incumbent Speaker resume the chair. Only if there is significant dissent is an actual division held, and in those

William Hague wanted a secret ballot to decide the Speaker's future after the election

circumstances the way each MP votes is a matter of record.

That, of course, is a significant deterrent to voting against a Speaker – MPs who support an attempt at removal, and fail, could face retaliation – not being called to speak, or only being called very late, for example. So, there was a democratic case for changing the rules – but this manoeuvre smacked of a coup against a Speaker who had been a thorn in ministerial sides, and who had made plenty of enemies on the Tory benches with his withering put-downs. More than that, Bercow's procedural rulings had frequently displeased ministers – and might present them with even greater problems in the event of a hung parliament.

Conservative MPs had been kept in Westminster for a party briefing. However, many Labour MPs had already left to start campaigning: if the rule change was to be blocked, they had to get back. So, to buy time, the Speaker allowed three urgent questions, using up a couple of hours before the house reached the government motion.

By that time, the Labour benches had filled up. William Hague was given a rough ride as he argued that the rule change was overdue, and that the government had simply seen a good moment to give MPs a chance to debate it. He was supported by Conservative MPs like Michael Fabricant – a strong critic of the Speaker, who invited him to 'pay tribute to Mr Speaker who, on 20 July 2000 and again on 23 April 2009, advocated the need for secret ballots to stop government whips "browbeating" MPs as to the way they might vote'.

But Mr Hague must have been wounded by the furious response from his Labour shadow, Angela Eagle, who said the leader of the House was supposed to defend MPs' rights: 'I am sorry to say that by supporting this grubby little plot against the Speaker on his last day as a parliamentarian, the leader of the House has failed in his duty.' Other MPs used phrases like 'stitch up' and 'grubby schoolboy intriguing'.

As a noisy, angry hour of debate continued, the killer blow came from a Conservative, Charles Walker, an ally of the Speaker and member of the powerful executive of the 1922 Committee, which represents Tory backbenchers. Crucially, he also chaired the Commons Procedure Committee. The anger felt across the chamber seemed to take form around him as he complained that he was not consulted about a debate on one of his committee's proposals – and he recounted how he'd attended end-of-term parties and farewell drinks where there had been plenty of opportunity to tell him what was planned.

His peroration – delivered with considerable emotion – was devastating: 'I have been played as a fool. When I go home tonight, I will look in the mirror and see an honourable fool looking back at me. I would much rather be an honourable fool, in this and any other matter, than a clever man.' For the only time in a difficult debate, William Hague's composure cracked. Many Conservative MPs were tearful. Labour MPs delivered an unprecedented standing ovation. In that moment the motion was clearly lost – and Charles Walker became the likely successor to Mr Bercow.

And the sequel, when the Commons met, after the May 2015 General Election, was that the new Conservative government did not orchestrate a challenge to the Speaker. Mr Bercow was re-elected with no opposition at all.

Assisted Dying Bill

Attempts to change the law to allow terminally ill people to end their lives have cropped up regularly in the House of Lords in recent years – but the latest, the Assisted Dying Bill, proposed by a Labour peer and former Lord Chancellor, Lord Falconer, has proved the most serious yet. Private members' Bills in the Lords seldom have much realistic prospect of becoming law, but this one produced a series of passionate and emotional debates.

Some of the most striking speeches came during detailed debate – when the crossbench or independent peer Lady O'Neill tried to change its title to the Assisted *Suicide* Bill. She said it was about aiding and abetting suicide, and just as truth in advertising was essential, so was truth in legislation. She was supported by the Labour peer Lord Brennan – who said the language had to be brutally clear, and the clearer the law the better the decisions people would make.

A powerful riposte came from the Labour peer Lord Cashman, who described how his partner of 31 years had died of cancer. His voice shaking with emotion, he said the circumstances of his loss shed some light on the question – in his distress he had wanted to commit suicide; his terminally ill partner had needed to have his death accelerated. That was an important distinction.

The crossbencher Lord Pannick, an eminent human rights lawyer, said the idea that the public would not understand the Bill's terminology was simply fanciful. But the Labour peer and doctor Lord Winston disagreed – elderly, confused, angry, distressed and perhaps even deranged patients who arrived in hospital needed as much clarity as possible, he said.

Rule changes that would give terminally ill patients the right to die was rejected by the House of Commons

Lord Deben, the former Conservative cabinet minister John Gummer, said the Bill's terminology should be stark, not soft – and the hearer needed to hear the word 'suicide', not 'assisted dying'. But Lord Low, vice president of the Royal National Institute of the Blind, suggested the real aim of the amendment was to give assisted dying the same stigma as suicide. He thought the latter word was inappropriate to describe the rational choice of a mentally competent, terminally ill person seeking a dignified, peaceful death.

