



Control & Automation

Complete manufacturing solutions

CUSTOMER CASE STUDY *Collection*

Making Outsourcing Easy

Customer Case Study Collection

The outsourcing strategies devised by PP Control & Automation (PP C&A) are helping machine builders and OEMs maximise manufacturing output, reduce lead times and time to market, mitigate risk, adapt to peaks and troughs in demand, and optimise cash flow and supply chains.

"These case studies provide evidence based stories of true manufacturing collaboration, benefit, and growth."

GARY HAYNES

Chief Sales Officer

PP Control & Automation



INSIDE THE COLLECTION

EBAR

One of the hospitality sector's most significant innovations has been given a production boost thanks to the scale and outsourcing capability of PP C&A.

Page. 4-13

Full-length case study

P2i

Unique technology born in the heart of Oxfordshire is helping protect millions of electronic devices across the world and its impact is set to grow even further.

Page. 14-23

Full-length case study



One of Europe's leading manufacturers of automated milking systems has set its sights on record production after strengthening strategic partnership with PP C&A.

Page. 24-29

Full-length case study

Mazak



Page. 30-37

Bitesize case studies

#1 Cheers! PP C&A raises the manufacturing capability for EBar

One of the hospitality sector's most significant innovations has been given a production boost thanks to the scale and outsourcing capability of PP Control & Automation (PP C&A).

The Company

The best inventions are often born out of necessity and that is certainly true of EBar, which is transforming bar service at live venues and sporting events across the UK.

Like any self-respecting rugby supporter, EBar co-founder Sam Pettiphar was waiting in a lengthy queue for a half-time pint at a Six Nation's international, when the match restarted and he missed seeing a crucial try.

This got him thinking that there must be a better solution to speed up bar service, the kernel of an idea that was accelerated when he joined forces with Nick Beeson during their MBA course at Robert Gordon University in Aberdeen.

Fast-forward nine years and EBar® is the fastest growing automated self-serve drinks solution in the UK, serving perfect pints in seconds. In fact, the firm's patented pressure pour technology delivers 98% keg optimisation and is capable of pouring 200 pints per hour.

This, along with its simple three-step 'order, pay, pour' interface, are proving a major hit not only with event goers, music lovers and sports fans, but also with venue operators keen to improve service and maximise revenue.



PICTURED

L-R: Jacob Manifold, Matthew Heather, Joanne Orbell & Dan Murphy (PP Control & Automation)

The Scenario

The first product to enter the commercial marketplace was the mobile EBar®, which can be deployed and set-up at venues in just 30 minutes. This was designed, developed and initially built in-house until assembly was outsourced to a local partner.

Demand for this technology has grown rapidly and, in 2023, the company introduced its latest solution – the Beerwall®. This is a permanent installation capable of pouring 400 pints per hour in a 2-unit configuration and has already been adopted by Brighton Hove Albion FC and five other Premier League clubs.

"Fan reaction is really driving our expansion and building our reputation for delivering a truly frictionless bar service solution for venues," explained Nick Beeson, Managing Director at EBar.

"We are innovators, not manufacturers and we recognised that volumes were going to quickly outgrow the capabilities of our first assembler.

"Managing the supply chain was very labour-intensive, which accelerated our decision to look for an outsourcing partner who could give us the ability to scale-up quickly and, importantly, get our products to market in a timeframe that suited the customer."



"Giving someone else responsibility for building our core product was a pivotal business decision that we knew we had to get right."

Nick Beeson, Managing Director, EBar.



The Solution

After an extensive procurement process and several site visits, PP Control & Automation (PP C&A) was chosen as EBar's outsourcing partner, with the automated drink dispensing specialist initially giving it responsibility for scaling-up production of Beerwall®. This involved the complete electronics and mechanical build and full assembly of the state-of-the-art model at PP C&A's facility in the West Midlands.

A dedicated team of eight engineers have created a specialist production cell that has the potential to build up to five units every week, a 200% increase on the previous capacity.

Investment in the latest automated crimp technology has also eliminated poor wiring connectivity that had delayed previous machines, whilst several issues with supply chain lead times have been collaboratively overcome with subtle design and procurement changes.

