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PARKLIFE

PLASTIC LOGIC WINS INNOVATION EXCELLENCE AWARD

Plastic Logic, experts in the development and industrialisation of flexible organic electronics, won the OLED Innovation Excellence award for its truly flexible AMOLED (active-matrix organic light-emitting diode) display technology. The award was announced on 4 November at the Global OLED Congress, a gathering of the world's leading display manufacturers and display industry analysts.

The displays are based on Plastic Logic's own lowtemperature process organic thin-film transistor (OTFT) array. The display has a bend radius of 0.75mm – so flexible that it could be wrapped around a pencil lead whilst still operating.

The plastic OTFT AMOLED differs from other array technologies in that it enables displays to be shaped, contoured and moulded: properties which will help manufacturers and system integrators to enable or even create new markets. Crucially these markets include wearable technology, where flexible displays unlock game-changing levels of utility in electronic products worn on the body or clothing.

www.plasticlogic.com



Above// a fully flexible organic thin film transistor by Plastic Logic (photo courtesy of Plastic Logic)



Above// Labour Party Parliamentary Candidate Daniel Zeichner (right) officially opens the new manufacturing facility with Owlstone co-founder Billy Boyle

OWLSTONE EXPANDS INTO NEW BUILDING

Owlstone Nanotech officially opened its new manufacturing facility at a ceremony attended by the Labour Party Parliamentary Candidate for Cambridge on 7 November at Cambridge Science Park.

Following major orders from US and Taiwanese defence customers, and promising results in medical applications of their technology, Owlstone has more than doubled its floorspace, and is now seeking to recruit for more than 15 new roles.

Founded in 2004 as a spinout from Cambridge University, Owlstone's business is based on a revolutionary microchip chemical sensor that allows the detection of trace amounts of chemicals present in the air, in breath and bodily fluids – in principle, almost anywhere.

The company's focus is now expanding to encompass medical uses of the technology and it has already completed an NHS-funded pilot study into the diagnosis of lung cancer using chemicals in the breath.

www.owlstonenanotech.com

RAPIDLY GROWING KISS APPOINTS NEW MD

Sarah Reakes has been promoted to Managing Director at integrated marketing agency Kiss Communications (KISS). A former Group Account Director at global advertising agency JWT, Sarah, who previously held the position of Strategy Director at KISS, has played a key role in the agency's success in recent years.

KISS has tripled its team in the last 12 months, doubled its turnover and built a wide portfolio of clients in the hi-tech sector including Bayer CropScience, Biochrom, The Technology Partnership (TTP), Horizon Discovery, One Nucleus and the Royal Society of Chemistry. Commenting on her new appointment, Sarah said: "This is an exciting opportunity. We work with some fantastic clients at KISS, who are extremely ambitious and willing to challenge the traditional boundaries of their industry. It is only with support of our exceptional team that we are able to offer these clients the guidance and support to define their marketing strategies."

www.kisscom.co.uk

Right// Sarah Reakes, Managing Director at Kiss Communications (photo courtesy of Kiss Communications)



DOMAINEX COLLABORATES TO TREAT ANTIBIOTIC-RESISTANT INFECTIONS

Domainex has begun a collaboration with Auspherix to develop new drugs to antibioticresistant bacterial infection. Announced on October 15, Domainex is the medicinal chemistry partner supporting the progression of Auspherix's novel anti-infective drug discovery programme.

