

Q&A with Tech Entrepreneur Clayton Sampson of Cyan-Tec

Posted 11th June 2018 by Christina Molina



What is it that Cyan-Tec does?

Cyan-Tec makes advanced technology equipment, specialising in hi-tech inkjet printing and automated laser systems for pretty much any sector including automotive, aerospace, medical, consumer goods and packaging. The company was founded in 2009, achieving in that time strong and sustainable growth in rapidly growing high-end technology sectors.

We invest in both our team of multi-disciplined engineers and product development to enable us to have the advanced capability to operate at the cutting edge of exciting technologies such as industrial inkjet.

We build, for example, 3D contour inkjet systems which are capable of printing onto a complex product profiles and robotic inkjet systems for printing 3D objects. Our printing systems can be used to decorate or differentiate products successfully matching advanced ink technologies to specific substrates for optimal adhesion and image quality. Alternatively, inkjet systems can provide manufacturers cost savings when applying hard coats to products from automotive trim to laminated flooring.

What is unique about your projects and capabilities?

Our products and capabilities enable us to offer industrial inkjet printing systems that can print onto 3 dimensional surfaces in production environments. We do this by overcoming the challenges of combining advanced motion systems and managing drop placement for printing onto some complex product shapes.

We export our systems around the world which is a reflection of our unique strengths in combining inkjet and automation expertise. This a growing market driven by customisation and product differentiation requirements as well as replacing existing technologies for product decoration and coating applications.

How do you deal with ink and coating challenges?

Matching the ink/fluid to the substrate is one of the areas where Cyan-Tec's expertise is so vital to deliver the right customer solution. We don't have control over the substrate- people bring us their product and ask us to provide a printing solution. If it is a coating application, for example, we apply our expertise and that of our technology partners to ensure the coating is compatible with the substrate, head, pre/post treatments and the fluid system. If it is food packaging application we consider UV and low migration factors.

For automotive, aerospace and other advanced industry sectors, what is driving interest?

Customization and reduction of waste is driving interest in the automotive sector. Traditional spraying of car components is actually a wasteful process. If any savings can be made in production, manufacturers are very keen to make them. When manufacturers spray a component, 50%-80% of the material is wasted. The precision nature of inkjet printing enables automotive and first tier automotive suppliers to reduce waste and enhance their environmental credentials.

Windscreen manufacturers can drive process efficiencies by using inkjet to apply coatings to enhance scratch resistance, edge sealing or light filtration. We have come across all sorts of components from brake pads to number plates and dashboards to engine covers where manufacturers are looking to enhance the quality of their product and their process efficiencies using inkjet.

The opportunity to customize is also a reality for aerospace. A first-tier supplier of interior trim for aeroplanes, for example, can add value to their product by offering personalised full-colour logos, information images and text or patterned decoration to enhance their product.

But it is not just trains, planes and automobiles that inkjet technology can enable suppliers of plastic extrusion or laminated flooring to add value by applying a scratch proof coating or wood effect pattern to differentiate their products from alternatives and benefit from the inkjet revolution.

We hear of new niche applications all the time which is what creates the buzz in the industry and offers exciting opportunities for growth.

What kind of customization?

Customization is appealing, for example, to manufacturers offering high-end products such as the low volume super cars where the car manufacturer is driving the first-tier supplier to develop distinct products with a luxury feel valued by car buyers.

Customization isn't restricted to the luxury market. Inkjet technology can be used to print faux leather decoration onto interior trim for automotive and aerospace industries. The customization can be both decorative but also functional where warning and information symbols can be printed.

Then there is the youth end of the market, where buyers buy low price cars but still want a degree of personalization. Here you need to personalise at full production speed. Inkjet is a great platform to achieve this.

What about medical?

Cyan-Tec inkjet systems offer medical device manufactures the opportunity to add value through decoration, marking, calibrating and coding. We regularly comes across new applications for its inkjet systems from blister packs to test tubes and inhalers to syringes. Inkjet technology can be used for example, to make asthma inhalers more attractive to younger users or to print dosage measurements on distribution devices.

