



dti

**KNOWLEDGE TRANSFER  
PARTNERSHIPS**

Knowledge Transfer  
Partnerships  
Annual Report 2004/5

SUCCEEDING THROUGH INNOVATION



The DTI drives our ambition of 'prosperity for all' by working to create the best environment for business success in the UK. We help people and companies to become more productive by promoting enterprise, innovation and creativity.

We champion UK business at home and abroad. We invest heavily in world-class science and technology. We protect the rights of working people and consumers. And we stand up for fair and open markets in the UK, Europe and the world.

## Knowledge Transfer Partnerships is funded by:

Biotechnology and Biological Sciences Research Council ([www.bbsrc.ac.uk](http://www.bbsrc.ac.uk))

Department for Environment, Food and Rural Affairs ([www.defra.gov.uk](http://www.defra.gov.uk))

Department of Health ([www.dh.gov.uk](http://www.dh.gov.uk))

Department of Trade and Industry ([www.dti.gov.uk](http://www.dti.gov.uk))

Economic & Social Research Council ([www.esrc.ac.uk](http://www.esrc.ac.uk))

Engineering and Physical Sciences Research Council ([www.epsrc.ac.uk](http://www.epsrc.ac.uk))

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Invest Northern Ireland ([www.investni.com](http://www.investni.com))

Natural Environment Research Council ([www.nerc.ac.uk](http://www.nerc.ac.uk))

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# Foreword



**Dr Ian Harrison**

**Director, Knowledge Transfer Services Directorate, DTI and Chairman of the KTP Management Board**

This Annual Report confirms that Knowledge Transfer Partnerships (KTP) is among the world's leading initiatives for promoting the transfer of knowledge and skills from researchers to business. Nearly every page includes examples of how businesses, academic institutions and - most particularly - young people have gained lasting benefit from their participation.

The year has been particularly notable for the participation of One NorthEast (the Regional Development Agency for the north east of England) as a new Sponsor - and the likelihood of several other new Sponsors in the coming year.

Growing involvement of KTP offices in universities in the management of the product has been seen in their Belfast conference in November 2004 and subsequent participation in KTP Management Board meetings.

And during the year, a new contract for the management of KTP on behalf of the Sponsors was awarded to Momenta, an operating division of AEA Technology plc.

One of the intended outcomes of the change of contractor will be greater emphasis on regional delivery and decision-making within KTP. Many of the staff of the former contractor, TTI Ltd, moved across to Momenta and I wish to acknowledge, with thanks, the seamlessness of the transition, on behalf of all the Sponsors.

KTP is a truly Government-wide initiative. Although DTI makes a large investment, we gratefully acknowledge the contribution that all the Sponsors make - not just in financial terms, but through their continued wholehearted support for the aims of the product. The breadth of coverage is quite remarkable and without parallel for this type of business support.

In 2005, KTP celebrates the 30th Anniversary of the launch of the then *Teaching Company Scheme* by the Science Research Council (SRC) and the Department of Industry (DoI). Sir Sam Edwards at SRC and the late Sir Ieuan Maddock at DoI can hardly have known that their baby would grow into such a strapping adult. All of us who have had the pleasure of helping to build TCS/KTP or who have benefited from it owe them an enormous debt of gratitude for their vision and tenacity in ensuring that the concept survived some teething troubles to evolve into today's product.

Over the coming year, we shall be working hard to improve KTP yet further and give even wider opportunities to the young people, businesses and researchers of today.

A handwritten signature in black ink, appearing to read 'Ian Harrison', with a long horizontal line underneath it.

# KTP Sponsors



## New Sponsors

The value of Knowledge Transfer Partnerships in the role of promoting enterprise, innovation and productivity is highly regarded and as such some 13 Sponsors are currently involved. This total includes the welcome addition of two new Sponsors: European Social Fund (ESF) and One NorthEast.

“ One NorthEast has recognised KTP as a powerful tool for improving business competitiveness and productivity, enhancing the business relevance of research and teaching across a wide range of academic disciplines together with the development and embedding of high-level skills in the region. KTP plays a pivotal role in supporting those sectors identified within the ‘three pillars’ framework of the Regional Economic Strategy.