Auspherix, an Australian early-stage anti-infectives company, intends to develop much-needed new drugs to fight the increasing problem of antibiotic-resistant bacterial infections, which have been widely reported as one of the most significant threats to patients' safety across the world. Small-molecule drug leads identified by Auspherix are being further refined with the help of the medicinal chemistry team at Domainex to deliver effective novel antibiotic drug candidates suitable for progression to the clinic. Eddy Littler, Chief Executive Officer of Domainex said, "We are thrilled to be working with Auspherix and combining their teams' extensive expertise in antibacterial research with Domainex's impressive track record in drug discovery. It has already proven to be a strong and fully integrated collaboration, and we are confident that our joint success will make a significant contribution to the treatment of antibacterial diseases."

www.domainex.co.uk

Right// scientists at the Domainex laboratories on Cambridge Science Park (photo courtesy of Domainex)





Above// Alan Richardson (left), CEO of Cambridge Consultants, with former CEO Dr Paul Auton (photo courtesy of Cambridge Consultants)

NEW FACILITIES OPEN AT CAMBRIDGE CONSULTANTS

Product design and development firm Cambridge Consultants has unveiled a £6m investment in new facilities to keep pace with its rapid growth. The firm recruited 90 people in the UK alone in 2014, taking its global workforce to 450.

The new facilities – at its Cambridge Science Park headquarters – have been called the Auton Building in recognition of Dr Paul Auton, who was CEO of Cambridge Consultants from 1983-1998. He unveiled a plaque on 1 December to mark the official opening of the new premises, which will house 120 engineers focused on developing wireless communication technology.

The growth of the firm is set to continue, with equally strong recruitment plans for 2015 – including around 40 additional wireless job opportunities. Work has already started on the next phase of the building expansion plans, with the foundations being laid for a three-storey extension to the new Auton Building.

www.cambridgeconsultants.com

VOLUNTEERS GET BACK TO NATURE

Swapping labcoats and goggles for waterproofs and wellies, employees at Cambridge Science Park have recently taken part in volunteering activity days at local nature reserves.

Organised by Cambridge City Council, volunteers got stuck into tasks such as enlarging ponds, laying hedges or making otter holts, focusing on site-specific conservation goals and promoting biodiversity.

Victoria Smith, Local Nature Reserves Officer, said: "It's great to work with these enthusiastic

groups of employees and we really achieve a lot in one day. For employers, it's a fantastic teambuilding exercise which is also free! The volunteers really seem to enjoy working together outdoors on a physical task and getting to know each other in a different environment. For those who live in Cambridge, they can also see how the site develops over time."

Groups of up to 20 can apply to participate in volunteering activities – email victoria.smith@ cambridge.gov.uk for more details.



Above// volunteers work together at a local nature reserve (photo courtesy of Victoria Smith)

Windows of opportunity

AUTOINJECTOR INNOVATION FROM OVAL MEDICAL TECHNOLOGIES

Working to revolutionise the global autoinjector market, Oval Medical Technologies has not been afraid to side-step convention in order to design better devices. Catalyst spoke to founder and Chief Technology Officer Matthew Young to find out more.

When Matthew decided to found Oval Medical Technologies back in 2009, it was certainly a risk. But after working for more than a decade at the world-renowned medical device designers Team Consulting, it was clearly a field he knew intimately. He'd personally been involved in the development of 12 inhalers, 8 autoinjectors as well as a variety of insufflators, insulin pens and other devices. No surprise, then, that he'd begun to notice both the major failings of existing products on the market and the opportunities these presented.

"There was a very big difference right from the start: we began by looking at the market first and then working on the technology"

His time at Team Consulting was also a period in which the demand for autoinjectors grew significantly. "The reason for this is that they're a much, much simpler way of delivering systemic drugs," he says. "Compared to an inhaler, for example, you don't have to change the formulation and the dose accuracy is typically much more precise. The only downside of autoinjectors is that you have a needle. Conversely, you could argue the only upside of inhaled systemic drugs is you don't have a needle."

Added to these inherent advantages, the importance of the autoinjector as a method of drug delivery has been elevated further still by the development over the last decade of a new group of drugs called biologic response modifiers. These so-called 'biologics' are complex, expensive and often highly viscous drugs, and their potency and fragility make them ill-suited for non-invasive delivery systems. For Matthew, however, the autoinjector devices that were being used instead were saddled with a range of drawbacks that made them an unattractive choice for patients and drug manufacturers alike.



