



Established in 1970 by
Trinity College Cambridge

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catalyst

CAMBRIDGE SCIENCE PARK NEWSLETTER

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Get your company in *Catalyst*

Catalyst is the twice-yearly newsletter for Cambridge Science Park and is always interested in hearing from companies based on the Park who would like to be featured in forthcoming issues.

Catalyst is distributed to all companies on Cambridge Science Park and around 1,000 other local, national and international organisations with an interest in hi-tech development.

There is no fee involved in appearing in the newsletter – if you'd like to get your company more widely known among fellow tenants and the broader hi-tech community, please email joanne.uttley@bidwells.co.uk for more details.

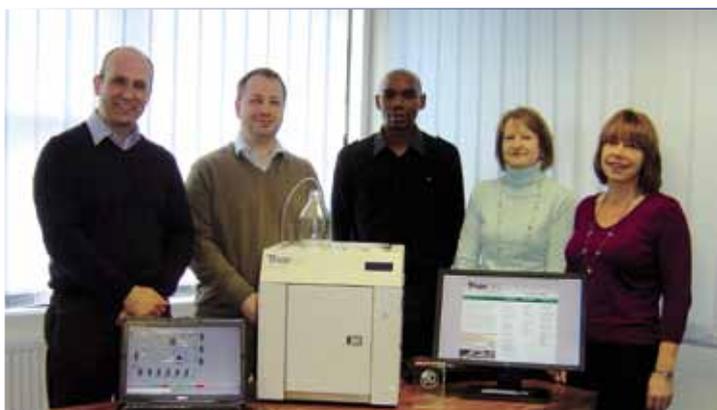
New arrivals



Owlstone

This Cambridge University spin-out has developed radical new MEMS-based miniaturised chemical detection technology for use in diverse industry sectors ranging from homeland security and defence to personal healthcare, industrial, automotive and environmental applications. Founded in 2004, the company now operates from Cambridge Science Park and Suffern, New York.

www.owlstone.co.uk



TharSFC

TharSFC, a Waters Company, is a world market leader in small and large scale chromatography instrumentation, and is rapidly expanding its presence globally in the field of drug discovery and development. TharSFC provides solutions to research scientists in the pharmaceutical, petrochemical, biotechnology and chemical industries. Their laboratory instruments enable scientists to reduce the time required to discover and develop new chemical compounds, allowing them to bring new products to market faster.

www.tharsfc.com

A plan for success

Cambridge University's competition for entrepreneurs

Europe's most successful student-run business planning and creation competition is now celebrating its tenth year. Catalyst spoke to Amir Chaudhry, President of Cambridge University Entrepreneurs (CUE), about helping to turn ideas into reality.

In purely financial terms, the figures alone are impressive. Over the last nine years, CUE has awarded over £360,000 in grants to 47 business ideas. These companies have since raised more than £28 million in further funding and are currently valued at over £42 million; former entrants include current Cambridge Science Park tenants such as Cambridge Temperature Concepts, Enecsys, EnVal, Optisynx and Owlstone.

Less quantifiable but arguably more significant in the long run, the business planning and creation competition run by CUE helps instil a "can-do" attitude and a sense of vision in would-be entrepreneurs taking their first steps in the unforgiving commercial world.

"We're unique for a university business planning and creation competition on this scale because we are run solely by students," Amir explains. "I think that makes us a lot more approachable for entrants who benefit from getting a lot of contact with us throughout the competition process."

The competition which is at the heart of CUE's activities combines three distinct phases, building in intensity and opportunity over the course of the academic year. In the first phase, participants are invited to outline their business ideas in 100 words or less to win one of 20 £100 prizes.

The second phase of the competition offers up to 10 cash prizes of £1,000 for business summaries which elaborate on an idea and outline the steps to making it a reality.

The third and most prestigious phase of the competition is the £5k challenge, where entrants must first provide a 3,500-word extended business plan summary. Finalists from this stage are then invited to produce a full business plan (and a demo for software ideas) and pitch their ideas directly to a panel of business experts and angel investors. The



Above and below: students at a CUE event

ultimate goal is to win one of six £5k prizes to be used for the creation of the new business.

"This competition is a great way for companies to tap into a fantastic resource of young, highly motivated and creative thinkers"

Each of the three phases of the competition is always open to new entrants, so everyone has a chance to take part during the year. The only requirement is that one member of the team must be a current member of the University.

