



Customer Case Studies

This collection of case studies examines some of the recent strategic outsourcing partnerships delivering against several business pains for machine builders and OEMs, and how those partners are benefiting from the PP C&A approach.





As an acknowledged leader in the provision of control & automation solutions to some of the World's most successful machinery builders, PP Control & Automation has had the opportunity to publish several case studies in the UK's premier journals for the manufacturing industry.

These case studies have been used to highlight and promote the very real business benefits that have been realised through building close working partnerships with customers.

PP C&A look to adopt a consultative approach when engaging with customers, looking to first fully understand and appreciate their areas of constraint and 'business pain', before looking to design a manufacturing solution that will deliver specific remedies, based on their individual needs. The solutions PP C&A offer are able to deliver significant and measurable results for every customer.

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Case study #1 Jenton Group

A breath of fresh air

A new manufacturing partnership between PP Control & Automation and Jenton Group has created the capacity to build new UV technology in volumes that could help protect us from Covid-19 in indoor spaces.



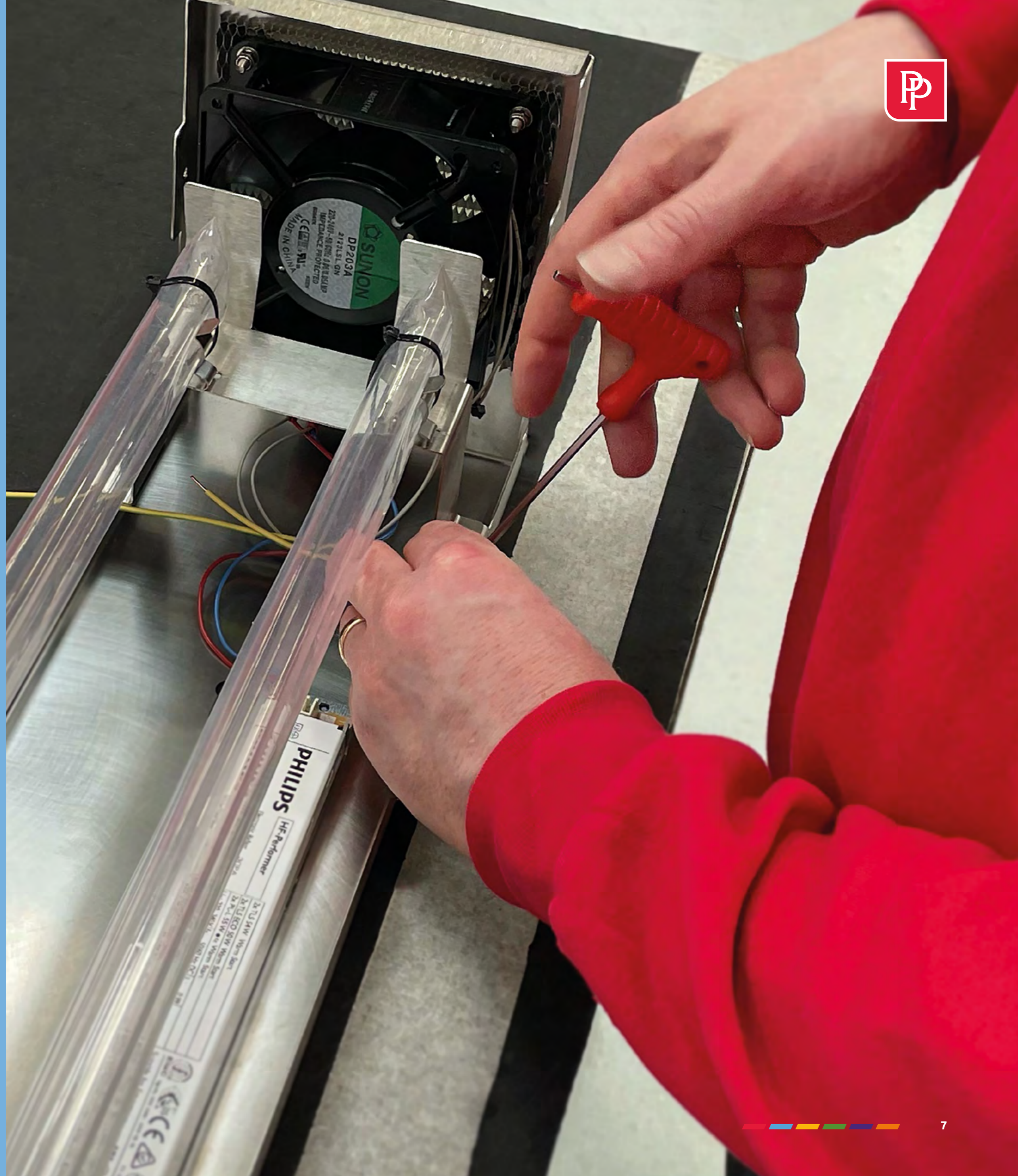
Covid-19 has changed the world as we know it... *and businesses across the globe are adapting to the 'new normal'.*