Above// Optical measurement of autoinjector components



Above// Oval Medical 1ml autoinjector, less than 10cm in length

"What really struck me was that autoinjectors were extremely poor at serving their market," he says. "They had high levels of unreliability. In fact almost all of them had been recalled at some point – some of them with multi-billion dollar products in them. Patients didn't always understand them and struggled to use them properly.

"I felt that the market had got to this point by a continuous process of small, organic changes; if you were starting again, you wouldn't necessarily get to the same place. The whole process had been driven by a highly conservative incremental development approach and no one had properly innovated."

It was in this context that Oval Medical Technologies was formed, as Matthew explains. "We saw a space in the market between these very conventional, unchallenging autoinjector devices and the very radical needle-free injectors and inhaled systemics," he says. "No one was using needles and really innovating – making a range of small but significant changes that would ultimately result in a step change in performance. That was basically our starting point."

Working initially from his kitchen table, Matthew saw that an alternative developmental approach would be critical to overcoming the problems presented by existing devices. "There was a very big difference right from the start: we began by looking at the market first and then working on the technology," he says. "It sounds quite obvious but it's still quite unusual in this field. In my time, I've seen the failure of too many technologies that went looking for a market."





Above (top)// Inspection of the drug container Above (bottom)// Analysis supported by mathematical models

First and foremost, the growing team was focused on making better products that could be used more easily and effectively by the people who needed them. "We really thought about who might be using these devices. We wanted to make autoinjectors that could be used by everyone – including people who were older, younger, more sick, less able, frightened or less well trained.

"That meant we really looked at some of the cognitive and emotional impacts of the device. For example, ours is much smaller and more portable than conventional autoinjectors – it doesn't look much different from a highlighter pen. It's also very obvious which end contains the needle and

we've also made it very clear, both visually and through an audible pair of clicks, when the delivery starts and finishes. We've made a device that's really safe and easy to use, but also reduces any potential fear or emotional burden connected with using an autoinjector."

"We also set out to make our device work with a far wider range of formulations than can be used in traditional autoinjectors. Compared to other devices, we can deliver very viscous drugs such as biologics. We've also eliminated the use of contaminants such as silicone which could narrow the potential choice of drugs we can work with. Ultimately that means we can work with a much wider range of products and help get them to market more quickly."

"I've sometimes charted the development of our company by counting the number of windows we've had at different times"

Another key target for the Oval team was improving the reliability of autoinjectors, an issue which would largely focus on the spring-based delivery system. Put simply, in a conventional device, if the spring is too weak, the plunger sticks and the drug doesn't deliver. If the spring is too strong, however, the glass syringe holding the drug will break. This is a complex engineering challenge due to high variability in strengths of different batches of glass syringes and also the impact of silicone lubricant on glass over time, which can result in a twentyfold difference between the friction encountered in a new syringe compared to one which is several years old.

"These were problems we really needed to respond to," explains Matthew. "We cross-fertilised technology from dry-powder inhalers and some technology from insufflators to come up with our novel solution. So we've made plastic syringes and engineered some features into them that mean our upper and lower limits of failure are huge – our container can take huge forces without breaking but it also has very low stiction [stopping friction]."

These and other innovations have led to the development of a device that is attracting significant interest from drug companies across Europe, the Far East and North America. In 2015, Oval will begin its own clinical trials for the delivery of a generic drug which it ultimately hopes will reach the market.

"We've already worked with a number of clients on their drug delivery programmes, but those are confidential so we're not able to share that data," he says. "So now we're putting our own investment money into this trial because we believe it's going to produce some exciting results that we can publish for everyone to see."