"A company like Owlstone is a great example of how the competition can encourage groups of individuals to turn their ideas into a commercial reality," says Amir of the chemical detection and sensing technology company (see page 6 for details) which was formed after participating in the 2003/04 competition.

"Although they didn't win the competition, the founders were inspired by their involvement to take their idea further and used their runners-up prize to develop their concepts and secure funding. Now they are an international company with a unique technology that has global potential – and this is typical of many companies that have been involved in our competition."

Amir's current role as president ends in July this year, but he looks forward to the continued success of the competition in years to come.

"I think the current economic situation is actually a great driver for innovation," he says. "With fewer jobs out there for graduates, I think we are going to see people becoming more creative and entrepreneurial in their career thinking."

"I would encourage local companies to think about getting involved in our competition and events to tap into this fantastic resource of young, highly motivated and creative thinkers. For example, some entrants have had people from existing companies sitting on their board of directors or as mentors. There is great talent here and I think any company would benefit from associating with it."

To become involved with Cambridge University Entrepreneurs visit www.cue.org.uk or email info@cue.org.uk



Developing a niche

Helping to develop new treatments for cancer with Hypoxium

tumours, and assays using a panel of isogenic cell lines licensed from Horizon Discovery. These isogenic cell line pairs are genetically identical, but have a stable single mutation or double knock-in or knock-out mutations of endogenous genes using proprietary gene engineering technology."

Dan helped establish Hypoxium in late 2006 with cell biologist Kyla Grimshaw; the company began trading in March 2007 and Dan joined in January 2008 as CEO. Having previously co-founded outsourced solid state research service provider Pharmorphix, he has been able to draw on his start-up experience in helping Hypoxium to set out on the right track.

"The learning curve is not quite as steep as the first time you set up a company," he says. "You've been through some of the approaches that work and those that don't, but you never stop learning.

"For example, putting in a good infrastructure at the beginning is vital. This means that even though you're a small company when you start out, you've got the potential to grow into a bigger company without hitting the end of the runway and having to reinvent yourself. This frees up time to focus on growth and meeting client expectations.

"Controlling your costs is also critical, to make sure you really understand the numbers and finance behind the business and the true cost of the product or service you're offering. However, by far the most important factor of success is always people. This is the hardest to get right and involves balancing the needs of your clients with the needs and expectations of the people within the company, your suppliers and your shareholders.

"You've got to focus on your clients' needs because they are your business, but also ensure that your own people are focused on what your company is trying to deliver and that they are motivated and rewarded."

Despite the growth in outsourced services for the pharmaceutical industry, Dan believes that a specialist focus helps to differentiate Hypoxium from other potential competitors.

"Our services are essentially split down into two core areas. The first area, and the majority of what we do, is about providing very flexible assay and assay development services, from simple growth assays through to more complex mechanism-of-action studies.

"Our goal is to help commercial and academic research organisations develop a general data pack beyond basic in vitro profiles. We design bespoke assays to provide mechanism-of-action data that ultimately adds value and confirms scientific rationale. When this data is combined with other chemical or pharmacological data, it creates a valuable package which can be used for outlicensing discussions, fundraising or to support the internal decision-making process.

"The second focus of Hypoxium is to provide niche assays and discovery tools. Over the last two years, this has involved developing two areas: assays conducted under very low oxygen levels (hypoxia) that replicate the microenvironment common in solid

Hypoxium is an ambitious young company providing oncology-focused cell biology services. Catalyst talked to Chief Executive Officer Dan Cowell about setting up the company and the challenges ahead.

"Over the last ten years, it's become routine for drug discovery companies and universities to outsource chemistry services," Dan explains. "But particularly for early-stage biology, using outsourced services is not so common and we felt there was an opportunity to develop a space in this market. This opportunity has also been driven by companies pursuing drug discovery programmes on either a semi-virtual or completely virtual model.

“By focusing on the one therapeutic area of oncology, we’re able to create a niche company that is very capable in a particular area and can really add value for our clients through our specialist knowledge while remaining cost effective.

“With Hypoxium, it’s not just about running a routine assay and providing a result. We’re able to provide insight into the best type of assay to run and the best way of doing it, as well as how to interpret results and get the most use out of them. We have to try to really understand what our clients want, making them not only satisfied, but also pleased and positive about their interactions with us – that’s the kind of service that makes us stand out.

