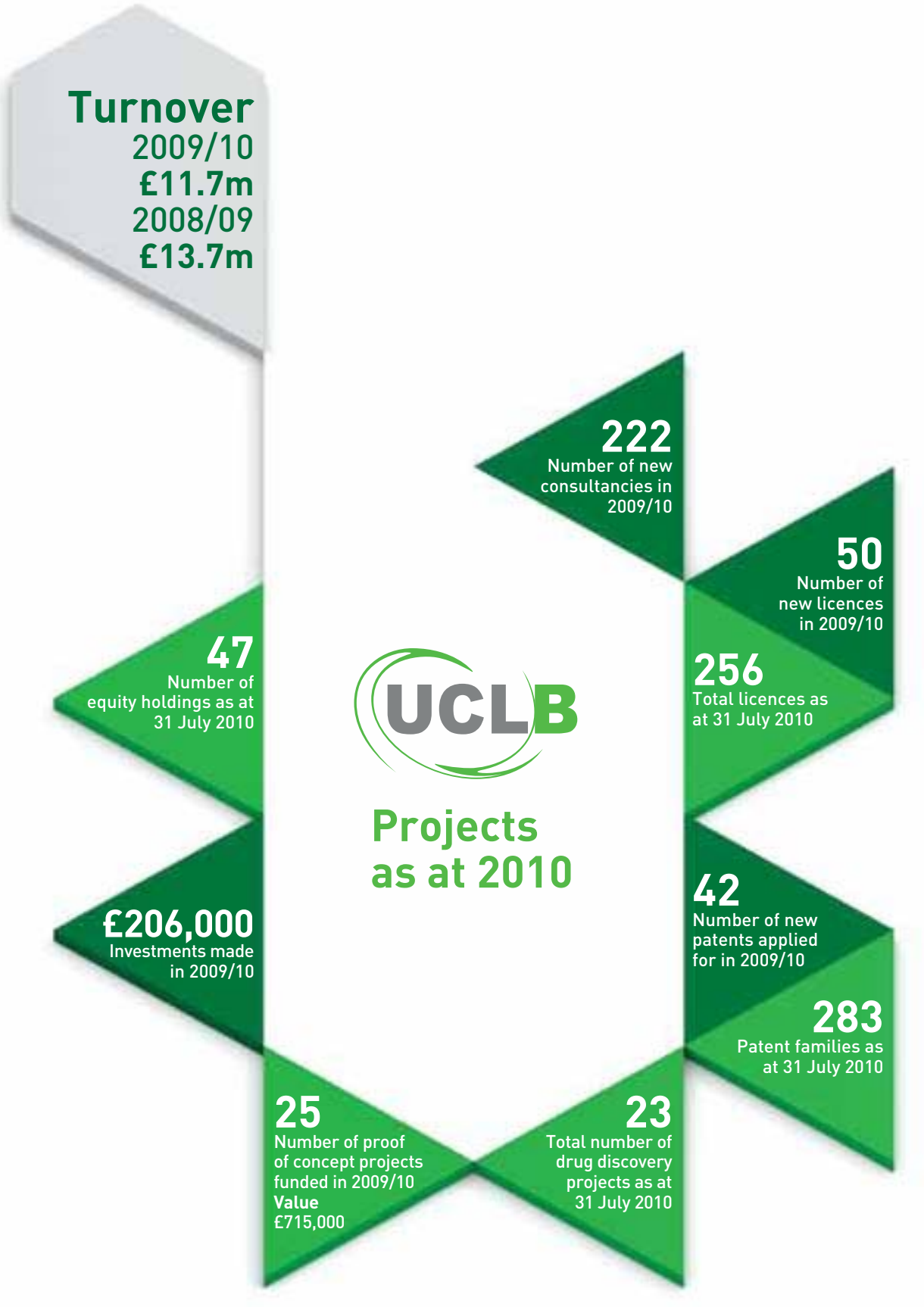
UCLB

The Realisation of Research

Annual Report
2009/2010

UCL

Projects as at 2010



Contents

Forewords 4

What we do 6

Opportunities 8

Specialist expertise

- Engineering, Physical Sciences & Built Environment 10
- Biomedical Sciences 12
- Project Management 14
- Consultancy Services 16

Financial summary 18

Find out more/Acknowledgements 19

Message from Cengiz Tarhan

UCL Business's objective is clear: to support University College London's (UCL) research and to 'realise more of that research' for the betterment of humankind in its widest sense.

Completing our fourth year as UCL Business, we continue to support UCL and UCL staff with a comprehensive range of services to achieve this objective. This ranges from the provision of UCL Consultants, enabling private consultancy to be carried out, through to facilitating contract research and enabling translational research grant opportunities to be pursued. Our direct investments in early stage UCL projects have increased as we strive to improve the process of identifying more novel ideas whilst helping to develop those ideas to commercialisation.

This year saw further investment in our project management capability and we now have in-house capacity to develop ideas to prototype and ultimately to CE marked products ready for distribution. This is an important new function that enhances our existing strengths and will help to advance many UCL ideas through proof of concept stage to market.

Our three criteria for supporting UCL projects are:

- Demonstrate the delivery of 'impact' in supporting UCL's Grand Research Challenges to improve global health, ensure sustainability in our cities, enhance and understand intercultural interactions and deliver human wellbeing.
- Demonstrate societal and economic benefits.
- Ensure there is scope to provide positive financial returns to enable our activities to be funded and to contribute profits back to UCL to support its charitable initiatives.

Delivering on all three criteria has its challenges. Many of our projects are long-term, some early stage projects will fail and others will take a number of years to deliver results. It is vital that we retain a diverse and strong portfolio, an inflow of new projects and a robust process for moving projects through to commercialisation.

This year we have demonstrated yet again that in many cases all three criteria can be achieved. The UCL Business portfolio, comprising spinout investments, licensed intellectual property and projects under development, has grown to 560 (2009: 530) and carries significant value both financially and in terms of potential future 'impact' on our surroundings, lives and the environment.