Nick went on to add: "The new product introduction process has been a fantastic opportunity for us to streamline some parts of the build and explore different components that can speed things up.

"Working with the PP C&A NPI team has seen us reduce 'production' of a Beerwall® to two days and this gives us confidence that we can scale up to the expected five units per week by the middle of summer.

"The outsourcing process has been quick and relatively straightforward and allowed us to focus on both new R&D activities and capitalising on commercial opportunities that will increase the number of Beerwall® units in operation to 100 by the end of 2025."

PICTURED

L-R: Marc Watkiss, NPI Production Leader & Matthew Heather, Business Development Manager (PP Control & Automation)

The PP C&A Difference

Constant investment in automation has been a key strategy for PP Control & Automation for the last two decades and this has created one of the most productive factories in the UK.

One of the major issues in the initial EBar build was the wiring loom, which could take up to half a day of production time. Utilising the power and speed of the Komax Zeta 640 harness machine, PP C&A has reduced this process to just minutes, delivering a huge time saving whilst also improving on repeatable quality.

"Outsourcing is about understanding the bigger picture – the pain points, the end goal and what looks like success...these are all conversations we had with Nick and his engineering team," pointed out Matt Heather, Business Development Manager at PP C&A.

"Complexity of the supply chain was one of the big things that came out of these discussions. There was a dependence on certain suppliers and managing lead times was a constant source of frustration."

He continued: "We've taken this type of anxiety away from other clients in the past and suggested that we take over the full management of the supply chain. There were existing relationships with a lot of the component suppliers, so the handover was seamless, and we've been able to cut lead times on troublesome parts due to greater visibility and communication."



The Results

Two units per week were built during the initial production phase but six months into the 'outsourcing partnership', with systems and processes in place, production of the Beerwall® is hitting the target of producing five units per week.

Build time has been cut in half and right first-time rates have improved significantly meaning EBar has full confidence in the performance of its technology when it rolls into a commercial setting.

Supply chain management concerns have been minimised by giving full responsibility to PP C&A, with new components identified for future builds that could save money and time.

Engineers from both teams continue to work with full transparency to identify other assembly improvements and to explore how the latest technology addition – the automatic cup feeder – can be integrated into future builds.

Nick said: "The last twelve months have been transformational for EBar. We've proven that our automated drink dispensing technology works at major live events, and we're now ready to capitalise on a significant increase in orders for our Beerwall® range.

"Our outsourcing relationship gives us the manufacturing confidence that we will meet current order times, as well as having the scale-up capability to ramp production to hundreds of Beerwall® units each year.

"There is also the international marketplace to consider, and this is something we could initially serve from the UK, especially with PP Control & Automation holding UL508a certification which is ideal for the North American market."

PP C&A's Matt Heather concluded: "EBar is delivering one of the biggest hospitality innovations in decades and we are giving it the production capability to maximise its first-to-market opportunity.

"It's fantastic to see two domestic innovators actually commercialising the technology in the UK."



#2

PP C&A enjoys extra coating with P2i deal extension

Unique technology born in the heart of Oxfordshire is helping protect millions of electronic devices across the world and its impact is set to grow even further with outsourcing deal extension.

P2i, which celebrated 20 years in business in 2024, designs and builds machines that apply the thinnest, most robust liquid protection on the market, helping to reduce the 58 million tonnes of e-waste that society creates every year. This is far bigger than the total weight of the Great Wall of China!

The company's coating technology works at the molecular level thanks to its unique Plasma Enhanced Vapour Deposition chamber. It is used to protect consumer, automotive, medical, aviation and general electronics and components.

Despite a host of global challenges leading to unprecedented supply chain disruption and soaring energy prices, the ambitious nano coating specialist has continued to increase its global presence, customer satisfaction levels and market diversification.

It now employs over 190 people globally at its facilities in Oxford in the UK, Shenzhen in China and satellite offices in Asia and the rest of the world, including technical/sales offices in India and the USA.

PICTURED:

One of the first P2i machine builds at PP C&A's award-winning facility.



The Scenario

Rewind just over ten years. P2i's technology was making waves, with the opportunity to coat and protect millions of emerging mobile handheld devices.

As a relatively young business, the company knew it had to work with a manufacturing partner to meet the volumes and achieve the speed to market required and demanded by its clients.