Virtual meetings and investment in digital technologies have become common in the workplace and firms are trying to find ways where they can use their expertise to develop innovations that protect us against the virus.

Jenton Group, a specialist manufacturer of packaging automation and UV systems, is one company that has ready-made technology making a real difference to delivering clean air in indoor spaces.

The Hampshire-based business has seen interest surge in its GRU-V® product, a wall-mounted UV Air Disinfection device that exposes ducted air to ultraviolet (UV-C) light to disinfect more than 99.99% of the SARS-CoV2 virus in the air (the virus that causes Covid-19), in addition to influenza and other airborne viruses.

*Easily fitted, they are already in place
in hundreds of workplaces across the
UK, Europe and the US.*



The Scenario

Jenton Group's expertise traditionally lies in the development and design of innovative new products. Whilst its manufacturing capabilities can produce small batches of fifty at a time, the management team had identified the need to find an outsourcing partner that could help it rapidly scale-up to cope with the potential of major increases in sales demand.

The firm had already been in discussions with PP Control & Automation about a new ventilator design and how it might use its manufacturing capacity in the West Midlands to create an urgent production line.

This particular project won the Engineer Magazine's Collaborate 2 Innovate Award, but unfortunately never made it past the design stage, with the Government choosing instead to increase existing supply chains.

What it did do was create the platform for the two businesses to work together and Jenton Group, faced with escalating orders for its GRU-V® system, took the decision to place the first large order for production units with PP C&A at the start of the year.

The GRU-V® can be found in places such as residential, commercial, healthcare, medical and education settings





The Solution

PP Control & Automation immediately created a dedicated manufacturing line at its Cheslyn Hay factory, with a team of engineers assigned to understand the build, before putting in place bespoke production processes that allows for consistent throughput and repeatable quality.

This was achieved in a matter of days from the first parts arriving on site and, from there, PP C&A has taken just a few weeks to complete build and lamp burn testing for the GRU-V® systems.

Supply chain management has also been outsourced meaning that Jenton Group simply provide the initial designs and then wait for first-off inspection and then delivery of the finished product – freeing up its engineers and designers to continue their R&D work and development of next generation products.

Tony Hague
CEO, PP C&A

"Scaling up is a massive challenge for specialist manufacturers, both from an operational, capacity and sometimes an investment point of view. This sometimes prevents businesses from taking the next step, often missing that market opportunity in the process. For those that do gamble, many fail due to lack of experience of handling production lines of that magnitude."

"Jenton Group's UV product range and its effectiveness to combat Covid-19 is gaining a lot of interest and the firm wanted the confidence of having a manufacturing partner they could turn to if volumes quickly escalated. The order for the first 100 has allowed both parties to dip their toe into a working relationship and how 'outsourcing manufacturing' could work."

"So far, the relationship with Jenton Group has been a seamless process and should pave the way for new opportunities."

The Results

Three months after the initial order was placed and the first shipment of GRU-V® systems has been successfully delivered to Jenton Group's Hampshire facility – on time, on budget and to the exacting quality standards required.

Processes have been put in place at PP C&A that will speed up future production and the creation of a specialist lamp burn testing facility means everything can be controlled under one roof.

A number of supply chain improvements have been identified that could support greater configurability for future system designs or to enhance other products in the company's UV range.