A selection of these is highlighted in this Annual Report to give a flavour of the type of projects developed at UCL Business.

The ultimate 'impact' value of our activity lies in the many UCL technologies, products and services that we have helped to create and continue to commercialise. In healthcare, life-saving therapeutics and devices originating from UCL are in everyday use across the world. These include: the Map of Medicine, which was developed at UCL and is now widely used across the UK by both doctors and patients; and the UCL compression stockings for the prevention of deep vein thrombosis (DVT), which are now available across the NHS and in many private hospitals, making an impact on many people's daily lives.

Our financial results for the year, with a combined turnover of £11.7m (2009: £13.7m) and profit before gift aid to UCL of just under £1m (2009: £1.1m), remain strong. The general business environment and the state of the economy has inevitably affected us and the partners we work with, but we are confident that 2010 will be a turning point as we move into 2011.

UCL Business activity continues to help UCL deliver on its knowledge transfer mission. We do this with the strong support of our staff and board, and I would like to thank them for another excellent year of activity. We also recognise the essential role played by our collaborating partners, research funders and, most importantly, UCL's researchers, who generate the novel ideas in the first place that can end up having such an important impact on all our lives.

Thank you all on behalf of the board and directors of UCL Business.

Cengiz A Tarhan
Managing Director

Message from Professor Stephen Caddick, UCL's Vice-Provost [Enterprise]

UCL Business has a very broad range of Enterprise activities and our overall aim is to support the UCL community in making contributions to the social and economic benefit of UCL and the UK.

Given the current world economy, there has never been a more exciting – or challenging – time to be in a university environment. There is a weight of expectation on universities to help the UK retain and improve its economic competitiveness. Recent events have demonstrated that research-intensive universities are seen as a key part of a growth agenda and it is clear that pioneering research is the platform for sustaining a knowledge-based economy. In this context we have three key aims: supporting UCL entrepreneurs; working with external partners; and commercialising our assets.

UCL Business plays a key role in our Enterprise agenda by ensuring that we maximise the value of the knowledge generated from our research. UCL is widely acknowledged as one of the world's leading universities, with a wide range of cutting-edge research activities. This provides numerous opportunities for commercialisation and UCL Business is clearly focused on developing intellectual property into commercial products.

UCL Business is one of the UK's most successful technology transfer organisations and has recently been cited as a model for technology transfer organisations in the US. UCL Business does not just make a profit through the successful commercialisation process, it also helps to generate many tens of millions of pounds in translational research income. This is essential for increasing the value of our intellectual property and for enabling the translational process to take place.

There were many highlights during 2010. The UCL spinout company Pentraxin, founded on Professor Mark Pepys' pioneering research on plasma proteins, continued to progress extremely well and hit the first milestone in the collaborative agreement with GSK.

The Institute of Ophthalmology, which is a world leader in developing new treatments for eye disease, particularly using stem cell technology, signed an agreement with AstraZeneca to develop a cure for diabetic retinopathy.

The UCL spinout company Endomagnetics, which is developing a new medical device for use in locating lymph nodes during the staging of breast cancer, has made substantial progress. Its novel approach of combining an injectable magnetic tracer with a magnetic sensing instrument removes the need for radioactive tracers, leading to benefits in areas such as cost reduction and workflow improvement. During 2010, Endomagnetics raised over £750k of investment from a syndicate led by UCL Business, secured CE mark accreditation for its medical sensing instrument and recruited an experienced CEO to lead the management team. This progress has been recognised by organisations such as the Technology Strategy Board, which recently cited Endomagnetics as being one of the UK's most promising healthcare technology businesses.

I would like to thank my colleague and former Vice-Provost Professor Mike Spyer, who has developed the entire Enterprise agenda over the last few years. Mike's work has placed us in an excellent position to make a leading contribution to the UK economy through Enterprise and it is my job to build on that strong foundation.

Overall it has been a great year and with all of the exciting initiatives and projects underway, progress is set to continue in 2011. I look forward to seeing further successes from UCL Business as an integral part of UCL's world-class Enterprise activities.

Stephen Caddick

Professor Stephen Caddick
Vice-Provost, Enterprise, UCL

What we do

UCL Business PLC (UCLB) is responsible for technology development and commercial transactions for UCL.

Offering world-class expertise in areas ranging from biomedicine to engineering and from the arts to the built environment, we work to make commercial connections between the expertise and innovations of UCL's academics and the needs of industry and the wider marketplace.

We facilitate the transfer of emerging technologies into commercial applications – the Realisation of Research.

Licensing technologies

For businesses seeking specific technology solutions, UCLB provides the commercial expertise, legal advice and administrative support required to broker licensing agreements, allowing companies to fully exploit unique technologies with the knowledge that exclusivity and market advantage is preserved.

Through UCLB, academics wishing to license technology have access to comprehensive support services, with Business Managers assisting throughout the process from initial negotiation to concluding contracts.

Providing expert consultancy

UCL Consultants Ltd (UCLC) is the consultancy office of UCL, representing UCL staff undertaking private consultancy work for external organisations. UCLC contracts with industry, governments and global corporations, as well as public bodies and SMEs, on projects that can range from a short-term, one-day consultancy through to large, multi-party projects. UCLC is both the source of and the gateway to critical specialist knowledge available across the university's 72 departments. Our aim is to provide an efficient and responsive service to clients seeking help and advice in solving their technical problems.

Creating spinout companies

UCLB has a long and successful track record in creating some of the most successful spinout businesses in key new industries. From discovery disclosure to commercialisation strategy, business plan development, contractual advice and formalisation, and through to incubation support, including the recruitment of management teams and identification of investors, our services cover the entire process.

Project management

UCLB provides UCL departments and institutes with a comprehensive project management service for single or multi-party collaborative industry projects. Our project management experts will assist the principal investigator and departmental administrators in managing the full life cycle of the project, and contribute to effective teamwork within the project group. With a focus on commercialisation, they will maintain effective liaison with internal and external key people and industry partners, ensuring the most effective route to market is delivered.