After an extensive selection process, it chose to work with PP Control & Automation (PP C&A) to develop the control panels for its first machines, a decision that would quickly flourish as both parties learned to leverage each other's strengths.

This naturally led to PP C&A being awarded the full build, providing electronics, supply chain management and sub-assembly services to P2i, creating 100 machines – all capable of coating hundreds of products at one time – that are still out in the market and operating successfully.

Like all fast-growing businesses, P2i was looking at new applications and opportunities for its technology, a search that led to the industry need for smaller machines that give customers the opportunity to invest and try out a compact model before purchasing the larger units.



**The thinnest, most
robust liquid protection
on the market.**

PICTURED:

Phil Millard, Head of Engineering at P2i with the new 18L machine



The Solution

"PP Control & Automation has been our manufacturing partner for more than half of our company life and its 'DNA' was embedded into our hugely successful existing machines. Getting them involved in our next generation 18L model at the earliest possible stage was the natural decision," explained Phil Millard, Head of Engineering at P2i.

"This system takes all of our capabilities and condenses them into a smaller, standalone unit that has less than half the footprint and can be wheeled onto any shopfloor in the world."

PP C&A's proven New Product Introduction (NPI) process was at the heart of the build, identifying a host of cost downs and process build efficiencies and, importantly, assisting with the production engineering process.

It took just six months from the initial idea for P2i to supply the machine design files to produce the first 18L machine, built from start to finish at the outsourcing specialist's state-of-the-art factory in the West Midlands.

This incredibly quick turnaround was made possible due to the entrenched relationship between the two companies and the complete transparency, where iterations are welcomed and acted upon to improve the process and the end-use application.

Tony Hague, Director at PP Control & Automation, picked up the story: "NPI is all about learning as you go, applying DFM measures, and settling upon the best possible production method, driving out costs and identifying where we can speed up the build."

"Our partnership with P2i is a fantastic example of how strategic outsourcing should work. On the 18L, we have been able to eliminate 20 hours from the build process, whilst still delivering the performance and quality demanded by the client."

"To build a high-tech machine in just six months is some achievement, but I believe we'll be even quicker next time. We both view iterations as a great learning process and this approach has and will deliver some fantastic bottom-line benefits."

P2i is quick to praise the depth of the relationship with PP C&A, citing the constant communication and the levels of trust that have been developed over the last decade.

Engineers at both firms are continually emailing each other even when there are no machines in production, whilst phone calls are constantly made to sound out and test new ideas/small changes to the process.

Phil went on to add: "Sometimes it can be the little things that make the biggest difference and I feel this is reflected in the openness of our dialogue. Over the years, we have learned to leverage each other's strengths and share IP – you can't have that relationship with every supplier, that's why I always describe PP C&A as our 'manufacturing partner'."



18L machine, inside and close up

The Results

Five 18L machines have been manufactured in record time and are now being sold and shipped to a variety of customers.

This is just the start. P2i is expecting demand for these systems to outstrip earlier models and PP Control & Automation has built a dedicated cell capable of creating tens of units every week.

As a manufacturing partner it has not stopped there. On this particular model, the company has taken on more supply chain responsibility and is now offering 'Factory Acceptance Test' meaning when machines head to Oxfordshire they have been tested and are working efficiently.

PP C&A's Tony Hague continued: "Our manufacturing expertise, combined with our automated cable processing to eliminate quality defects and the strength of our partnership, have created an industry-first machine that is opening up new markets for P2i.

Martin Tolliday, Chief Operating Officer at P2i, concluded: "Our expertise is in designing and developing machines that can apply ultra-thin coatings to a wide range of applications, helping increasingly reduce the amount of e-waste produced across the world every year.

"Our technology is our USP and, to get the most out of it, we leverage PP C&A's 50 years+ of machine build expertise as our manufacturing partner. It is a vitally important relationship, that is pivotal to us growing and taking advantage of new opportunities.

"The partnership is only going to get stronger. Whilst our 18L model is being rolled out, we are already working on the next generation of equipment that will provide the fastest and largest coating application capability we've ever produced."