The Conservative veteran Lord Tebbit produced a copy of the *Oxford English Dictionary* and quoted the definition

Baroness Campbell of Surbiton

it gave: '"Suicide, the act of taking one's own life – self murder". Can we settle the matter now?' Another Conservative, Lord Dobbs, retorted that to end one's life in a process involving doctors, nurses and a judge was not killing oneself.

The most powerful attack came from the disability campaigner Lady Campbell of Surbiton – who has spinal muscular atrophy. Speaking from her wheelchair, she said that like many people with disabilities she had experienced long periods of depression, 'but then things could get better. When you, and if you, get through that period … If in my case a new ventilation system is developed, you get better again. Maybe you have a week, or a month, or as in my case another 2 years. But during that weary low time when everyone is expecting that this is the time that you are going to die, you could easily take advantage of an assisted dying exit.'

The House listened in utter silence as she said she'd taken important decisions in those low periods. She had not taken a pension because she had always expected to die – and her request that peers remember that when she asked for a free lunch produced a muted, rueful gulp, rather than a giggle from peers.

But the House voted to reject both the attempt to change the title of the Bill and another amendment for more restrictive rules on assisted dying. And both votes underlined the strong support it has now built up in the Lords. In the end, the Bill ran out of debating time, but its supporters believe the extensive debate, and changes, including the addition of judicial oversight to the process, have produced a well-honed proposal that can be laid before the new parliament, for another attempt to write it into the statute book.

The first Euro-rebellion of the 2015 parliament

The sequel to the 10 November 2014 row over the European Arrest Warrant was played out when the Commons came to debate the detail of the new Conservative government's European Union Referendum Bill – when it became clear that many Eurosceptic Conservative backbenchers harboured deep suspicions of their own leadership.

The Bill would have allowed a vote on British membership to be held in parallel with the May 2016 elections – which will include the elections for the Scottish parliament and for the mayor and borough councils of London. And it also included a relaxation of the normal 'purdah' rules, which restrict government activity that might influence the result in the run-up to an election or referendum.

Both of these could be – and were – seen as an attempt to bias the referendum in favour of the pro-EU side: London and Scotland were seen as pro-EU areas, where extra turn-out driven by their elections could produce additional votes for the 'yes' vote, and the relaxation of purdah would have allowed, Eurosceptics feared, the whole weight of the government machine to be thrown behind the 'yes' campaign.

Before the committee stage debate began, the government had announced the referendum would not be held alongside the Scottish and London elections – which left purdah as the main bone of contention. The Europe minister David Lidington wrote to MPs, arguing that the purdah rules could inhibit ministers in carrying out the day-to-day business.

But as the debate began, the former SNP leader Alex Salmond, newly returned to Westminster and now his party's foreign affairs spokesman, predicted a re-run of the events that he believed had swung the 2014 Scottish referendum against independence. 'Let us just assume that, to try to get the "yes" result that the Prime Minister wishes, he needed a last-minute initiative. With no rules or restrictions saying that new political initiatives should not be made at governmental level during the last 28 days of the campaign, what would stop the Prime Minister doing a tour of the capitals of each of the governments across Europe – suspending Question Time in the national parliament – and stop their flying as one to London to announce a new commitment, a new undertaking, a new pledge, a new vow?'

The Conservative and former defence secretary Liam Fox said it was 'unseemly at best' for the government to exempt itself from the normal pre-election restrictions – underlining that it was essential that the

The European Union Referendum Bill caused unease within the Conservative party

referendum process was seen as fair. He noted that he had never, in 23 years in parliament, defied his party whip, and he urged the government not to force him to do so on this Bill.

In response, Mr Lidington said the government would exercise 'restraint' during the referendum campaign, and he promised to bring forward new amendments at the next stage of consideration of the Bill – the report stage – in September. Crucially, this was enough to ensure that Labour would not back rebel Conservatives, allowing them to defeat the government.

But a rebel amendment from the veteran Eurosceptic Sir Bill Cash was pushed to a vote – and, although it attracted only 27 Conservatives, no one missed the significance of the moment. The Conservative Eurosceptics had demonstrated that they had the numbers and the will to defeat the government – if the other main opposition parties lined up alongside them. So, the government avoided embarrassment only because Labour did not take sides against it. With a new Labour leader due to be elected in the autumn, ministers cannot rely on similar support in future.

Danny Alexander's last stand

Danny Alexander's 'Yellow Budget' was poorly received

Until 7 May, Danny Alexander was one of the four most powerful members of the coalition government. As the Lib Dem's man in the Treasury, he sat on the Quad – the key committee coordinating coalition business, alongside David Cameron, George Osborne and Nick Clegg. As the number two minister in the Treasury he was a co-author of the final coalition budget, delivered on 18 March by Chancellor George Osborne. And the following day, with an election looming, and pressure to put clear yellow water between the Lib Dems and the Conservatives, it fell to him to deliver a Commons statement entitled 'Fiscal responsibility and fairness', which was billed as his party's alternative budget. The attempt was not a success.