Our mission

Supporting UCL, we aim to be the best university commercialisation group in the UK and globally.

Our first aim: Fulfil our Grand Challenges
The end point of all research and innovation at UCL is focused on a set of Grand Challenges, and the achievement of these is the great motivator for everything we do:

1 Global Health

2 Sustainable Communities

3 Intercultural Interaction

4 Human Wellbeing

This set of challenges forms the benchmark against which we judge all potential innovations emanating from UCL.

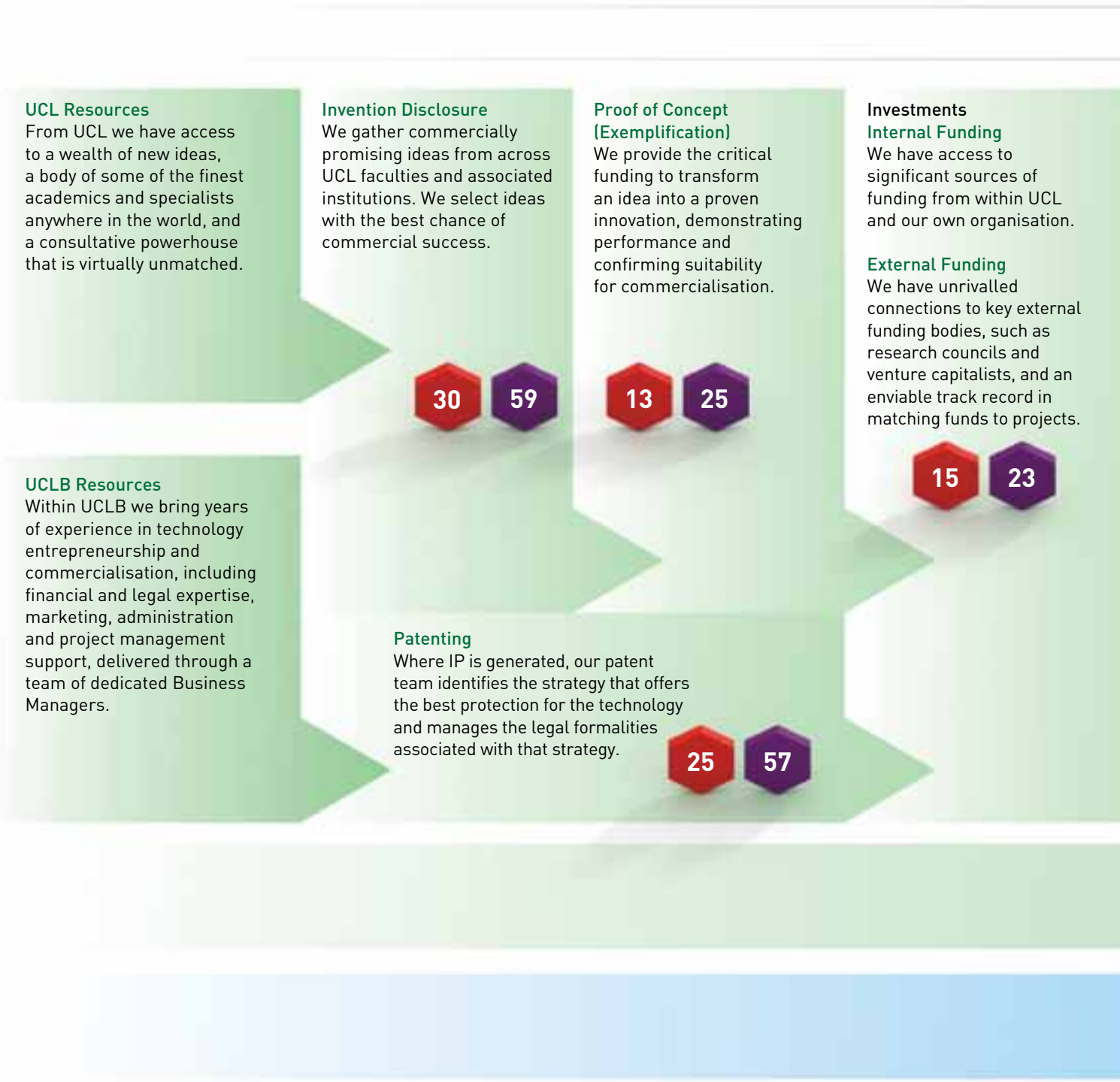
Our second aim: Add value where we can
At UCLB we believe it is not enough to simply deliver a technology transfer path and an injection of capital. We believe in bringing expertise and experience into the mix to add real benefit, through financial and legal advice, intellectual property management, project management, and marketing and communications support.

In our experience, this foundation of support is invaluable in ensuring more good ideas make the transition into marketable innovations.

This is the Realisation of Research.