"The build process has been revolutionised and we are now working on the sixth system, which we believe we will deliver in weeks as opposed to months. Design for manufacture has been critical in giving us a proven process that offers the best quality, speed and reliability."



#3

Fullwood milks strategic outsourcing partnership to deliver major production boost

One of Europe's leading manufacturers of automated milking systems has set its sights on record production after strengthening an existing strategic partnership with PP Control & Automation (PP C&A).

The Scenario

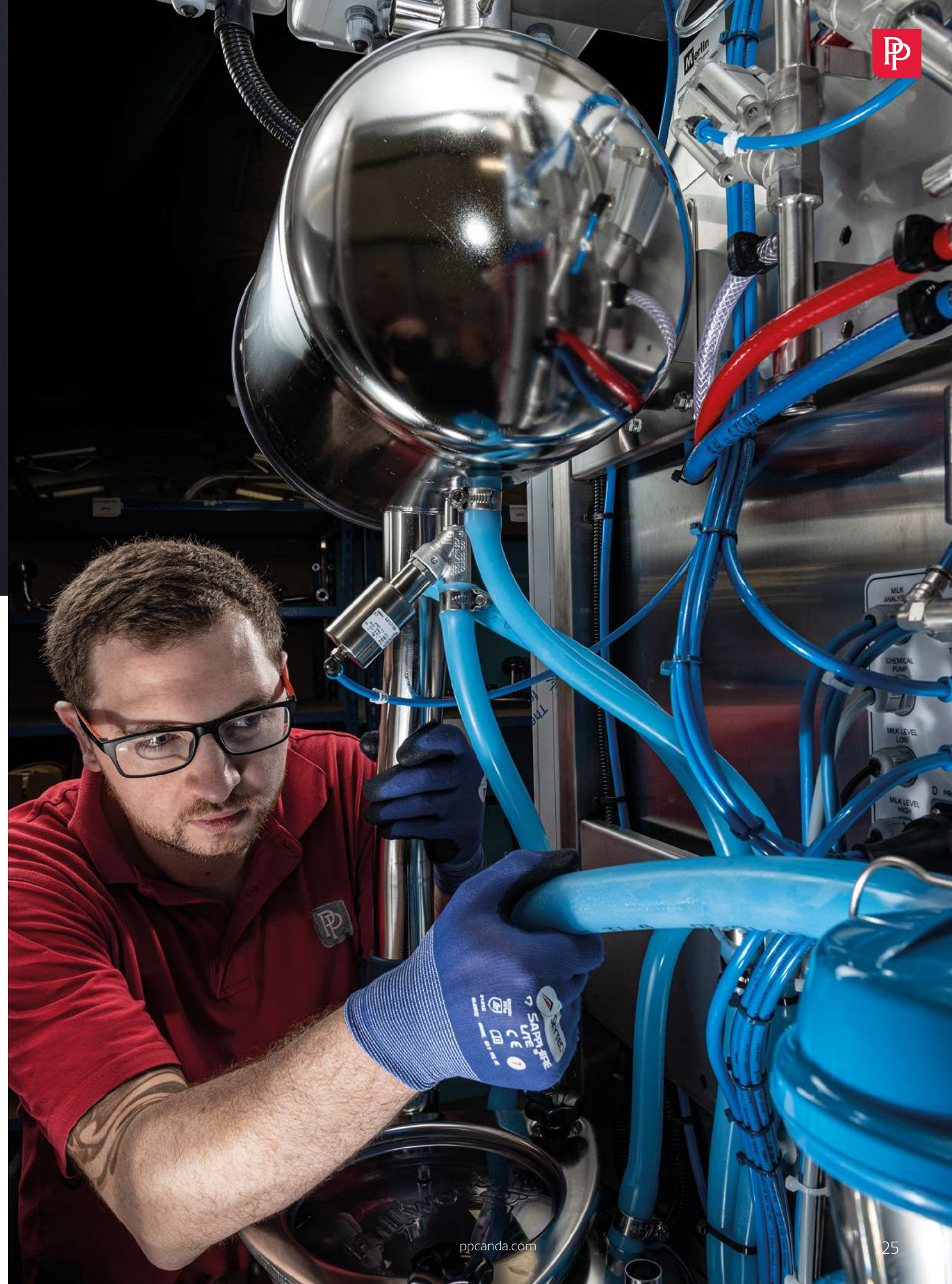
A huge surge in demand for the latest machines within the dairy industry means that Fullwood Joz has enjoyed particular success with its M2erlin robotic milking systems.