“We all come from industry backgrounds, so we’re very focused on delivery, quality and good communication with our clients. When people outsource, they don’t expect it to go quiet. We want our clients to feel as if we were a part of their internal team and that they can rely on us to keep them fully informed at all stages of a project. Nobody wants to be stopped in a corridor by a manager or investor asking how their project is going and not to have an answer.”

Specialising in biology services for early-stage oncology research makes sense from both a business and an ethical perspective, according to Dan.

Above left: compound profiling under hypoxia
Below: protein expression analysis by Western blotting

“There have been a lot of advances in our understanding of cancer in recent years and how to target the mechanisms which allow cancer cells to grow and survive. This means that there are a lot of new treatments being devised in this area which we can potentially add value to.

“Even though the compounds that we’re working on are usually at a very early stage, some of them will progress through into the clinic and eventually make a difference to people’s lives.

“The new drugs that are coming out on the market are a lot more targeted than some of the older drugs, so hopefully the potential therapies that we’re working on will not only attack the disease more effectively but also give people a better quality of life while they are having treatment.”

Having previously worked on Cambridge Science Park with Pharmorphix, Dan was glad to remain on the site at Hypoxium’s office in the Cambridge Science Park Innovation Centre. “Trinity College is very experienced in providing the right type of facilities and flexible leases that new hi-tech companies need,” he says “It has made it very simple to get up and running fast. We have interactions with some of the other businesses here in the Innovation Centre and even if they’re not working in our field, it’s always useful to share experiences and try to learn from them.”

Having doubled its revenue in 2008, Dan foresees ongoing aggressive growth but remains aware of potential pitfalls ahead.

“We are targeting a further doubling of our revenue over the next couple of years,” he says. “The big challenge in growing a company is making sure you don’t overstretch yourself. You want to be profitable and sustainable both now and in the future. So that means balancing growth and quality – you don’t want growth to come at the expense of quality.

“Ultimately, we’re trying to build a stable company which provides high-quality research support for the development of new treatments for cancer – that’s where we’d really like to make a difference.”

www.hypoxium.com

Hypoxium

The client’s view

“The work Hypoxium carry out for us is critical to all our research programmes and in particular the specific assays performed under oxygen starved conditions. Hypoxium provide a highly professional service responding quickly to our requests. I would certainly recommend Hypoxium as a service provider which has on several occasions worked beyond my expectations to generate our data.”

**Bob Boyle, Executive Director,
 Sentinel Oncology**



One in a billion

Novel chemical detection technology from Owlstone



Owlstone's miniaturised chemical detection technology is helping to change the face of a multi-billion dollar market spanning a diverse range of industry sectors. Catalyst spoke to Business Development Manager Chris Prior-Jones to find out more.

From homeland security and defence to personal healthcare, industrial, automotive and environmental applications, Owlstone has developed a groundbreaking range of chemical monitoring and detection solutions that are able to detect substances at part-per-billion levels of accuracy.

"The Owlstone story began when co-founders Andrew Koehl, David Ruiz-Alonso and Billy Boyle teamed up as researchers at the University of Cambridge to develop and commercialise a novel chemical detection technology," explains Prior-Jones.

"An initial research and business plan won them a runners-up prize in the 2003/04 Cambridge University Entrepreneurs business planning competition. This was the foundation to secure seed funding from

Advance Nanotech, which is an American company providing finance and support for the commercialisation of nanotechnology innovations."

The breakthrough solution was the development of a miniaturised platform for Field Asymmetric Ion Mobility Spectrometry (FAIMS), a sensitive and proven method for trace detection. The coin-sized microchip sensor at the heart of Owlstone's technology is a hundred times smaller and a thousand times cheaper than other currently available devices. The result is a low-cost yet highly adaptable platform for the detection of organic and inorganic chemical agents in extremely low concentrations.

When Owlstone established as a commercial entity in 2004, the company looked first to the US market to secure a number of research grants from major contractors including the US Department of Defense and the US Air Force.

Initially concentrating on major research projects looking at explosive detection and

cabin air-quality measurement technology, the company also began to build a team of people concentrating on the development of portable detection instrumentation for use across a diverse range of market sectors.