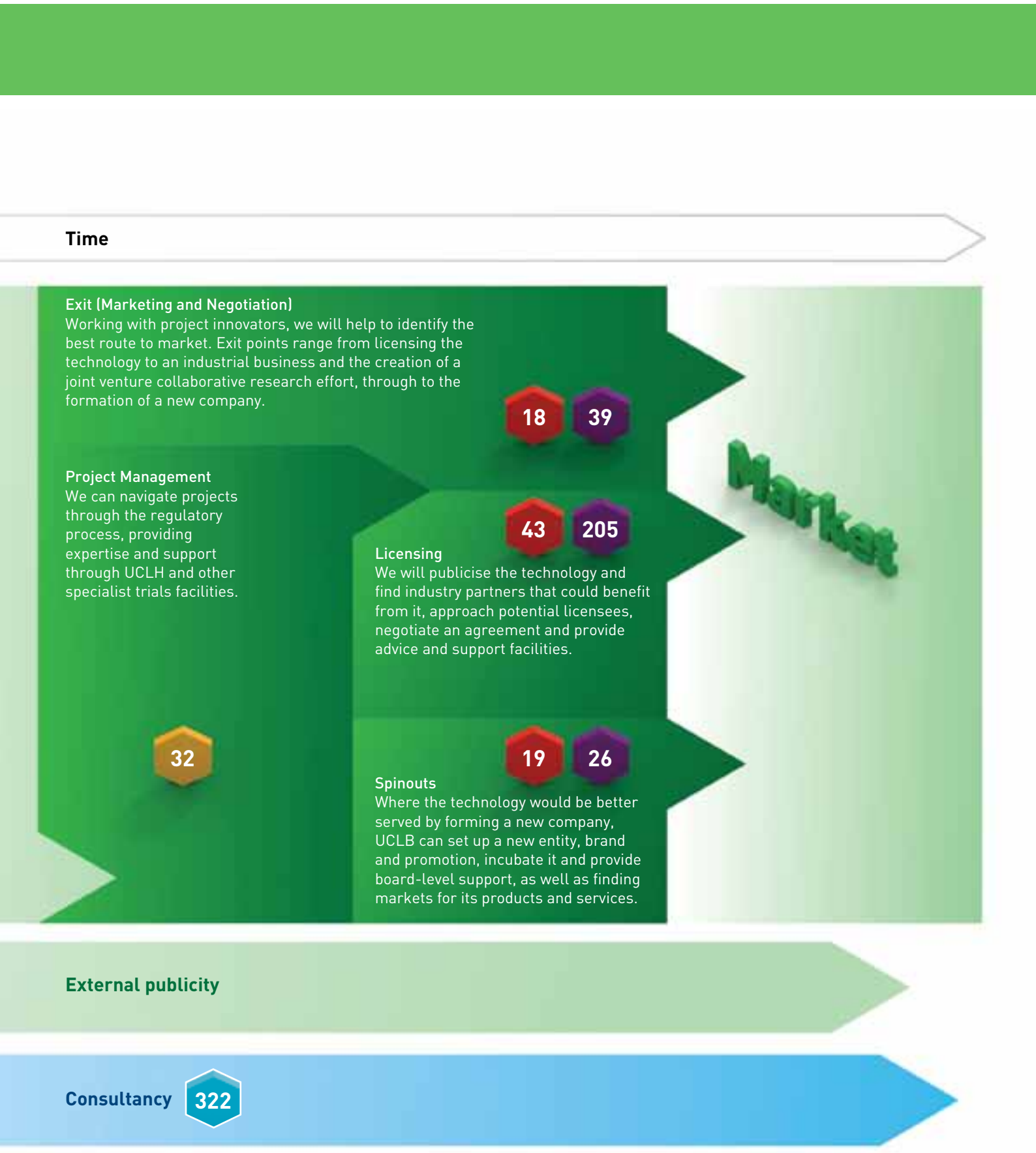
Opportunities

The diagram shows the number of active projects at each stage of the development process as at July 2010.



Key: Total number of active projects per phase

Engineering and Physical Sciences


Time
Exit (Marketing and Negotiation)
Working with project innovators, we will help to identify the best route to market. Exit points range from licensing the technology to an industrial business and the creation of a joint venture collaborative research effort, through to the formation of a new company.
18
39
Project Management
We can navigate projects through the regulatory process, providing expertise and support through UCLH and other specialist trials facilities.
43
205
Licensing
We will publicise the technology and find industry partners that could benefit from it, approach potential licensees, negotiate an agreement and provide advice and support facilities.
Market
32
19
26
Spinouts
Where the technology would be better served by forming a new company, UCLB can set up a new entity, brand and promotion, incubate it and provide board-level support, as well as finding markets for its products and services.
External publicity
Consultancy
322
Biomedical Sciences
Project Management
Consultancy Service

Specialist expertise
Engineering, Physical Sciences & Built Environment

Invention (IDF) → Patent → Exemplification → Marketing and Negotiation → Licence / Spinout

Sageta

Prostate cancer currently accounts for almost a third of all newly diagnosed cancers in men in the UK. As the use of diagnostic tests and public awareness increases, a growing proportion of new prostate cancer cases are detected in the early stages, whilst the cancer is confined to the prostate. The treatment options available to patients with early stage localised disease are highly polarised: no treatment or radical treatment. Focal therapy aims to selectively treat the most aggressive and harmful prostate tumours and potentially strike a balance between controlling the disease and minimising the risk of treatment-related side effects. The development of new imaging methods is critical to focal therapy achieving its full potential.

Although there is increasing evidence that magnetic resonance imaging (MRI) is able to accurately locate prostate tumours, there is currently no satisfactory way to use this information in guiding treatment. Professor Dave Hawkes, Dr Dean Barratt and Dr Tim Carter from the Centre for Medical Image Computing (CMIC) have developed techniques that allow pre-acquired MRI scans to be aligned and visualised with ultrasound images of the prostate obtained during treatment, providing a 'road map' of the cancer for surgeons. A spinout company, Sageta, has been set up to commercialise the technology.

An initial demonstrator was developed in 2009 using patient data and was supported by proof of concept funding from UCLB. The CMIC team subsequently secured support from the National Institute for Health Research to develop two demonstration devices that could be used in future clinical trials. The project is being undertaken in conjunction with US HIFU, LLC, a provider of High Intensity Focused Ultrasound solutions based in North Carolina, USA, and Sageta Ltd. UCLB continues to work closely with the CMIC and Sageta during what is an important translation phase for image registration technology.



Dr Dean Barratt, Dr Tim Cater and Professor David Hawkes

E-LUCID

In 2010 Dr Steven Schooling, the Director of Physical Sciences, Engineering, Built Environment & Social Sciences, and Marina Santilli, Business Manager of UCLB, launched E-LUCID, a web portal for the online licensing of university IP.

E-LUCID provides a simple solution for handling the licensing of academic software and assists UCL academics in maximising the impact of their research. Uniquely, in comparison to other university technology promotion portals, software marketed on E-LUCID is available for immediate download and has clearly stated licence terms and conditions, as well as a transparent pricing structure. This allows a commercial licensing transaction to be completed entirely through the automated workflow. E-LUCID also allows for multiple software licensing strategies, such as those commonly seen with the commercialisation of open-source software, in which the software may be offered for free under copyleft licences such as the General Public Licence (GPL), and for a fee under a proprietary licence.