Richard Little
Director, Jenton Group

"I'm confident that we have found a formula that works and look forward to seeing how the relationship develops going forward with higher volumes and additional products."

"Using UV disinfection to stop the spread of Covid-19 indoors has had very little coverage, but that is changing as the world adapts to the new normal. Our systems use lamps that are proven to kill 99.99% of the SARS-CoV-2 virus, creating safer educational, health and workspaces wherever they are installed. We have seen a significant increase in demand for GRU-V® and this accelerated the need for us to engage with PP C&A so that we can, importantly, satisfy existing orders and also have a blueprint on how we cope with future sales."

"There's always an element of risk to outsourcing, no matter how calculated the decision is. So far, we've been really impressed with PP Control & Automation and how quickly it has got to grips with our system, seamlessly integrating production so it can make them as fast as we can."





Case study #2 Needham Group

Laser Guided Expansion

Turning to the strategic manufacturing outsourcing expertise of PP Control & Automation could prove to be a pivotal decision for Needham Group as it aims to turn a £30m expansion blueprint into reality.

There are exciting expansion plans brewing at Needham Group in Whitchurch, one of the UK's leading family-run technology companies.

The management team has unveiled a blueprint that will see it more than treble revenues to £30m between now and 2025, with the possibility of creating 30 new jobs in the process.

Founded by Roger Needham in 1962, the firm is looking to achieve this ambitious target by boosting export activity across its three divisions, increased investment in marketing, extending distribution networks and developing capacity to take on more bespoke projects.

Whilst its traditional coding and ink technology businesses will play an important role, it is laser marking - the newest addition to the portfolio - that is offering the fastest route to growth and the biggest global potential.



The Scenario

Needham Group first ventured into manufacturing laser marking machines in 2019 and has spent the last two years fine tuning its existing range of products, which spans N-Lase Desktop, Desktop Pro, Benchtop, Handheld, Workstation and Integrated Solutions.

This is supplemented by a custom project offer, where the R&D and engineering teams will work with clients to develop new innovative uses for laser technology. It is widely accepted that this department is being hamstrung due to a lack of capacity, so the decision was taken to look for an outsourcing partner who could build its standard range.

The Group's Head of Operations had worked with PP Control & Automation at a previous company and had seen already the multitude of benefits the right 'choice' could deliver.

A meeting between the two businesses was quickly set up and several visits to PP C&A's world class manufacturing facility in Cheslyn Hay soon followed, with a project team set up to build the desktop laser machine from a kit of supplied parts.



The Solution

It didn't take long for the strategic manufacturing outsourcing specialist to prove it could complete the build to the required standard.

This gave engineers at Needham Group the confidence to advance discussions around introducing low volume production – a decision that will allow it to free-up capacity at its Whitchurch base and also give it more surplus manufacturing capability to support the anticipated rise in laser sales from £3m to £10m over the next three years.

Aled Ellis, Managing Director, picked up the story: "Our 'USP' is not in building the machines, but in developing the innovative uses and applications for laser technology – that's where we come into our own and where we anticipate the real growth to come from.

"Once PP C&A proved they could build the prototype machine successfully, it made complete sense to look at a more strategic arrangement, first starting with the Desktop and Desktop Pro models and then, over time, moving on to the rest of our range.

"We have handed over the complete assembly process, including management of the supply chain."

PP Control & Automation has a dedicated manufacturing cell in place that will increase as volumes build.

This currently boasts four staff supporting the build, plus a wider support team covering the shared functions of Engineering, Supply Chain and Customer Services.

"The initial volumes will be between 8 to 10 laser systems per month, rising to 20 if initial projections are realised," explained Tony Hague, CEO of PP C&A.

"It's all about making sure we fine tune the build and explore ways in which we can standardise processes to make assembly and customisation slightly easier than it is at the moment."

"The longer-term picture is that we will need to be in a position to build over 300 laser marking machines every year, something we can comfortably do at our site in the West Midlands."



The Results

A few weeks into low volume production and the strategic partnership is already reaping dividends, with lead times halved to just two weeks from the bill of materials arriving in Cheslyn Hay.