Five years since it was founded, the year ahead looks set to be a significant one for Oval. Looking back over the company's evolution, Matthew reflects upon the journey so far. "In presentations I've given, I've sometimes charted the development of our company by counting the number of windows we've had at different times," he says. "Sometimes that number has grown very slowly, sometimes there have been a lot of new windows; sometimes there's been a slight reduction and sometimes it increases again. It doesn't stay static for long and we've definitely got a lot more windows than when we started.

"We've moved about a dozen times here in the Innovation Centre according to our growth – the flexibility to do that is really important to smaller companies such as ours. And five years down the line, I'm still motivated by the same things: I'd like to help people and I'd like to get drugs to market. But what I never realised when I started back in 2009 was just how much fun all this would be."

www.ovalmedical.com

Less is more

THE CHANGING AGROCHEMICAL LANDSCAPE WITH BAYER CROPSCIENCE

Having established itself as the UK's number one agrochemical company, the focus for Bayer CropScience is firmly on the future. Catalyst spoke to Communications & Government Affairs Manager Dr Julian Little about the past, the present and what lies ahead.



As a subsidiary of Bayer AG, Bayer CropScience is part of a global commercial and scientific success story that stretches back more than 150 years. The German chemical and pharmaceutical giant was founded back in 1863, among other things to exploit some of the discoveries that had emerged from the nascent synthetic dye-making industry. Having realised that, alongside colouring fabrics, some synthetic dyes were also very good at killing certain agricultural pests, Bayer scientists developed some of the very first insecticides which led to significant growth in agricultural yield.

In 1899, Bayer patented what is still one of the best known and widely used pharmaceutical products in the world: aspirin. It was only as a result of the aftermath of World War I that Bayer lost the trademark in countries such as the US, France and the UK. Nevertheless, even today, in more than 80 countries worldwide the popular analgesic is still known as Bayer Aspirin.

A few chapters in the Bayer history are somewhat darker. "We've had some spectacular failures as well," explains Julian. "For example, we also patented heroin. It was initially conceived as a flu remedy which was aimed at being slightly less addictive than the things people were using up to that point. Obviously some things don't turn out as planned."

A long-established market leader in pharmaceuticals, Bayer's global standing in agrochemicals has been a more recent development. "When it comes to the agriculture side, Bayer wasn't one of the top three worldwide until around the year 2000 when we purchased Aventis CropScience from Aventis," he says.

"If we don't innovate we'll die, because other companies will always bring in a generic version over time."

"Now we're probably the second largest agrochemicals company worldwide, developing and manufacturing herbicides, fungicides, insecticides and other things that allow farmers to grow high-quality, affordable food. And that's always been the key thing for us: providing farmers and growers with tools that they can use to produce the food that we all need at the price we want it."

The global growth mirrors a rapid shift of gears for Bayer CropScience in the UK and the vindication of an approach that places quality at the heart of its commercial strategy. "Since 2000, we've nearly doubled our market share in this country by selling some of the most expensive products on the market," explains Julian. "What that tells you is that Bayer CropScience is an extremely innovation-based company and that our ultimate customers, the farmers, like the products we are offering. Innovation is the absolute key to our business. If we don't innovate we'll die, because other companies will always bring in a generic version over time."

The company's UK market share in agrochemicals is considerably larger than its nearest competitor. And with the first major sales achieved from its seed business in the UK in 2013, there is a genuine sense of anticipation as to what the future could bring. Unsurprisingly, perhaps, high expectations are the result of Bayer's unrelenting focus on finding opportunities where others may have grown tired of looking.

"We've just begun our wheat seed business and it's probably one of the most exciting areas in our business at the moment," says Julian. "That might surprise some people because traditionally there has not been that much innovation in wheat breeding over the last 20 or 30 years. For example, if you compare some of the dramatic increases in productivity and quality in crops like maize, soy, cotton and oilseed rape, wheat has only achieved small incremental improvements in yield year on year – performance has plateaued.

"It's basically because wheat is a very strange crop. It's a combination of a number of different plants and has developed from over 1,000 years of breeding. That makes the genome very complicated and difficult to manipulate. In comparison: maize, dead simple; cotton, dead simple.