E-LUCID has successfully provided an effective solution for university software licensing and to date 750+ software licences have been secured since the launch of the system, with an initial portfolio of 10 software products drawn from across UCL. Initially created for the licensing of software, the E-LUCID system is being extended to cater for transacting Material Transfer Agreements (MTAs) across UCL.


Mrs Marina Santilli and Dr Steven Schooling

Co-Development

Investment

Market

Senceive Ltd

Senceive was spun out from UCL's Department of Electronic & Electrical Engineering to commercialise a novel wireless sensor network technology platform. The technology provides an industrial monitoring solution that is simple to install, offers robust performance, and is highly scalable and cost-effective compared to conventional 'wired' approaches.

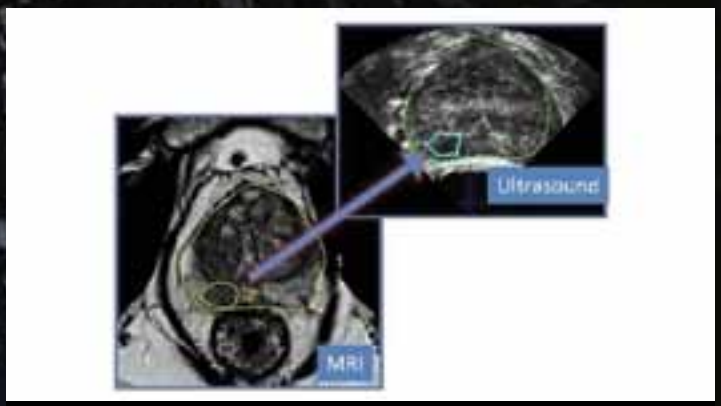
The initial prototype development and trials were supported by funds provided by UCLB. A successful trial with Network Rail to monitor earthwork embankments for early signs of slippage was carried out in 2008. Following this, in 2009 Senceive launched FlatMesh, a wireless monitoring solution with the capability to monitor large, distributed or remote assets such as bridges, embankments or construction sites through a network of wireless-enabled sensors, with data fed back to the user through a GPRS capability.

Over the past 18 months, Senceive recruited Graham Smith as CEO to lead the business through its next phase of growth; working closely with Chief Operating Officer Simon Maddison, he has developed strategic relationships with partners operating in rail and construction markets, such as Balfour Beatty.

Furthermore, Senceive's monitoring solutions have been implemented at high-profile sites such as the Tower of London and the company has been engaged by customers including Amey and Carillion to provide solutions for projects such as CrossRail. As a result, Senceive is poised to become the de facto solution for wireless remote conditioning monitoring across a range of rail-related and geo-technical applications. It is targeting marketplaces with significant growth, such the UK market for rail monitoring solutions, estimated to be worth at least £500 million.

UCLB continues to be closely involved in the development of Senceive through active board representation and the provision of out-sourced support services.

Mr Simon Maddison and Mr Graham Smith



Sageta: MRI scan

E-LUCID website: www.uclb-elicensing.com

Senceive: Bridge monitoring (Network Rail)

Find more technologies for licence at:
www.uclb.com/technologydirectory

Specialist expertise
Biomedical Sciences

Invention (IDF) → Patent → Exemplification → Pre-Clinical → Phase I

Adoptive immunotherapy of Epstein-Barr virus-associated malignancies

Professor Hans Stauss, Head of Immunology at UCL, is leading the development of an adoptive immunotherapy for Epstein-Barr virus-associated malignancies. Epstein-Barr virus (EBV) is a common cancer-causing virus of the herpes family. Most people are exposed to EBV at a young age and develop immunity. However, EBV is a major cause of nasopharyngeal carcinoma and certain lymphomas, particularly in South-East Asia.

The transfer of T-cell receptor (TCR) genes to a patient's T lymphocytes enables the gene-modified T-cells to attack tumour cells. Professor Stauss and his team are using this approach to explore the ability of this immunotherapy to control EBV-associated malignancies and also the spread of cytomegalovirus infections in immunosuppressed individuals.

Mr Chris Loryman of UCLB had this technology platform patented in late 2009 and Professor Stauss successfully applied in September 2010 for a Developmental Pathway Funding Scheme (DPFS) award from the Medical Research Council to support the preclinical development. With this funding, the team plans to test the safety and efficacy of this new immunotherapy protocol, and progress this research into Phase I/II clinical trials with the goal of establishing effective immunity in patients.


Professor Hans Stauss and Mr Chris Loryman

Development of a novel liver dialysis device

Researchers at UCL's Institute of Hepatology, led by Dr Nathan Davies and Professor Rajiv Jalan, have developed a novel liver dialysis device. In liver failure, the accumulation of protein-bound toxins and increased susceptibility to infection cause multi-organ failure and death. Apart from liver transplantation, there is no efficient treatment to prolong the life of patients suffering from this condition. A cost-effective and clinically efficacious therapy presents a real and immediate unmet clinical need.

The UCL team has developed and tested an extracorporeal dialysis device that works similarly to a kidney dialysis machine. The concept is based upon the role that albumin plays in the liver detoxification process. In liver failure, albumin is reduced irreversibly in concentration and function, with endotoxemia contributing to an increased risk of infection. The device incorporates both endotoxin removal and albumin removal and replacement.

Dr Abbie Watts of UCLB has patented the device and provided Dr Davies and Professor Jalan with a proof of concept grant to fund the initial development of this technology. More recently, further development of the technology, supported by the Department of Health and the world-leading dialysis device manufacturer Gambro Dialysatoren GmbH, have validated this approach in a porcine model of acute liver failure.

Current work is underway to refine the device in the porcine liver failure model, with the near-term goal of a clinical trial to demonstrate efficacy in patients with liver failure.