"Lonestar can detect if a plant is ill before it shows any visible signs of being ill"

The result was the launch of Lonestar in 2007: a revolutionary portable detection unit incorporating Owlstone's proprietary FAIMS technology which can provide both rapid alerts and detailed sample analysis. Able to operate at part-per-billion accuracy, the solid-state system can be adapted via software customisation to meet a mind-boggling array of different needs.

"One major industry area we've been marketing Lonestar around is the food and drink sector," says Prior-Jones. "For example, a potential application is within the alcoholic drinks industry where we are trialling Lonestar

to test for counterfeit goods which can penetrate the market.

"Another area that we've been looking at is the detection of disease in tomato plants. Depending on the state of disease in the plants, they give off different gas signatures; Lonestar is able to quantify that and identify the particular disease stage. This means that you can detect if a plant is ill before it shows any visible signs of being ill – that's really important in big greenhouses in places such as Holland in order to prevent disease spreading across an entire harvest."

"Looking at human healthcare, Lonestar can be used to detect disease via human breath analysis. For example, if acetone is detected in a breath sample it can be an indicator of diabetes – other types of disease including cancer can also potentially be diagnosed in such a way.

"The market in which I personally have experience is the petro-chemical process industry. In this large and dynamic sector one of the areas we're looking at is quantifying gases from gas fields. In small gas fields, each well has its own unique signature or fingerprint, so you can actually detect the state of health of the well or also the type of gas coming from it by getting an overall picture of the gas.

"Other methods for analysis such as gas chromatography would only look at specific parts of the gas and analyse certain components of that, whereas we generate a picture of the whole sample which can then be used to monitor changes in the quality of the gas over time.

"We are also becoming increasingly involved in industrial process monitoring. Because of our rapid detection capability and the low levels we can go to, we're hoping that we can move into that area and overtake some of the existing methods. This has particular relevance to the semiconductor industry where the quality of the production atmosphere is critical to quality control.

"There are many further applications outside the mainstream of our marketing efforts. For example, one fascinating but unexpected

development is the purchase by the British Library of a Lonestar system to research into the correlation between the 'smell of old books' and their state of degradation."

Alongside other applications in fields such as fire prevention (via the detection of pre-combustion gases) and meat spoilage, Owlstone has also targeted an important additional market by selling the Lonestar unit to original equipment manufacturers (OEMs) for incorporation into their own instrumentation.

"The British Library has purchased a Lonestar system to research into the correlation between the 'smell of old books' and their state of degradation"

The strength of Owlstone's proprietary technology has helped it achieve key milestones including a research contract valued at \$3.7 million with the US Defense Threat Reduction Agency, a \$1.2 million contract with UK-based defence contractor SELEX Galileo to design and deliver a chemical warfare agent detector for battlefield usage, alongside the launch of Lonestar.

Indeed, such has been the recent success of the company that Advance Nanotech, its major investor and majority shareholder, decided to abandon its other areas of research and development to focus solely on the development and commercialisation of Owlstone technology, changing its name to Owlstone and operating as a single commercial entity.

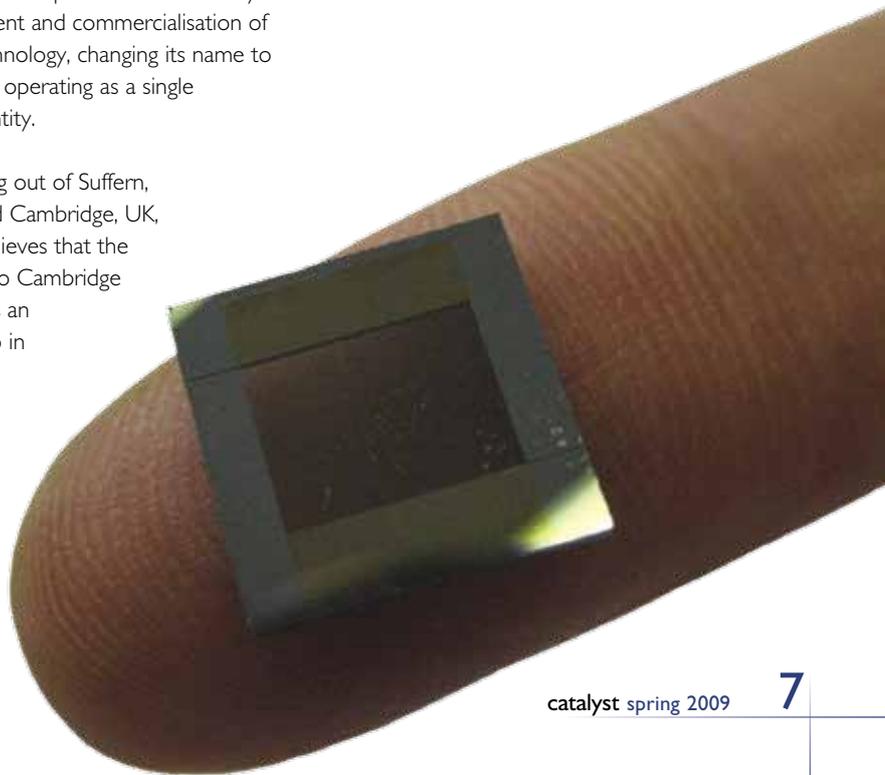
Now operating out of Suffern, New York and Cambridge, UK, Prior-Jones believes that the recent move to Cambridge Science Park is an important step in the company's ongoing evolution.