With significant advantages, the system has created a reduction in labour costs and increase in milk yield and volumes for its customers. However, with this increased demand comes increased manufacturing pressures and a need to reassess capacity and resources.

The company decided a more integrated machine build approach was required and that this would have to be discussed with a partner it could trust.

PICTURED:

Pneumatics, hydraulics & fluid system & electro-mechanical build at PP C&A



The Solution

After working together for more than a decade, PP C&A and Fullwood brought together dedicated teams to plan future M²erlin production patterns and share ways in which the 'build' process could be streamlined, manufacturing costs managed, and capacity capability doubled – all without additional production space and labour resource.

Reviewing best practices gleaned from other industry sectors, the PP C&A 'design for manufacture' engineering team revised the current build processes and came up with a number of suggestions that would see it provide a significantly more cross-functional and added value build solution. It identified that the electrical and mechanical controls could be combined into a single integrated outsourcing approach.

Work then commenced on both production engineering – identifying areas of standardisation, option configuration, combined test requirements, as well as mapping out supply chain needs and engaging both current and new suppliers to ensure optimum quality, reliability and total production costs. To ensure reliability, PP C&A used a trusted method to intricately test the systems using a special test rig – a test which functionally checks the entire system through software, replicating the connectivity associated with the robot.

The supply chain challenge also required PP C&A to move fabrication and machined parts into its own supply chain to create additional production capacity with Fullwood.



“...a paradigm shift in the way we manufacture and manage our supply chains.”

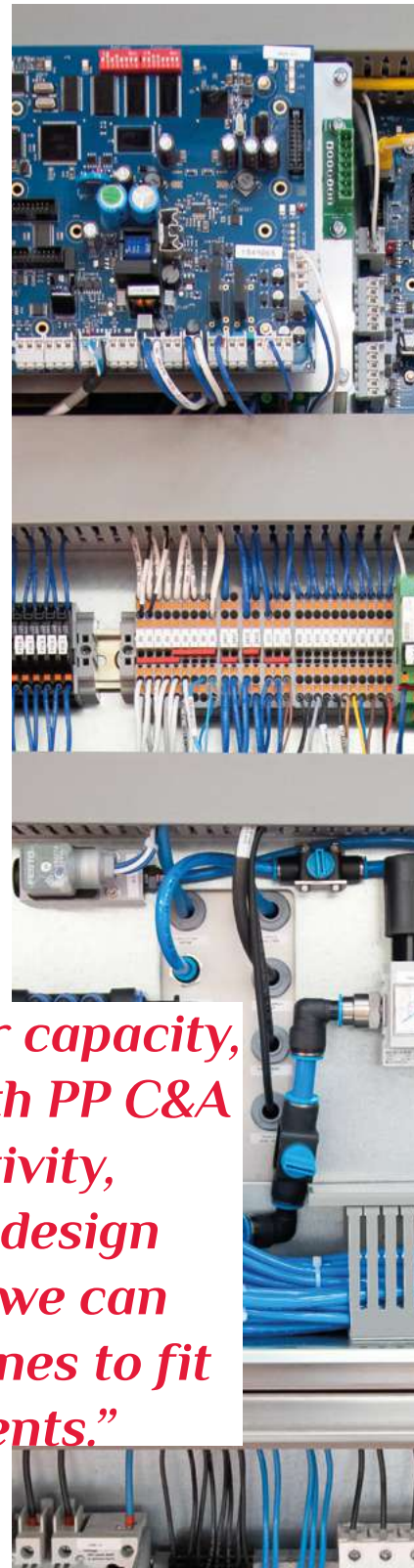
PICTURED: Aled Williams, Operations Manager Fullwood

The Results

The strategic outsourcing partnership has already delivered significant results for Fullwood and played a key role in the company doubling its production and keeping up with customer demand. PP C&A continue to support Fullwood in scaling-up through a standardised approach to design and flexible customer configuration. This approach to engineering design support also ensures that all international safety legislation is met, including UL508a.