Dr Nathan Davies, Professor Rajiv Jalan and Dr Abbie Watts

Phase II | Phase III | Market

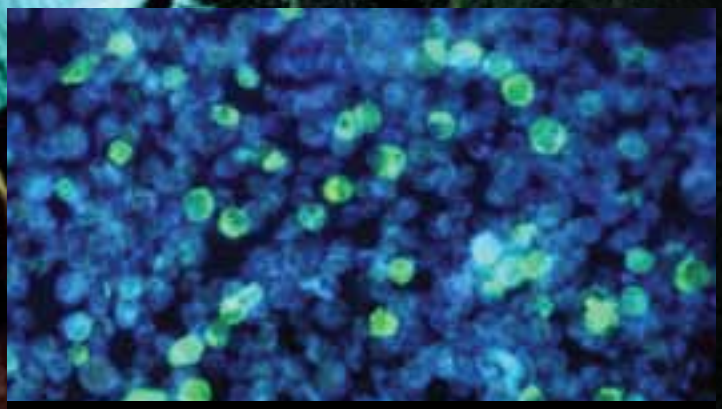
Further development of BPC8, for treatment of cardiovascular and inflammatory disease

Almost all acute medical and surgical emergencies incorporating tissue damage, such as acute myocardial infarction, stroke, trauma, burns, sepsis and transplant rejection, are associated with greatly increased C-reactive protein (CRP) production. Cardiovascular disease causes over 4.3 million deaths annually in Europe (http://www.heartstats.org), and is the leading cause of death worldwide, ischaemic heart disease killing 17 million annually. UCLB has been supporting Professor Mark Pepys in the development of BPC8, a novel CRP-depleting drug, for the treatment of cardiovascular and inflammatory disease.

Pentraxin Therapeutics is a spinout company created by UCLB to commercialise the BPC8 technology and others coming from Professor Pepys and his laboratory; Mr Cengiz Tarhan, Managing Director of UCLB, is also a Director of Pentraxin. In 2010 Professor Pepys received a £4 million Developmental Clinical Studies (DCS) grant from the Medical Research Council to develop BPC8 to first Phase IIa proof of concept studies in patients with acute myocardial infarction treated by primary percutaneous coronary intervention. Evidence of reduction of myocardial injury in these studies will support further clinical development of therapeutic CRP inhibition for this and other acute indications, providing a substantial new contribution to the management of this unmet medical need.

In previous animal studies, Professor Pepys and his team demonstrated that human CRP exacerbates ischaemic tissue injury in vivo via a complement-dependent mechanism, and that this pathogenic effect is completely revoked by administration of BPC6, an earlier version of BPC8 (published in Nature journal, 27 April 2006).

Professor Mark Pepys and Mr Cengiz Tarhan



TRC

Liver dialysis device

CRP

Find more technologies for licence at:
www.uclb.com/technologydirectory

Specialist expertise
Project Management

Conceptual Design → Prototype Development → Regulatory Pathway → Pre-Clinical → Phase I/II Clinical Trials

Quench infusion pump

Patient hydration in hospitals is a common problem faced by clinicians. Inaccuracy can lead to dehydration, which can cause:

- impaired kidney function
- symptoms of dementia
- mortality

Hydration is currently assessed simply by measuring urine output, which is generally considered to be inaccurate.

The quench pump, designed by Professor Hugh Montgomery and Professor Monty Mythen, aims to address this problem by permitting the clinician to accurately prescribe fluid requirements. It is fully programmable and can accurately meter total volume infused both orally and intravenously, as well as having the capacity to measure the fluid output, presenting an accurate profile of fluid balance to the clinician. This pump will enable better clinical control of hydration, even allowing high-dependency, incapacitated patients to drink safely whilst lying down.

The UCLB project management team has worked closely with Professors Montgomery and Mythen to provide the regulatory support using proof of concept funding to develop a prototype which is now being evaluated prior to CE marking using proof of concept funding. This means that the benefits of the product will reach patients more quickly, while significantly increasing revenues to UCL.


Professor Hugh Montgomery and Professor Monty Mythen

New material and designs for hernia repair

Professors Alexander Seifalian and George Hamilton and their team at UCL have developed a novel, patented platform material that has superior characteristics and biocompatibility to those of current materials used for hernia (and pelvic floor) repair. This material has been evaluated extensively, demonstrated in vivo to be fully biocompatible and has recently completed preclinical trials with excellent results. UCLB's subsidiary company Evexar Medical Limited has developed a number of novel, patented designs for hernia repair based on feedback from consultant surgeons in the field.

This novel material, combined with the range of devices designed by Evexar, has been developed to form the basis of the next generation of hernia and soft tissue repair devices. The material is exceptionally strong, yet soft and pliable, mitigating the risk of potential side effects such as fistulae and extreme discomfort to the patient. In particular, it rolls easily, is clear and has an excellent shape memory, making laparoscopic surgery far easier.

Preclinical studies aim to demonstrate that Evexar's designs, combined with use of this new material, will lead to a 'step change' in hernia and soft tissue repair technology, with the devices promoting greater patient benefits.

A full portfolio of designs provides an optimal solution for each hernia location, based on the local anatomy. In addition, UCLB's novel platform material allows rapid development of new designs and even the possibility of bespoke designs, optimised for maximum patient benefit.

Dr Alexa Smith of UCLB has worked closely with academics and clinicians who are experts in their fields, providing regulatory support, product development and prototype build through to preclinical studies. The projects management team ensures that the products reach the market and the patients in as short a time as possible, bringing benefits to patients and revenues to UCL.



Professor Alexander Seifalian, Professor George Hamilton and Dr Alexa Smith

Phase III/IV Clinical Trials

MHRA/FDA Approval & CE Marking

Market Research Pricing/Manufacture Distribution

Novel disposable self-illuminated procedural proctoscope

UCLB's subsidiary company Evexar Medical Limited has developed a novel self-illuminated procedural proctoscope, which is based on clinical experience and is the first in a range of self-illuminated products. Current examination procedures using proctoscopes require a light source to illuminate the clinician's field of view; this is currently provided by a fibre optic instrument that requires cleaning between procedures. In this new development, Evexar Medical has designed, CE marked and is manufacturing a proctoscope and illuminator system that is completely disposable and competitively priced. This complete disposability allows the clinician to have increased flexibility without any trailing fibre optic or mains electricity cables. There is a reduced risk of cross infection since the products are single-patient use and fully disposable in a standard clinical waste container.