Even before Mr Alexander began, the Speaker, John Bercow, intervened, to make clear that any ministerial statement had to be made on behalf of the whole government, not just one component of it. He said it would be unfair to the House for a minister to use his privilege for party purposes, and would put the chair in an awkward position.

The chief secretary did attempt to unveil an alternative economic vision to that of his coalition partners: 'Today I set out a better economic plan for Britain … based on values of fairness as well as strength … [that] enables our country to see light at the end of the tunnel. It is not a rollercoaster ride, but a steady path back to prosperity. It sticks to the path we have chosen in this government, rather than lurching away from it by cutting too much or borrowing too much.' Essentially, he unveiled the middle-way campaign theme his party then used throughout the general election, but as a piece of parliamentary theatre the speech was a failure.

Mr Alexander was never a great parliamentary orator, and was heckled mercilessly by Labour MPs. At one point, the Labour front-bencher Andrew Gwynn threw a copy of the coalition budget book onto the table in front of the chief secretary. He cut a lonely figure at the Dispatch Box. Only a handful of Lib Dem MPs had turned out, and there were catcalls, jeers and shouts of 'bye' from Labour when his leader, Nick Clegg, left the chamber while Mr Alexander took questions.

Labour's Treasury spokesman Chris Leslie was withering: 'doesn't he realise how two-faced he looks'. He complained that the statement was an abuse of the procedures of the Commons.

There was no official Conservative response – but the backbencher Adam Afriyie pulled no punches: 'I have to say that I am stunned by this statement … This is the Westminster bubble at its absolute worst, and it represents everything that is wrong with politics today. The Liberal Democrats have betrayed their voters, and their voters know it; their own candidates are now pretending to be independents; and today's display is an absolute betrayal of the role they have played in government.'

A bruised Mr Alexander staggered to the end of his statement. Whatever the virtues of the policies he announced, they did his party little good. Seven weeks later he was out of parliament, a casualty of the SNP landslide in Scotland, and his party was reduced to a rump of just eight MPs.

A Queen's Speech for working people from a One Nation Government

It was a tale of the unexpected; after an election campaign dominated by speculation over the possibility of a hung parliament, David Cameron's Conservatives were now in government in their own right, with a modest but definite majority.

Their Queen's Speech was the first purely Conservative programme for government since the distant days of John Major. Conservative MPs – whose number included plenty of new faces – were jubilant. Labour, which almost till the last had expected to be in government, not opposition, was in crisis. The Liberal Democrats were reduced to a remnant, and the SNP had taken over as the third party in the Commons, forming a confident, sometimes noisy phalanx in a corner of the chamber, where a lively border dispute with Labour MPs became one of the running themes of the early weeks of the new parliament.

One sign of the change was the appearance of Labour's Harriet Harman to speak for her party. Five years before, she had been acting leader after the departure of Gordon Brown; now she was filling in again, following the resignation of Ed Miliband.

Recalling David Cameron's admission that he would not seek a third term as Prime Minister, she remarked that they were both interim leaders – and she promised the Conservatives that, with such a slender majority, they would not have everything their way. But there were ironic cheers from the government side as she confirmed that Labour had dropped its opposition to a referendum on the UK's membership of the EU: 'We believe that it will be better for Britain if we stay in the European Union. It is important for the future of this country, which is why 16- and 17-year-olds should have the right to vote in the referendum – it is their future, too.'

The Queen outlined the one-nation programme of the first majority Conservative government in two decades

She warned that the economy, the constitution and public services remained in a fragile state and that the benefits of returning economic growth were not being shared. 'Britain cannot succeed with low-skilled, low-wage, insecure employment and a race to the bottom. The path to economic prosperity and recovery must involve a high-skilled, long-term approach.' She added that Labour was sympathetic to another key government policy, the idea of a new cap on annual household benefit payments.

On the constitution, she said any change to 'English votes for English laws' should be built on the 'broadest possible consensus'. And she took a swipe at the SNP MPs, who all but wiped out Labour in their former Scottish heartland: 'Of course the Scottish National party wants to break up the Union – it wants people to have to choose between being Scottish and being British – but it would be utterly irresponsible for the Prime Minister to continue what he did so shamefully in the general election, which was to set the English against the Scots … Let

The Prime Minister did not fail to notice the attendance of former SNP leader Alex Salmond in the Commons

us be in no doubt: the worst possible outcome for Scotland would be the SNP demanding full fiscal autonomy, which they know does not add up, and a Tory Prime Minister giving it to them.'