Quality guidelines have been surpassed and a number of efficiency improvements have been identified that could speed assembly up even further or give Needham Group designers the opportunity to modify standard models to encompass additional features.

David Needham, Chairman of Needham Group, continued: "PP C&A's technical knowledge and electrical/mechanical build capabilities are second to none and it has got to grips with our laser technology quicker than we originally envisaged.

"We have seen the early signs of a partnership that could deliver us 300-strong volumes every year and this gives us a fantastic platform to aggressively market and sell our products in the UK and, importantly, increase our export activity through a number of key distributors.

"The other benefit of outsourcing the standard model build is that we have more than trebled capacity in our special projects team, giving our R&D experts and engineers the chance to take on more custom machines.

"We've always had demand in this field but could only agree to a limited number of builds. These restrictions have been lifted and we are very excited to make the most of what could be a £multi-million opportunity."

Tony Hague concluded: "Our aim is to become a true partner in every sense of the word and to play an important role in Needham Group achieving its £30m blueprint, delivering capacity, efficiency and, as the relationship develops, innovation in design.

"We have also introduced Aled, David and their team to the marketing and PR companies we use – getting the firm's name and technology out to the right people will make a massive difference."

"PP C&A's technical knowledge and electrical/mechanical build capabilities are second to none."





EYOTO™

Case study #3 EYOTO™

Clear vision

PP Control & Automation's strategic manufacturing outsourcing service is helping bring new tele-optometry solutions to market at a time when remote technology is in huge demand.

EYOTO™ is a world leader in the creation of advanced tele-optometry solutions for the global optical industry.

The company, which originated as a spin-out from the prestigious Aston University School of Optometry, is using its expertise in image processing, computer vision, machine learning, artificial intelligence and ophthalmic user interface design to bring remote platform eyecare solutions to market.

It started life as a developer of white label technologies before taking the decision to launch its own product in the shape of eMap™, the world's first edge to edge, fully digitised, remotely accessible lens analysis system.

The aim with this technology is to give global eye care companies and retailers the opportunity to bring lenses to life at the click of a button, with incredibly advanced surface inspection and full-colour power maps in just 55 seconds.

The Scenario

R&D and Product Development are EYOTO's main strengths, so when it came to building the eMap devices, the company decided to go down the route of outsourcing the manufacturing.

The thinking was simple. By using a specialist, the firm could speed up time to market, so crucial to maximising the commercial benefits of the technology, whilst also leaving its experts free to concentrate on core business activities.

Executing the strategy was somewhat more difficult, with the initial choice of manufacturing partner not going as planned, with quality, lead times and supply chain management all major issues and leaving the EYOTO team considering alternative options with the clock ticking on meeting confirmed orders already in the pipeline.

PP C&A set-up a dedicated CV5-500 team; including members from electrical design, production engineering and supply chain specialists



The Solution

The only solution left was to try to find another contract manufacturing specialist that could quickly pick up the project and this is where PP Control & Automation (PP C&A) came into the equation.

With a track record of supporting 25 of the world's largest machinery builders, the West Midlands-based company used its proven product introduction methodology to take on the eMap™ contract in a matter of weeks.

Learning 'on the product' was accelerated, with a joint 'Design for Manufacturing' exercise undertaken during the first few machine builds, quickly identifying a number of aesthetic improvements and functional changes behind the enclosure covers.

Garry Myatt, Sales Director at PP C&A, commented: "EYOTO had been let down badly and needed a partner they could trust to pick things up and put in place a full manufacturing line that would deliver substantial quantities within the first six months.

"Our ability to have the right skills available in engineering competence, cable preparation and creation, electro-mechanical build and assembly meant we had the majority of what we needed under one roof and then it was simply case of designing the build process.

"One of the key things we did was to invest over £150,000 into a new dedicated Electrostatic Discharge (ESD) and Complex Box Build manufacturing area specifically for eMap™ and similar products going forward."

He continued: "This ensures that the customer requirements and legal compliance to the recognised standards are met and involved the installation of special flooring, benches and test equipment – all grounded to earth to ensure that life of the electronics is protected from potential electrostatic discharge."

The Results

PP Control & Automation and EYOTO are several months into their strategic outsourcing relationship and eMap™ devices have been built and delivered to customers in the UK and overseas with further orders in play to deliver throughout the next couple of years.