Distribution networks have been established in the UK and Ireland, with significant sales forecasts projected for the coming year; global distribution networks are being recruited.

Mrs Karen Cheetham, Director of Projects at UCLB and Director of Evexar, along with her team and clinical consultant Mr Stephen Barker, has been instrumental in supporting and managing the Evexar Medical development activities, which have involved design, prototyping, sourcing suitable suppliers and regulatory compliance. This project illustrates the skills contained within the UCLB project management team, and the ability of the team to transform a clinical concept into a global product.

Mr Steve Barker and Karen Cheetham

Quench infusion pump

New material and design for hernia repair

Evexar proctoscope

Find out more about effective project management at: www.uclb.com

Specialist expertise
Consultancy Services

A complete contracting service to UCL staff and clients, connecting UCL expertise with national and international organisations

The Researcher of the Future: The 'Google Generation' Study

UCLC was commissioned to undertake a study to review and analyse the way in which students seek and use information in a digital environment. The study, carried out by UCL's Department of Information Studies under the direction of Professor David Nicholas, was funded by the British Library and Joint Information Systems Committee (JISC), and supported by the BBC. The study took place over nine months and has been described as the most influential piece of library and information science research undertaken in the last decade, having had a huge resonance with policy-makers, professionals and the media.

The evidence-based study found a 'fast-food', 'cut & paste' culture amongst young students, and inferred that this could lead to serious and worrying consequences for society, academia and the workplace. The study also found that people of all ages could now be considered as being part of the 'Google Generation', and that this has led to a major change in information-seeking and -using behaviour. Data was used to develop web behavioural profiles for the general population. The study also provided researchers and system developers with a vocabulary to describe digital behaviour more accurately, including new terms such as bouncing, promiscuity and power-browsing.

The 'Google Generation' study was highly cited – it was the most downloaded and reviewed report by the JISC – and the study has had significant impact across the blogosphere and international audiences, being translated into Russian (by the Russian State Library), French (by the French Ministry of Education) and Spanish (by the University of Granada).

It also received considerable national and international public engagement through the BBC television programme The Virtual Revolution and via a national web experiment on the BBC's website, going on to spawn further mainstream research projects such as the UK National E-Books Observatory, funded by JISC, and Digital Lives, funded by the Arts & Humanities Research Council.

Following the findings of this study, research is being undertaken by UCL neurologists to determine whether/how the brain is being re-wired as a result of digital communication.

Professor David Nicholas

The Development of the Vigilance Modeller

During 2009–10, North Lincolnshire experienced a marked increase in domestic burglaries. In response to this, the North Lincolnshire Safer Neighbourhoods organisation investigated ways of reducing the impact of these crimes on its inhabitants. One of the systems identified was a predictive burglary modelling developed by UCL's Dr Shane Johnson of the Department of Security and Crime Science.

Current research indicates that the risk of burglary spreads like a transmissible disease. If a burglary occurs in one home, another is likely to occur soon at another home nearby. Using an approach first developed to monitor the spread of disease, Dr Johnson and his UCL team conducted research in the East Midlands area. From this research, they developed a model to predict where crime would occur. Tested against traditional 'hotspotting' methods, the new model proved to be far more accurate.

The Home Office's 'vigilance' programme is a £3 million fund allotted to help 35 areas across the UK tackle and prevent burglary and personal robbery. Under this programme, North Lincolnshire Safer Neighbourhoods' Crime and Disorder Reduction Partnership (CDRP) was commissioned to produce a toolkit for the benefit of other CDRPs, and to provide a guide for the introduction of the UCL predictive model into their own processes and working practices. This was the first time such an academic study was translated and implemented.

The objective of the programme was to achieve a reduction in crime and the fear of crime within the area by a more effective use of information available to North Lincolnshire Council and its partners, their officers and the public. The components of this toolkit included a web-based predictive modeller – the 'Vigilance Modeller'. The 'Vigilance Modeller' programme was downloaded to a specially produced, credit card-sized USB memory stick, which North Lincolnshire Safer Neighbourhoods distributed to all 375 UK community safety partnerships.

The vigilance modeller is currently being distributed across the UK.

Dr Shane Johnson

Internationalisation in Action through UCL Consultants

In 2010, Dr Rosalind Duhs of UCL's Centre for the Advancement of Learning and Teaching (CALT) was invited to be a guest lecturer on an MA course in Higher Education Teaching at an institute for international students. Dr Duhs taught teaching principles and curriculum design and development, with a focus on integrating culture, values and ethics.

The aim of the course was for participants to develop their higher education teaching ability and to design innovative curricula and assessments based on current theories of teaching and learning.

Students used the virtual learning environment Moodle, a UCL platform, for group course work. Through this online learning platform, students shared their cross-cultural experiences of learning in England and in their home countries.

A workshop on the internationalisation of the curriculum provided students with the opportunity to compare and contrast learning strategies, drawing on the experience of others with diverse educational backgrounds.

The students enjoyed this interactive learning experience rich in intercultural communication, and hope to introduce these innovative methods of teaching to their home countries.