David Cameron began his response with a barbed welcome for Harriet Harman's return as acting Labour leader. And he noted the presence of the former Scottish first minister, Alex Salmond, back on the SNP benches: 'I notice that he is now the foreign affairs spokesman for his party – for which I assume he speaks on issues relating to England, Wales and Northern Ireland.'

He said the last parliament had been about a 'repair job' on the UK economy, and this one would be about 'renewal'. 'This is the Queen's Speech for working people, from a one nation government that will bring our country together. We have a clear mandate from the British people, a long-term economic plan that is working, a detailed and compelling manifesto, and we will not waste a single moment in getting on with the task,' he said.

He announced that the government would legislate immediately for an EU membership referendum and would then embark on negotiations to reform Britain's membership terms. And while he welcomed Labour's support for the referendum, he noted: 'If we had listened to the Labour Party there would be no renegotiation and there would be no referendum; there would be no choice.'

As Deputy Prime Minister the Liberal Democrat leader Nick Clegg had sat alongside David Cameron on the government front bench. But the election reduced his party to just eight MPs – that meant he had to sit on the backbenches and wait quite a while for the opportunity to deliver his thoughts: 'my party's parliamentary presence may be much reduced in size, but our mission is clearer than ever. As we did in the coalition government, we will fight any attempt to weaken the fundamental rights of our citizens, whether those enshrined in the European Convention on Human Rights and the Human Rights Act, or those threatened by what sounds, from what I have heard today, to be a turbo-charged snoopers' charter.' These themes were to unfold over the early weeks of the new parliament.

The new government's first budget

It was George Osborne's seventh budget, but his first completely Conservative one. And its sheer radical sweep left political parties and interest groups struggling to catch up.

The central element was a series of radical cuts to in-work tax credits, new restrictions on housing benefit and a reduction in the annual benefit cap to £23,000 a year per household in London and £20,000 in the rest of Britain. These measures were partially compensated for by a new £7.20 an hour national living wage for workers aged over 25 – an audacious raid on Labour's election manifesto. It will come into force in April 2016 and rise to £9 an hour by 2020. As it was announced, the work and pensions secretary Iain Duncan Smith could be seen punching the air in delight. And as Conservative MPs cheered, Mr Osborne repeated the announcement with theatrical flair – in case Labour MPs hadn't heard it the first time.

The Chancellor hailed his proposals as a budget for working people 'that sets out a plan for Britain for the next 5 years to keep us moving from a low-wage, high-tax, high-welfare economy to the higher wage, lower tax, lower welfare country we intend to create'. He said the budget was the product of a 'one nation' government, which had been entrusted by the British people to rebuild the economy on a stronger footing. And he pointed to the unfolding crisis in Greece as a warning of what could happen if this country failed to deal with its borrowing.

One key announcement was that he would continue to cut the deficit at the same pace seen in the last parliament – a pace that would see the UK move to a surplus in the 2019–2020 financial year. That promise was underpinned by a series of measures, including the decision to restrict public sector pay rises to 1% per year, to replace student maintenance grants with loans and to abolish permanent non-domiciled tax status.

These measures would also allow the government to meet NATO's annual defence spending target for member nations, of 2% of GDP. The threat that Britain might not meet that requirement had caused considerable disquiet on the Conservative benches – so the announcement was greeted with some pleasure there.

When the Chancellor sat down there were ecstatic cheers from Conservative MPs, who sensed that he had produced an economic package with real voter appeal, and one that wrong-footed the opposition. Labour's acting leader, Harriet Harman, promised to look constructively at proposals to cut welfare spending. But she warned that the new national living wage would not make up for the cuts to tax credits, and many families would suffer as a result. And she added that the budget was 'less about economic strategy and more about political tactics to help him move next door [from 11 Downing Street to the Prime Minister's residence, No. 10]'.

Chancellor George Osborne's focus was on cutting the welfare bill by £12 billion and boosting employment and productivity in Britain

The responses from a slightly punch-drunk House of Commons reflected the need to fully digest an unusually complicated and far-reaching financial package. The newly re-elected chair of the Treasury Select Committee, the Conservative Andrew Tyrie, suggested that the recent electoral 'bidding war' had reduced the Chancellor's room for manoeuvre, leaving too much of government spending ring-fenced from cuts, and he had not made his job any easier by tying his hands on tax, by legislating to prevent increases to the main taxes. But he thought this budget, the forthcoming spending announcements in the autumn statement and the budget next year would, taken together, provide a real opportunity to secure the economic revival of Britain.

A less favourable assessment came from the SNP's finance spokesman Stewart Hosie, who said that the Chancellor had been wrong to suggest that people living on benefits were making a 'lifestyle choice' even if they were trying hard to find a job: 'their lifestyle choice is to work, and they should not be denigrated by someone who has never been short of a bob or two'.

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