Above// Bayer CropScience research farm at Great Chishill, Cambridgeshire and wheat trials (all article images courtesy of Bayer CropScience)



Above// Inspecting wheat trials Below// Encouraging biodiversity with owl and bee boxes



"But instead of seeing stagnation, we've said we need to look at wheat as a growth crop, it is an opportunity for a company like us. We want to produce a truly innovative high-performance hybrid wheat, which doesn't really exist anywhere in the world right now. It's not just Bayer that's looking for this, but we believe that a combination of our knowledge, our partnerships and our international access to different wheat lines gives us a massive head start."

Unsurprisingly, perhaps, this new imperative comes hard on the heels of major upheavals in the wheat market in recent years, including a doubling in price in 2008 and a subsequent redoubling in 2010. It's also no coincidence that the issue of food security in the UK has rarely been higher on the political agenda in the modern era.

"We've only had something like 60% self-sufficiency in food in the UK in recent years, which makes us highly dependent on what happens elsewhere," says Julian. "So we're really pleased that the UK Government is now starting to respond to this issue and launched its UK Strategy for Agricultural Technologies last year, which is aimed at identifying and developing the opportunities and strengths of the UK agri-tech sector, much like its Life Sciences Strategy.

"For a government to say 'we want modern productive agriculture' is a massive step forward - traditionally right across Europe, governments have been de-incentivising agriculture for the last 20 years. To us as a company, it's really encouraging for our work in the UK and another reason why we were really excited to announce in June this year that we had actually started wheat breeding here in the UK - in fact, just to the west of Cambridge."

"Ultimately, we're helping farmers respond to the expectation that they can produce more food on less land with fewer natural resources."

Situated on Cambridge Science Park since 2007, the location puts Bayer CropScience "in the absolute centre of productive agriculture in the UK" according to Julian. While much of its research activities take place at other Bayer European centres, the Cambridge hub is a focal point for UK development including the coordination of field activities as well as ongoing projects with around 25 different UK universities, research institutes or SMEs.

Producing and selling a wide range of pesticides, insecticides, herbicides and more, Bayer CropScience inevitably finds itself at the heart of the heated debate regarding the role of agrochemicals in farming and their effects on our environment. Julian believes the company is pioneering new solutions to these complex issues.

"We've always been looking at how you can minimise the use of our products," he explains. "That might seem strange, but we believe if you've got the best and most targeted products, you can use less of them. We also work a lot with farmers to help promote biodiversity. For example, we believe farmers should focus their efforts where biodiversity, and the potential to increase biodiversity, is greatest, like around the margins of their fields rather than in fields themselves. We're sharing ideas and practical approaches that are achievable and affordable on working farms.

"Ultimately, we're helping farmers respond to the expectation that they can produce more food on less land using fewer natural resources. Globally, in 1950 one hectare of land was needed to feed two people. Today it's four people and in 2050 it will be six people. This is a challenge that affects us all, so we're constantly looking for new and innovative solutions."

www.bayercropscience.co.uk

A shining light

SIR JOHN BRADFIELD, 1925-2014

One name alone is synonymous with the foundation of Cambridge Science Park: Sir John Bradfield, Senior Bursar of Trinity College from 1956 to 1992. Following his passing in October last year, Catalyst remembers his life and work.

It is perhaps of no surprise to those who knew him that Sir John was on his way to a Trinity forum for tenants of Cambridge Science Park when he died. Indefatigable, curious and forever passionate about one of his proudest legacies, the 89-year-old was always keen to find out more about the wide range of companies, large and small, established on the site.

These days more than 100 organisations and 5,000 people work on Cambridge Science Park. International giants such as Toshiba and Philips have chosen it as a key research site while home-grown success stories such as Abcam, Cambridge Consultants and Xaar have helped, along with many others, to make it a globally renowned brand.