Despite little set-up time, all deadlines have been met on schedule and a number of design improvements have been incorporated to make it easier to manufacture going forward – crucial when scaling up and targeting global retailers who demand product immediately.

The partnership has been built on transparency and trust, with any issues and faults quickly identified and overcome by tapping into the collaborative expertise of engineers and designers at both firms.



Vice President of Product Development, EYOTO™

“Engaging with PP Control & Automation removed a lot of the stress we were under, as we quickly realised it would deliver on the manufacturing side of things, leaving us free to concentrate on what we do best.”

“We went from being in a very difficult position with no manufacturing partner to meeting all of our forward production targets...better still, we now have a dedicated cell to help us scale up eMap™ volumes and embed future technology launches.

“I was immediately impressed with the company's 'can-do' attitude. Nothing was too much trouble and, after being let down badly before, I immediately knew that this firm would deliver.

“This is just the start. We have a major technology roadmap in place that will involve the regular introduction of new products, especially with Covid-19 increasing the importance and need for remote ophthalmic equipment. We are confident that PP C&A has the capacity, skills and design for manufacture expertise to play a crucial role in all of these new product introductions.”



INVENTORE

Case study #4 Inventor-e

Disrupting inventory management

Inventor-e is accelerating disruption of inventory management with the help of PP Control & Automation and several key technical partners.

The Scenario

One of the biggest challenges for a fast-growing SME technology business is to scale-up quickly enough to meet the opportunity and this is exactly the situation Inventor-e found itself in back in 2019.

The management team had recognised early on that its core strength lay in the design and constant evolution of products and solutions and that the manufacture and assembly of its systems could be outsourced to a partner that shared its vision and values.

With this in mind, the company signed a deal with PP Control & Automation to manufacture and assemble SmartStores Secure and iVendCab, which saw the West Midlands-based machine building expert optimise the design for manufacture, taking the products through a UL certification process and creating a dedicated cell that could meet the build requirements of the future.

This relationship has evolved over the last few years, with PP C&A also now responsible for supply chain management, a move that has delivered several operational benefits.

It has also paved the way for the introduction of Inventor-e's latest products - the iVendScale (a scale-based inventory management vending system providing access and dispensing of products) and iBinScale (a scale-based inventory monitoring solution that offers mobile automated replenishment).



The Solution

The development of any new solution relies on being 'first to market' and with it comes a lot of pressure and stringent lead times.

PP Control & Automation had proved it could deliver on the manufacturing and was invited to get involved earlier on in the development of the iVendScale and iBinScale.

Engineers at the firm quickly identified the opportunity to introduce fellow Manufacturing Assembly Network (MAN) member Grove Design, an experienced engineering design consultancy, to the project to see if it could support prototyping and explore ways where it could make the systems robust whilst keeping the costs competitive.

Austin Owens, Owner of Grove Design, commented: "We reverse engineered the current products and this revealed several design improvements we could make that would improve both the speed of manufacture and the performance of the solutions.

"Inventor-e's development team were very receptive to the changes we suggested and straight away you could tell an excellent working relationship and a shared understanding of what is involved was forming."

"We have significant experience of working with PP C&A and its production teams and this meant that once the designs were signed-off we could look at the best way of bringing them to life. This included creating new test jigs and assemblies that are now in use in Cheslyn Hay and have been proven to further optimise the manufacture and test process."

PP Control & Automation has taken on full supply chain management for the iVendScale and iBinScale and, following a constant review of performance and capabilities, has introduced new fabrication partners and C-MAC SMT to satisfy all the Printed Circuit Board Assemblies (PCBA) requirements.



"Our role is to create the supply chain and the production line to ensure we can scale-up rapidly for Inventor-e's existing solutions and its increasing range of new products."



Tony Hague
CEO, PP C&A

Tony Hague, CEO of PP C&A, went on to add: "Our role is to create the supply chain and the production line to ensure we can scale-up rapidly for Inventor-e's existing solutions and its increasing range of new products.

"Our mechanical and assembly experience helped us shave days off the lead time on all of the products and, by working together, we have been able to optimise costs through design for manufacture to help the client achieve the elusive 'price points' it requires.