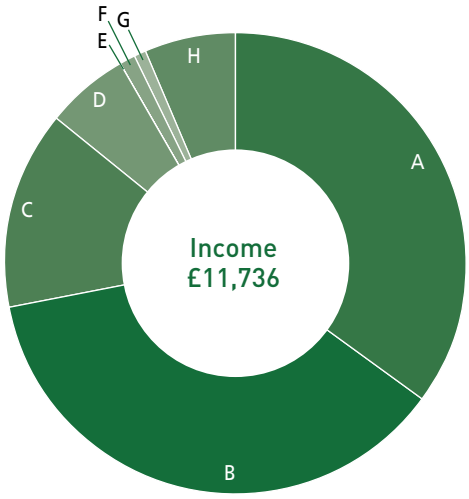
Dr Rosalind Duhs

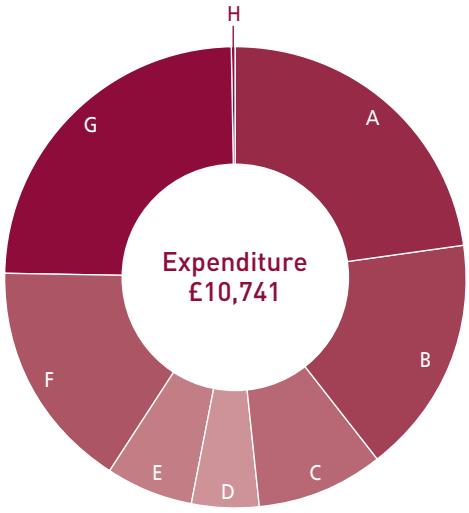
The 'Google Generation'

Find out more about consultancy services at: www.uclconsultants.com

Financials

UCLB group activity – Summary results	2009/10	2008/09
	(£'000)	(£'000)
Income	11,736	13,689
Expenditure	10,741	12,530
Profit before Gift to UCL	**995**	**1,159**





Income analysis for 2009/10		(£'000)
A	Royalties and intellectual property income	4,137
B	Consultancy services	4,313
C	Services to UCL	1,629
D	Proof of concept funding	684
E	Equity realisations	12
F	Research	136
G	Interest	88
H	Other	737
		11,736

Expenditure analysis for 2009/10		(£'000)
A	Staff costs	2,450
B	Research and consultancy	1,789
C	Patent costs	964
D	Premises	499
E	Other	657
F	Distributions to academics and inventors	1,739
G	Distributions to UCL	2,619
H	Investment impairments	24
		10,741

The above figures include those of UCL Business PLC, UCL Consultants Ltd and the UCL Proof of Concept funds administered by UCL Business PLC

Find out more

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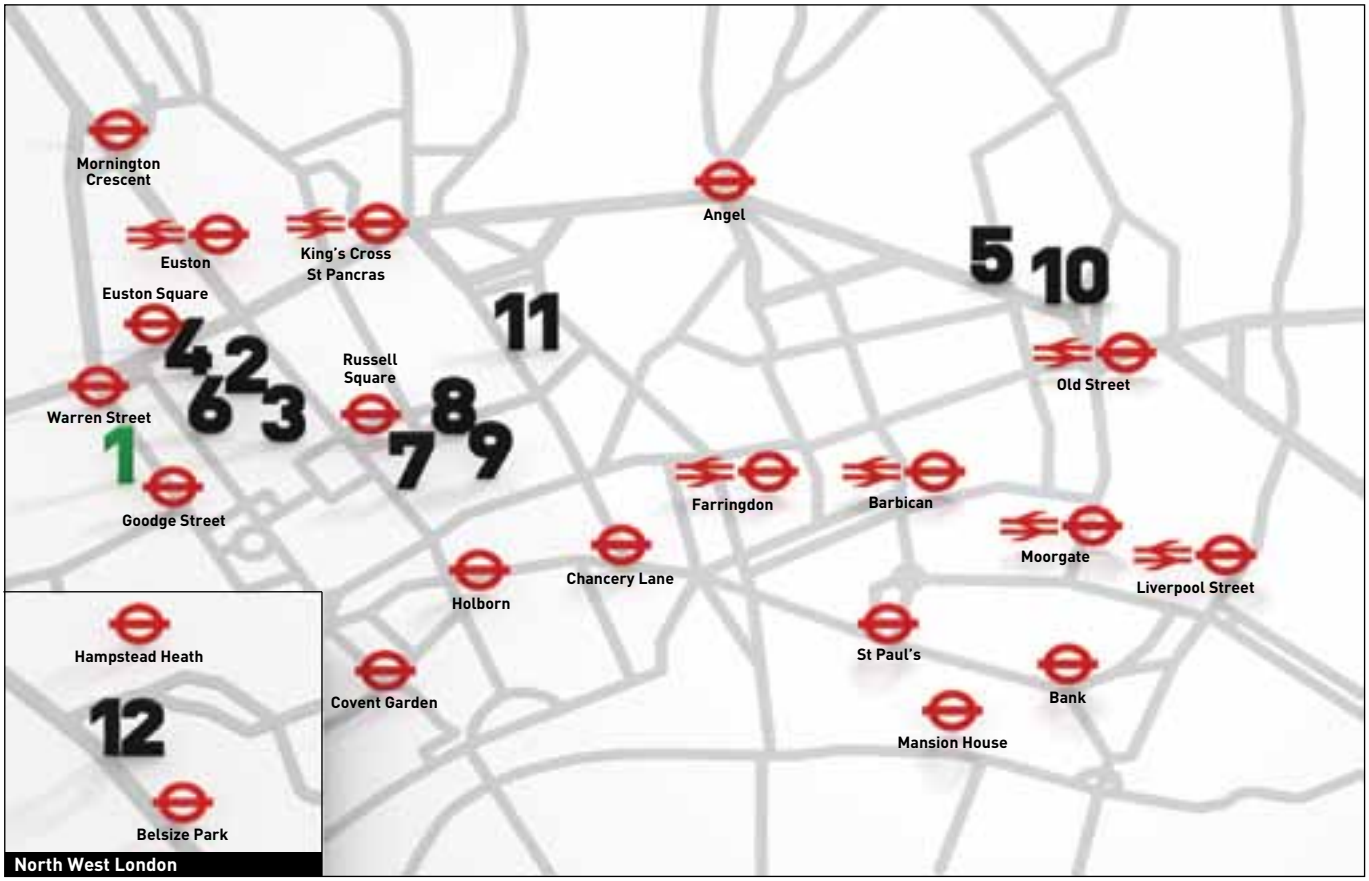
Acknowledgements

We are privileged to be able to call on the partnership support of an unrivalled group of institutions. When you engage with UCLB, you engage with all of these great knowledge centres:



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