"In our previous location we were quite modularised – we had four different units in different parts," he says. "It's made a big difference coming here to Cambridge Science Park – we have an integrated factory and office space and our own front door. It gives us a real physical presence and I think that's important both for us as a company and our clients." Building on the success of its technology to date, Prior-Jones is understandably optimistic about what the future holds for Owlstone.

"It's going to be quite exciting in the months and years ahead because there are so many applications for our technology, both in the defence sector and also the civilian sector. The challenge at the moment for us is to develop our software even further so that it can recognise all the chemicals that we need it to for the many different applications we are working on.

"We're also working hard to raise our profile in a very targeted way – there is a danger for us of being swamped with requests for information on applications that have little or no commercial value. We need to make sure we keep focused in areas that can really help our company grow to its maximum potential, and I think we're definitely heading in the right direction."

www.owlstone.co.uk



Positive thinking

Looking forward with Cambridge Consultants



The second longest-serving tenant on Cambridge Science Park, Cambridge Consultants continues to build its reputation for innovation and expertise both at home and abroad. Catalyst spoke to Dr Brian Moon, Chief Executive Officer, about the company's recent performance and where he sees it heading.

"I realise this has been a difficult time for many businesses and that's not something that anybody likes to see," says Dr Moon. "But for Cambridge Consultants, 2008 was a record year in which we had higher revenues and higher profitability than in our nearly 50 years of history."

Confidence is strong at Cambridge Consultants and this enviable position is the result of steady growth and long-term strategy.

"The end of 2004 was an important turning point for us. It was where the business really started to recover from the downturn that followed the collapse of the dotcom boom

and the 9/11 attacks of 2001," explains Dr Moon.

"After that, 2005 was really good, 2006 was even better, 2007 was great and 2008 has been exceptional. We've got bigger as a company both in terms of revenue, where we've grown from a £25-million turnover to a £35-million turnover, and in terms of people, where we've expanded to become a 300-plus people business.

"Our people are very entrepreneurial in the broader sense of the word, which I think is about using your god-given or learned talent in the way that you want to"

"Of course everybody in the company here is of the real world; they read the papers, they see the TV and they wonder how and when the downturn is going to affect us. The truth is we don't exactly know, but it helps to be

confident and to do our best and that's what everybody is doing here."

The success of Cambridge Consultants has always been built on its innovation across a diverse range of sectors, which now includes medical technologies, consumer and industrial products, defence and security, wireless technology, transport and a newly formed specialism of cleantech.

"Our cleantech business is about responding to the challenges we face from climate change and rising fuel costs," says Dr Moon. "As an engineering-focused research company, this isn't about jumping on any bandwagon. We're investing in a new wave of technological advances in fields such as renewable energy, sustainable transport and energy-efficient products that will help deliver our clients competitive advantage as well as promoting a more sustainable future."

Other business sectors are also helping to drive the company forward. Cambridge Consultants' low-power and low-cost wireless technology is already at work in medical diagnostic devices and is expected to evolve into drug delivery and surgical devices as markets emerge.

The company's through-wall radar system – known as Prism – has recently been launched in the US and features a remote laptop monitoring application for use by security services on location.