The partnership has played a crucial role in supporting Fullwood's ambitious growth plans, with additional production capacity enabling the company to double its output whilst maintaining consistent lead times. This has been underpinned by consistently high production levels and impressive on-time delivery scores. To accommodate the expansion, a dedicated 7,500 sq ft space was created, and 25 staff were redirected into more value-added activities, further enhancing operational efficiency. The use of an advanced system – subjected to intricate testing before arriving on site – has ensured seamless integration and reliability. Collectively, these developments have significantly contributed to Fullwood's ability to increase turnover and maintain its position as a market leader.

“In addition to boosting our capacity, we have worked closely with PP C&A engineers to boost connectivity, incorporating a number of design iterations into the build so we can easily customise the machines to fit the client's exact requirements.”



"The relationship works so well because we both bring our own areas of expertise to the table, challenging and working through ideas that provide mutual benefits and unrivalled performance for our customers."

Production Director, Mazak UK

Mazak UK collaborated with PP C&A to develop the CV5-500, a fully simultaneous 5-axis machining center designed and built entirely in the UK. PP C&A's 'Design for Manufacturing' team worked closely with Mazak engineers to create a modular control system that streamlined production and allowed for easy customisation. This partnership enabled Mazak to launch the CV5-500 in March 2020, meeting competitive pricing and performance targets. The collaboration exemplifies how combining expertise can lead to innovative manufacturing solutions that benefit both companies and their customers.

Mazak



“Thanks to the relationship with PP C&A we have brought a new solution to market quicker than our competitors, a new solution that will change the way factories manage their inventory for years to come.”

Founder, Inventor-e

Inventor-e partnered with PP C&A to bring the iVendScale+ to market, benefiting from streamlined production, rapid prototyping, and improved scalability. The outsourcing partnership enabled Inventor-e to focus on innovation whilst leveraging PP C&A's expertise in DFMA, engineering and production. By entrusting the build and assembly of their advanced inventory management system, Inventor-e reduced time-to-market and operational complexities. The collaboration also ensured consistent product quality and supported the seamless integration of cutting-edge weight sensor technology. As a result, Inventor-e could meet growing demand efficiently, enhancing their reputation as a leader in smart inventory control solutions.



"This is a major project for our business and one we can deliver on time and to budget thanks to our team of experts and the support we receive from PP C&A."

Managing Director, Hedinn

Since 2017, PP C&A has partnered with Hedinn, one of Iceland's largest companies on 13 different projects, culminating in their most ambitious: a protein plant for Sildarvinnslan handling 380 tonnes of raw input daily. PP C&A manufactures all electrical control panels and manages component supply chains, supplying key feedback during build preparation to optimise design and structure. This collaboration enabled Hedinn to slash lead times by 15–20%, cut production costs, and free internal teams to focus on innovation and customer service. As a result, Hedinn has scaled efficiently and enhanced its global competitiveness.



"This has proven very successful, and we have secured several cost downs whilst maintaining the same level of quality and performance on what will be the next generation of our technology."

Vice President of Sourcing, Winbro Group Technologies

PP C&A's decade-long partnership with Winbro Group Technologies shows how strategic outsourcing helps machine builders focus on core competencies whilst improving flexibility, quality and speed to market. Initially selected to build UL 508A-compliant control systems for North America, PP C&A proved capability through prototype panels delivered ahead of schedule. Since then, it has supported over 300 machine builds and created a dedicated Winbro production cell. The relationship now supports the HSD351, the world's most productive EDM drilling machine, with PP C&A assembling the EDM generator module, managing supply chain and reducing assembly time.



Module or assembly-based, part or full machine build

Do things better and faster, with less risk.

PP Control & Automation is an award-winning provider of strategic outsourcing solutions to many of the most successful and respected machine builders worldwide.

The PP C&A approach to manufacturing starts with understanding your business pain. This pain is often a constraint to further growth. Commonly, they are centred around people and space, or production lead times and supply chain management. PP C&A alleviate these constraints by building relationships, strategies and manufacturing solutions that help you focus on your core competencies and comfortably and confidently leave the rest in expert hands.

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MAKING OUTSOURCING EASY



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