Of course, it wasn't ever thus. Trinity College had owned the 140-acre plot of land since 1546, a site which had more recently been used by US Army to prepare tanks and vehicles for the D-Day landings and then fallen largely into disuse. Having become Senior Bursar in 1956, Sir John had already begun diversifying the college's traditional strategy of investment in agricultural land to grow a portfolio of commercial land and financial equities. As the 1960s drew to a close, he moved fast after spotting an opportunity.

"It had taken Trinity about 12 weeks (including a Christmas vacation) to decide to create the first Science Park in England, which was much visited and much copied"

"In the 1960s, Harold Wilson urged all universities to think more about their links with industry in the light of the white-hot technological revolution," he said. "And in 1969 a University Committee, containing our own muchloved Charles Oatley, recommended a moderate growth of high-tech industry in Cambridge."

After various discussions over the Christmas period, Sir John announced a radical plan with which to start the new decade. "[I] recommended to the Council at their first meeting in January 1970 that we should try to develop a Science Park on the Milton Road land," he said. "They agreed – and we were in business. From the date of publication of the University report, it had taken Trinity about 12 weeks (including a Christmas vacation) to decide to create the first Science Park in England, which was much visited and much copied – locally, nationally and internationally."

Although it took two years to get the necessary consents from local and central government, his vision for a Cambridge Science Park – Europe's first such centre of its kind – had begun to take shape.

"[A]t last in late 1972 we got clearance based on a unique use clause and other conditions to ensure the place remained a proper science park, with appropriate occupiers, low density and good landscaping," he said. "The rumour that it was

all to enable me to indulge my passion for planting trees is false – but the fine cedars developing there will be a joy long after the present buildings have passed away."

Right from the start, Sir John saw that establishing and developing the links between the University and hi-tech tenants was critical to the success of Cambridge Science Park. "With help from numerous Fellows we worked hard on University liaison for tenants – e.g. library access and apparatus loans... plus talks on current University research," he said. "We subsidised joint research schemes between Science Park companies and University labs – they don't produce Nobel prizes, but do produce invaluable human contacts, which is what it's all about."



Above// Sir John Bradfield in the Wren Library, Trinity College, Cambridge



Above// Tree planting to commemorate the opening of Cambridge Science Park with Sir John Bradfield (centre), Sir Alan Hodgkin (left) and Lord Adrian (right)

His evident fascination in science and technology was deep rooted. Sir John won a scholarship to study natural science at Trinity College in 1942 and he became a research fellow in zoology in 1947 and then later a resident biologist at the Cavendish Laboratories. He commented: "[It was] all very exhilarating. But my Fellowship was running out. The Cavendish job was not secure. Jobs in cell biology were hard to find – it was not the 'in thing' which it is now. Then out of the blue in 1951 the College invited me to be Junior Bursar."

The remarkable business acumen and investment savvy which became apparent throughout his long career might have been hard to predict from the outset. Appointed Senior Bursar in 1956, Sir John later reflected: "There was the slight difficulty that I knew virtually nothing about investment in property or securities". Nevertheless, he did not view this as an insurmountable obstacle. He spent a month in an investment bank and then set out on the course of the autodidact. "I read a lot too", he said, "and learned in a practical way by investing small sums of my own modest savings – nothing sharpens the mind better than losing one's own money."

The lessons were clearly well learnt. Alongside Cambridge Science Park, Sir John also helped to guide the transformation of Felixstowe docks, where Trinity was a significant landowner, into Europe's largest container port today. Indeed, during his tenure as Senior Bursar, he oversaw a 75-fold increase in external revenue in money terms (six-fold when adjusted for inflation). An extraordinary achievement, not least for a man who described himself as "totally unprepared" for the role when he started. "I'd never seen a stock certificate or a lease of a piece of land or whatever really," he said, "but if you listen carefully to good advice, you can soon pick it up."