Meanwhile its patented holographic radar technology presents a solution to the problem of radar detection of windfarms. Holographic radar differs from traditional scanning radar in that it constantly illuminates the field of view and analyses the returns using computing power, whereas a scanning radar only sees objects momentarily each time its beam spins. The considerable computing power that is required for this will continue to grow while the power requirement will continue to decrease, meaning that exciting new applications for holographic radar are likely to emerge as time goes on.

Left: the Vena wireless health device developed by Cambridge Consultants
Right: wireless health technology
Below right: the Prism 200 handheld through-the-wall radar system developed by Cambridge Consultants



Despite the diversity of its technological expertise, Dr Moon believes that there are some core qualities that help to create a distinctive community at Cambridge Consultants.

"Whilst it might seem diversified from the outside, we're actually pretty focused and working towards our common objectives," he says. "We've fostered a 'can-do' environment for a lot of very capable people who largely manage their own goals within a set framework.

"Like a lot of companies on Cambridge Science Park, we employ many very bright, highly educated people who accept insightful leadership but don't want to be managed down every step of the path. We give guidance in terms of the business objectives that we're looking to achieve, but allow them to use their own skills and talents in the ways that work best for them.

"We recently received planning permission for a £13-million extension here on Cambridge Science Park"

"Our people are also very entrepreneurial in the broader sense of the word, which I think is about using your god-given or learned talent in the way that you want to. They are entrepreneurial in wanting to see their talents and their technology exploited in meaningful and valuable ways in the world. Our people recognise that in order to achieve that, you've got to work with other people, which I believe is another element of true entrepreneurialism."

More than half of Cambridge Consultants' business is overseas, and the importance of its US market has led to the growth of a 35-strong team based in Cambridge, Massachusetts. On this side of the Atlantic, new development at

the company's headquarters on Cambridge Science Park is also being planned to support further growth.

"Being on Cambridge Science Park is very precious to us," says Dr Moon. "I think we are recognised as an important company on the Science Park; we were the second resident here and we've absolutely no intention of moving.

"We arrived on the site in 1978 and we're already up to phase five of building development. We recently received planning permission for a phase six £13-million extension which will include new office space, laboratories and an energy centre, due to start in the near future.

"It's an outward sign of our determination to grow and be positive," he continues. "There is a lot of uncertainty for everyone in the business world about the economic situation that's developed and of course we can't simply

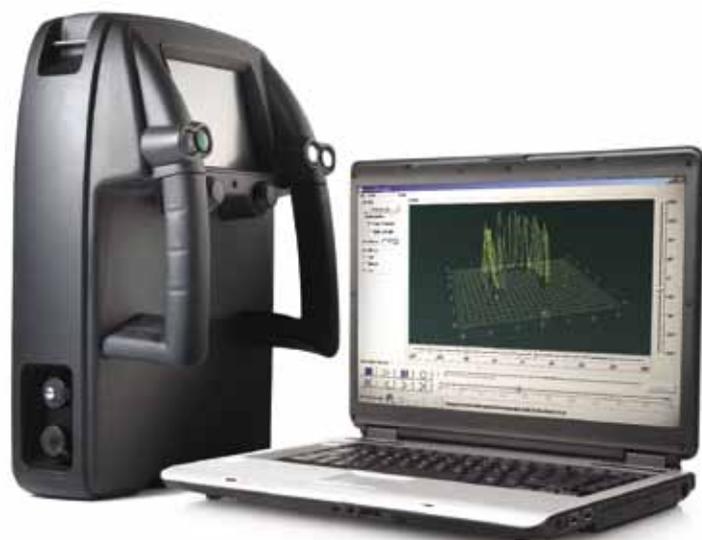
assume that at Cambridge Consultants we'll carry on unaffected.

"But we believe that it's important for us to be positive, play to our strengths and deliver quality work that satisfies our clients – that's how we've got to where we are today.

"Our plan right now for 2009 is to have a year that is approximately the same as 2008. Actually that's probably more challenging than it sounds because last year we were running the engine a bit too hot and some of our people were working more than 100% of their time.