Over the last 9 years that Cyan-Tec has been in existence, how has technology changed?

In the last 9 years, customers have become more aware of inkjet and what it can do. At the first InPrint, for example, people came to speak to us who had never seen inkjet before and were excited by its potential for their products. At the second show, people were more informed, and at the third they brought their products along to discuss. Year after year manufacturers increasingly came with real applications and a greater knowledge of inkjet technology and the possibilities for enhancing their products.

Who do you compete with as a business?

We don't really have direct competitors which is why we say our combined inkjet and automation capabilities are pretty unique in the industry. There are, of course companies that also provide inkjet systems but we have in addition a broad range of engineering, component handling, automation and robotics capabilities which we have found is attractive to customers looking for industrial inkjet equipment.

This doesn't make us complacent, we still have to deliver a cost effective solution, or the projects will not be viable. We are collaborative in our working style and work with technology providers to drive innovation across the industry because we believe that both our customers and our suppliers benefit from the provision of first class, properly engineered inkjet solutions for industrial printing and manufacturing environments.

We are proposing a project in the aerospace sector at the moment which involves, laser ablation, inkjet printing of a functional material, laser welding with robots, all in the confines of a cleanroom. We offer a one-stop shop proposition for these technologies, and I think we are unique in that

We invest in maintaining an advanced skill base across all engineering disciplines and therefore we have all of those skills in-house and we think this is currently a matchless capability in the inkjet industry and a difficult one to replicate.

How do you feel the market is growing?

The inkjet industry offers both challenges and opportunities and as with any hi-tech industry success builds success. This is why we work closely with technology providers and promote the advantages of Cyan-Tec's combined inkjet and automation expertise. We believe an industry can only grow if its technology providers stick to what they know and combine those unique skill sets to drive the industry forward.

In order for the market to grow for everyone from print head to ink suppliers, from software to module suppliers printing systems in the field must be shown to be robust and fit for 24/7 production. That is our expertise and we like to stick to what we know and shout about it.

In the industry generally people have inkjet printing on their radar and seem poised to take the next steps whilst growth is currently being driven by niche applications, high-end products and the early adopters wanting to get ahead of the game in their industry.

What would you regard is the biggest challenge?

Challenges arise from the sheer variety of applications and the complexity of combining various advanced technologies to build robust solutions. The industry needs to remain aware of potential pitfalls which could impede growth across the industrial inkjet community and at Cyan-Tec we are rising to the potential challenges.

As a relatively new technology, customers are hesitant to invest before seeing samples to demonstrate image quality and durability. This requires upfront cost on the part of the equipment provider with no guarantee of order placement. Again, both investment and a collaborative approach aids industry expansion and technological advances.

What markets in your opinion offer the best potential for growth into the future?

Décor and packaging are well known growth areas and for us this means big single pass print bars which we have in development.

The big growth markets in the industrial sectors are those where product handling, presentation and the production environment are a big factor. This brings us to another unique capability of Cyan-Tec in the inkjet industry. We have extensive robotic handling experience in advanced, high-tech industries which when combined with our inkjet expertise offers an unrivalled capability. Using robot directly for inkjet coating and decorating, we see as a big growth market as this plays to our strengths.

It's Cyan-Tec's unique ability to combine inkjet and a number of complementary technologies together with a fully integrated production line including loading, unloading, motion and data handling that gives us the biggest growth opportunity.

Robotic inkjet is an exciting and deliverable technology and Cyan-Tec's well-developed relationships with robot suppliers offers us great opportunities for expansion. And if you excuse the pun Cyan-Tec's robotic inkjet systems also offers the inkjet community the opportunity to reach markets previously beyond its reach.

These are exciting times! The future is what we in the inkjet community want to make it. Let's work and grow together.