Dr Chris Morley, Fellow of Trinity College and Assistant Bursar with Sir John from 1985 to 1991, saw at first hand how the man worked. "He had tremendous energy and work ethic, that's the first thing to say," he remembers. "He was very good at getting on with people, I think that was part of the secret of his success, in that he always looked up information about people, always knew who he was meeting. He could talk to anybody. He also had a very clear-minded brain, so he immediately saw the implications of any suggestion, about business particularly."

"We subsidised joint research schemes between Science Park companies and University labs – they don't produce Nobel prizes, but do produce invaluable human contacts, which is what it's all about"

For many, retirement from such a demanding role after more than three decades might have presented the well-deserved opportunity to ease the unrelenting pace he had consistently set – "my normal working day was 6.30am to 7.30pm (with the FT and property journals after that)", he described. But for Sir John, it was simply the start of a new chapter. Drawing on his wealth of experience, he took on two contrasting yet highly significant public roles: the first chairman of the Addenbrooke's NHS Trust and the last chairman of the Commission for New Towns. After being appointed CBE in 1986, he received his knighthood in 2007.

On October 13th 2014, Sir John passed away at Trinity College, en route to the aforementioned Cambridge Science Park Forum. The founding light may have gone out, but, as he would have wished, the fire is truly lit.

PARKLIFE connections

Cambridge AWiSE (Association for Women in Science & Engineering) is a multidisciplinary membership networking organisation composed of individuals from institutions, businesses, associations and other organisations all of whom share the common goal of advancing the interests of women in science, engineering, technology, maths and medicine. Cambridge AWiSE holds regular meetings and events; for details see the website or get in touch.

Web: www.camawise.org.uk Email: info@camawise.org.uk Twitter: @camawise Linkedin: http://www.linkedin.com/groups?gid=43043

Cambridge Enterprise exists to help University of Cambridge inventors, innovators and entrepreneurs make their ideas and concepts more commercially successful for the benefit of society, the UK economy, the inventors and the University.

Web: www.enterprise.cam.ac.uk Email: enquiries@enterprise.cam.ac.uk

Cambridge Network is a membership organisation. We bring people together – from business and academia – to meet each other and share ideas, encouraging collaboration and partnership for shared success. With over 1,200 corporate members, including start-ups, SMEs and global corporations, Cambridge Network represents the majority of the technology businesses in Cambridge.

Web: www.cambridgenetwork.co.uk Email: Claire.Ruskin@cambridgenetwork.co.uk Tel: 01223 300148

Cambridge University Technology and Enterprise Club

(CUTEC) is a leading student-run organisation that seeks to nurture and enhance the entrepreneurial spirit amongst academics and students. The club is mainly run by students who are passionate about science and entrepreneurship, supported by advisors drawn from the local business community.

Web: www.cutec.org Email: info@cutec.org **CHASE** (formerly the Cambridge Hi-Tech Association of Small Enterprises) is a lively networking group for entrepreneurs, start-ups, small firms and people interested in business and hi-tech, based in Cambridge.

Web: www.chase.org.uk

One Nucleus is the largest membership organisation for life science and healthcare companies in Europe. A not-for-profit company with more than 470 member organisations across the world (mainly Cambridge and London based), its mission is to maximise the global competitiveness of its members. Its core activities include networking events (from eight to 800 delegates), training, a Group Purchasing Consortium which saves its members £4 million per annum, special interest groups and an international strategy.

Web: www.onenucleus.com Email: info@onenucleus.com

Science Technology Network (STN) is an online database service that provides global access to an integrated network of the most important and comprehensive chemistry, sci-tech and patent databases from the world's most respected producers.