"So the plan is for modest growth this year – maybe 20 people joining us instead of 50 – and to try and get the same sort of revenue levels spread over 20 more people, which will help make it more sustainable in the long run."

www.cambridgeconsultants.com



PARKLIFE

Guided busway due to open in late summer

The guided busway from St Ives to Cambridge is due to open in late summer 2009. The busway will run via two stops on Cambridge Science Park, providing employees with a frequent, high-quality and environmentally friendly way of getting to and from work.

Stagecoach and Whippet Coaches have signed up to provide bus services on the guided busway. There will be at least six buses per hour going from St Ives to Cambridge during peak times and buses will operate from 6am to

midnight, seven days a week. Bus stops will also feature real-time service information.

The first new buses which will run on the guideway have been ordered, the majority of which include features such as leather seats, air conditioning and wireless Internet connections, and will produce up to 80% less carbon emissions than standard buses currently in use in the Cambridge area.

www.cambridgeshire.gov.uk/transport/guided



Above: bus trialled on guideway in 2008

Mundipharma and Napp move into new offices



Above: inside the new Mundipharma/Napp offices

On 9 February 2009, 389 employees of Mundipharma International, Mundipharma Research Limited and Napp Pharmaceutical Holdings moved into their new home on Cambridge Science Park from their existing facilities on the site.

The three three-storey buildings deliver approximately 10,330 square metres of useable floor space and are made from a concrete frame with insulated glass curtain walling to the outside walls. Inside, light and space have been used to maximum effect in open-plan areas designed to support both collaborative and more secluded working practices.



Above: the new Mundipharma/Napp offices at CSP

CSP website competition winner announced

Julie Lakin, Director of HR and Administration at Smart Holograms, received a Nintendo Wii gaming console as winner of a competition to celebrate the launch of the newly revamped and updated Cambridge Science Park website.

The prize was presented by Bidwells Letting Agent for the Cambridge Science Park, Michelle Cantwell.

The website has a range of new features including a refreshed design, RSS feeds for news, jobs and events, a discussion forum and an interactive timeline about the history of Cambridge Science Park.

www.cambridgesciencepark.co.uk



Above: Julie Lakin (left) of Smart Holograms receives her prize

PARKLIFE connections

Biology in Business (BiB) is a Cambridge-based non-profit organisation with more than 1,700 members that bridges academic and commercial life science to promote career development and technology transfer through events, online resources and networking opportunities.

Email: info@biologyinbusiness.org
www.biologyinbusiness.org

The Eastern Region Biotechnology Initiative (ERBI)

ERBI's objective is to facilitate and accelerate the growth of biotech in Cambridge and the East of England. Its core activities include: hosting networking events, special interest groups, training, partnering and member promotion, publications, regional and national initiatives.

Email: info@erbi.co.uk
www.erbi.co.uk

Research Services Division (RSD) helps to identify, secure and manage research funding for the University from regional, national and international sponsors. It encourages collaboration between the University and industry, and fosters long-term research partnerships between companies and academics for mutual benefit. RSD also organises Horizon, the leading seminar series, which provides participants with a first look at new developments in the most exciting areas of science and technology at Cambridge University.

Contact: **Hannah Pawson**
Email: hannah.pawson@rsd.cam.ac.uk
www.rsd.cam.ac.uk

The Great Eastern Investment Forum (GEIF) is a leading UK business angel network located in Cambridge which exists to introduce ambitious, innovative companies seeking funding to business angels and other early-stage funders seeking quality investment opportunities.

www.geif.co.uk

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.

www.stn-international.com

Cambridge AWiSE (Association for Women in Science and Engineering)

AWiSE is a multidisciplinary membership organisation composed of individuals, businesses, associations, institutions and other organisations, all of whom share the common goal of advancing the interests of women in science, engineering and technology. The Cambridge branch holds regular meetings and events; for details see the website or get in touch.

Email: camawisemeetings@yahoo.co.uk
www.camawise.org.uk

The Cambridge Network is a membership organisation with the mission to link like-minded people from business, finance and academia to each other and to global partners for the benefit of the Cambridge region. It helps Cambridge raise its game by delivering over 40 networking, partnering and special interest group events per year (mostly in Cambridge, but also in London, Boston and Shanghai) and a high-profile website where its 1,300 corporate members publish profiles, news, jobs and events every day.

www.cambridgenetwork.co.uk
Tel: 01223 422362

Enterprise Link, a Business Link service for Cambridgeshire, is a membership network providing advice and support for early-stage, entrepreneurial/aspirational businesses. It holds a variety of networking events and seminars at the St John's Innovation Centre in Cambridge, and also sends out regular bulletins to members with information, advice and opportunities. It can also arrange access to sector specialists.