"This is a fantastic example of the power of collaboration and how collective engineering expertise can help bring new technology to market quickly and within budget."

PP Control & Automation took on full supply chain management for both the iVendScale and iBinScale





The Results

Inventor-e has just signed-off the first six iVendScale systems destined for Mitsubishi through its distributor, Scott Direct, and this marks the next stage of the firm's expansion.

Repeatable quality, lead times and the ability to customise parts of the build have all been achieved by PP Control & Automation, whilst production processes have been honed to ensure optimum efficiencies and the capacity put in place to ramp up volumes to thousands of units per annum.

"We've got ambitious plans to increase revenue from £2m to £5m in the next twelve months and the roll-out of iVendScale into its first operational industrial environment is a major milestone for our business," continued Dean Henry, Founder of Inventor-e.

"Interest in our vending technology is huge and we've now signed exclusive partnership deals with Rexel and Wolseley, as well as a working arrangement with Arco. This means volumes could increase rapidly and I'm confident we have the supply chain and manufacturing partners in place to meet this demand when it happens.

"The MAN Group has become a critical partner for us, from our initial engagement with PP Control & Automation to getting Grove involved in design and adding C-MAC SMT's electronic expertise to projects. It's a truly domestic effort in taking UK technology global."

iBinScale will be the next major introduction for Inventor-e and is aiming to meet industry's desire for mobile automated replenishment.

The solution, which could be ideally suited for aerospace and healthcare, provides an immediate, continual supply of direct or indirect materials at point-of-use, with 24/7 employee access.

It automatically reorders materials as inventory is consumed, with the bins continually weighed and able to be positioned anywhere around the facility.



Dean Henry
Founder, Inventor-e

"The MAN Group has become a critical partner for us, from our initial engagement with PP Control & Automation to getting Grove involved in design and adding C-MAC SMT's electronic expertise to projects. It's a truly domestic effort in taking UK technology global."

Dean went on to add: "Accurate inventory allows suppliers to manage the supply chain and prevents costly stock outs, with no need to carry out expensive, time-consuming physical stocktakes... this is very much in demand.

"We have already committed to producing 7500 iBinScales, with the expectation that this will rise to over 50,000 within a couple of years."

He concluded: "Our North American industrial distributor, Fastenal, has also placed orders for 12,500, with PP C&A's expertise in UL standards ensuring our systems are compliant with the required local standards.

"If we meet our growth plans, we'll create a further 20 jobs at Inventor-e and potentially 60 more in the supply chain."



Unlock your growth potential

Your focus is on growing sales revenue and market share. PP C&A share this focus with you. By working together in a collaborative manner, strategies that deliver measurable success will be developed for you.

A comprehensive outsourcing solution is a strategic enabler to that success and is best considered as a long-term partnership. This partnership between you and PP C&A is built on alleviating constraints to growth by first identifying business pains.

Your particular barriers and pains will be varied but typically revolve around available resource (people, space, cash) or process capability (resulting in extended lead times or increased costs). PP C&A's role is to work as partners to help minimise and eliminate such constraints and work together to help you grow revenue and profitability.

An increasing number of OEMs are choosing strategic outsourcing as part of an overall production and supply chain strategy. Partnering with a strategic outsourcing arm allows you to delegate non-core activities and win back the time you need to focus on your core business competencies. Product innovation, research & development and sales & marketing to name but a few.

When you're looking to grow but barriers are ever-present, PP C&A get to the root of the problem and unlock your true potential.

Growth after all, is still the fastest way to profitability.



Since 1967, PP Control & Automation has grown to be one of the world's leading providers of strategic outsourcing solutions.

PP C&A looks to adopt a consultative approach when engaging with customers, looking first to fully understand and appreciate potential areas of constraint and 'business pain', before designing a manufacturing solution that delivers specific remedies based on your individual needs. The solution PP C&A offers is able to deliver significant and measurable results.



**STRATEGIC
OUTSOURCING**



**CONTROL &
AUTOMATION**



**CONTRACT
MANUFACTURING**



Control & Automation

Complete manufacturing solutions

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