Web: www.stn-international.com



The Cambridge Science Park

is managed by Bidwells on behalf of Trinity College. Cambridge Science Park tenants can post news, events and jobs free on www.cambridgesciencepark.co.uk Twitter: cambridgesciencepark@camsciencepark



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Front cover// image courtesy of Oval Medical Technologies



Innovation Centre, unit 23, home to over 30 companies, for a full list of occupants go to www.cambridgesciencepark.co.uk



This year we celebrated 25 years since Oakland Innovation was formed. We're very much a forward-looking company, but it's still an important milestone for us and a chance to take stock of what we've accomplished.

We've built a great reputation in our market, have an impressive portfolio of clients, and even though we've straddled two, or maybe even three, recessions we've remained profitable and successful. And although the business has changed significantly over the years, we're still working with our very first client – our business is founded on strong and long-lasting business relationships. Growing our business, retaining our clients and building a talented and motivated workforce – these are all achievements of which we're very proud.

Initially we started out using a publishing business model in what was the preinternet era. We produced a directory which was aimed at forging connections between UK universities and industry. In the mid-1990s we realised that what the market needed was to forge very specific partnerships with experts around particular technical issues and challenges. Initially facilitating these connections by pinpointing the right experts around the world, we gradually developed into a consultancy business and now help companies to resolve their technical challenges and explore new business opportunities.

"I believe we have to embrace diversity because it's absolutely fundamental for the success of our economy"

Now we have a team of around 50 really bright scientists and engineers who are able to solve problems in their own right, and augment their own skills and knowledge by harnessing and integrating insight drawn from experts in sometimes very narrow areas of interest right around the world. In this way, we develop informed recommendations and solutions for our clients. We're working for some of the biggest companies in the world, generally large corporations, especially in the fast-moving consumer goods sectors including food and beverages, beauty, homecare chemicals and materials. The pace of innovation and the breadth of expertise required in these industries are some of the reasons these companies come to us to help them stay ahead of the competition.

The global spread of our clients is reflected in our workforce – we have over 20 different nationalities working here. That's hugely important to us as a business, not only because we can draw on the brightest minds from right across the world, but also because they've got extensive local knowledge and insight.

One of the great things about Cambridge is that it has this great pool of diverse talent from all across the world. That's very much in the Cambridge DNA and it's important we don't lose sight of the value that having so many different experiences, cultures and nationalities in one place brings to our city and to our economy. At Oakland, we're lucky because we have an excellent HR Manager, but the level of administration necessary for small businesses to employ non-Europeans can make this important process very burdensome. I believe we have to embrace diversity because it's absolutely fundamental for the success of our economy.

"I think the Cambridge brand has changed: it's more mature, more commercially savvy, more grown up"

Of course the Cambridge hi-tech scene itself has changed significantly in the last 25 years. It was perhaps more maverick, more small-scale, more start-up entrepreneurial back then. Over time, we've seen the arrival of many more global hi-tech companies in Cambridge, which has helped build a very healthy technology ecosystem and infrastructure; in turn, I believe there are more opportunities for businesses of all sizes. As a result, I think the Cambridge brand has changed: it's more mature, more commercially savvy, more grown up.

Nevertheless, there are some major issues we still face here: first and foremost, the cost of living. Property prices here make it very difficult for people, especially at entry level, to live in or around Cambridge. You have the contradiction of younger people being forced further and further outside the city and making longer commutes. We have people who travel into work every day from places near Letchworth and Hitchin. For businesses, ultimately, it means that highly talented employees might look elsewhere for work if they can't afford to live here.

The hi-tech sector is very vibrant in Cambridge, but I also think it would be very healthy for our local economy if it was more diverse in terms of the spread of industries. A greater breadth is good not only because different sectors expand and contract at different times, therefore providing more overall stability, but also because it encourages the cross-fertilisation of ideas and expertise. For example, we work a lot in food and beverage sector, which is not very strong in Cambridge. But it's a great industry and certainly there's a lot of interesting science and technology involved with it.

At Oakland, we'll obviously continue to evolve. But our core proposition won't change – that we're a group of smart, technically literate, commercially astute people that help make our business a powerhouse for innovation, understanding and insight.

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