Email: info@enterprise-link.co.uk
www.enterprise-link.co.uk

i10 provides large and small businesses with easy access to the expertise, resources and innovation within universities and higher education institutions in the East of England.

Contact: **Catherine Atkins**
Email: c.atkins@i10.org.uk
Tel: 07738 455166

The Cambridge Science Park is managed by Bidwells on behalf of Trinity College.

Catalyst is a forum for companies on the Cambridge Science Park.

The next issue will be published in Summer 2009. If you have any comments or suggestions for stories to be included in the next issue, please get in touch with Julie Bushell or Joanne Uttley (see right).



Management:

Jeremy Tuck MRICS
Email: jeremy.tuck@bidwells.co.uk
Tel: +44 (0) 1223 559333

PR & marketing:

Julie Bushell
Email: julie.bushell@bidwells.co.uk
Tel: +44 (0) 1223 559331

Joanne Uttley
Email: joanne.uttley@bidwells.co.uk
Tel: +44 (0) 1223 559393

Agency letting:

Michelle Cantwell
Email: michelle.cantwell@bidwells.co.uk
Tel: +44 (0) 1223 841841



Viewpoint

Dr Tim Minshall, Senior Lecturer in Technology Management, Institute for Manufacturing, University of Cambridge

As part of the Technology Enterprise Group within the Institute for Manufacturing, we're very interested in looking at the different ways in which new hi-tech firms are created and the different sorts of business models that can be followed.

One thing we've been looking at is the growing importance of open innovation – the idea that more opportunities are created by firms sharing information and working collaboratively together than by individual firms working on their own. We're particularly interested in how smaller start-up firms can work with much bigger established names to make that happen and create real value on both sides.

There are lots of issues that need to be addressed in such scenarios, not least the management of intellectual property in a way that benefits all sides, and the development of appropriate skills within firms of all sizes to support collaboration. We've also just started looking at the role of intermediary organisations that can act as a bridge between smaller and larger companies, and the ways in which universities can support the implementation of open innovation.

We're also interested in how geography continues to matter for hi-tech development. There is an argument that with the Internet, you could be an inventor anywhere in the world and still have a company pick up your idea and commercialise it. But while it's true that there are some great technologies out there making the world a smaller and more accessible place, we're seeing that close proximity to other new and existing firms

and research centres is still an important driver for hi-tech development.

That's why science parks have a very promising future. But I think it will be different to the older model which typically consisted of a group of science-based companies located together. These days, we're seeing more of a range of companies on successful parks such as Cambridge Science Park, from R&D centres for huge international companies to very small start-ups, alongside other service providers.

“There is a new generation of business leaders coming in to put their mark on the next stage of hi-tech development in Cambridge”

Cambridge is a fantastic example of hi-tech cluster development because we have everything here in a fairly tightly defined geographic space. Cambridge Science Park is great example of concentrated hi-tech development within this larger cluster – it's a leading brand that's recognised around the world.

One of the reasons Cambridge has been so successful is because it's had a long and evolving history of technology transfer, and a spirit of open innovation and enterprise that permeates throughout the cluster. This has partly been due to the influence of a generation of Cambridge entrepreneurs whom you might call the “founding fathers” of the Cambridge Phenomenon, people such as Hermann Hauser, Walter Herriot, Andy Richards, David Cleevly and many others.

This group has set the tone for the way hi-tech business has developed in Cambridge – the fact that it's a very collaborative place, a very open place, and a very networked place. What's very exciting now is that this group is now passing the baton to a

new generation of business leaders coming in to put their mark on the next stage of development.

In terms of engagement between the private sector and the universities here in Cambridge, there's already a significant amount going on, but we'd always like to see more. It's up to us to make sure that companies know what's going on here and how best to engage with us.

It would be great to see more and more companies benefiting from hosting projects for students from across the University, supporting the Cambridge University Entrepreneurs business plan competitions, engaging with the other activities and organisations linked via the University Enterprise Network, helping to ensure this symbiotic relationship between the public and private sectors continues to grow and evolve for the future.

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