Local companies have been delighted with the results of KTP, allowing them to bring in resources they otherwise wouldn’t have had and helping reduce product development time. ”

**Lewis Rimington**, Specialist Advisor (Higher Education), One NorthEast.

# Introduction

## About Knowledge Transfer Partnerships

Knowledge Transfer Partnerships is Europe's leading programme helping businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base.

Each Partnership employs one or more high-calibre Associates (recently qualified people) for a project lasting one to three years, transferring the knowledge the company is seeking into the business. Each Associate works in the company on a project which is core to the strategic development of the business. Associates are jointly supervised by a senior member of the business and an academic or technical specialist from the partnering knowledge base organisation. Through contact with businesses, the knowledge base partner is also provided with a relevant and improved understanding of the challenges companies encounter, and their business requirements and operations.

Knowledge Transfer Partnerships is a UK-wide programme funded by 13 Government organisations led by the Department of Trade and Industry (DTI). Each Partnership is part-funded by the Government with the balance of the costs coming from the company partner.

## The flexibility of Knowledge Transfer Partnerships

Knowledge Transfer Partnerships is intentionally flexible in delivery, allowing:

- projects to vary in length between 12 and 36 months

- knowledge base partners to include Further Education Institutions (teaching at least the equivalent of NVQ Level 4) as well as Higher Education Institutions, Research and Technology Organisations and Public Sector Research Institutes
- Associates to be either post-graduate researchers, university graduates, or individuals recently qualified to at least NVQ (Level 4) or equivalent.

## Benefits for the Associate

Knowledge Transfer Partnerships can help Associates enhance their career prospects by providing them with the opportunity to manage a challenging project central to a company's strategic development and long-term growth, as well as offering top class training and development in business management and leadership skills.

- Over 50% of Associates register for a higher degree during their project
- Over 70% of Associates are offered employment by their host company on completion of their project.

## Benefits for the knowledge base

Through Knowledge Transfer Partnerships, academics are able to:

- develop business-relevant teaching materials
- identify new research themes and undergraduate and post-graduate projects
- publish high quality research papers
- contribute to the Research Assessment Exercise (RAE) assessment and rating of their department.

## Benefits for the company partner

Business performance outputs vary considerably from case to case, given the rich variety of projects.

Latest information shows that, on average, the business benefits that can be expected from a single KTP project are:

- an increase of over £220,000 in annual profits before tax
- the creation of three genuine new jobs

- an increase in the skills of existing staff.

Put another way, for every £1 million of Government investment in Knowledge Transfer Partnerships, the benefits achieved by UK businesses amount to:

- £3.3 million increase in annual profits before tax
- the creation of 77 genuine new jobs
- 263 company staff trained.

## Knowledge Transfer Partnerships' mission

**To strengthen the competitiveness, wealth creation and economic performance of the UK by the enhancement of knowledge and skills and the stimulation of innovation through collaborative projects between business and the knowledge base.**

The objectives of Knowledge Transfer Partnerships are to:

- facilitate the transfer of knowledge and the spread of technical and business skills, through innovation projects undertaken by high calibre, recently qualified people under the joint supervision of personnel from business and the knowledge base
- provide company-based training for recently qualified people in order to enhance their business and specialist skills

- stimulate and enhance business-relevant training and research undertaken by the knowledge base
- increase the extent of interactions of businesses with the knowledge base and their awareness about the contribution that the knowledge base can make to business development and growth.

In a DTI review carried out a year ago, Knowledge Transfer Partnerships emerged as one of the most successful knowledge transfer mechanisms that the Government offers to UK businesses. Each Partnership brings business benefits, skills and knowledge to industry, graduates and academics across the UK.



“ Knowledge Transfer Partnerships has been described by various people, including Lord Sainsbury and Richard Lambert, as ‘one of our best mechanisms for technology transfer’. I subscribe to that view. ”

**Professor Sir Keith O'Nions, FRS**, Guest Speaker at the Awards event 2004.

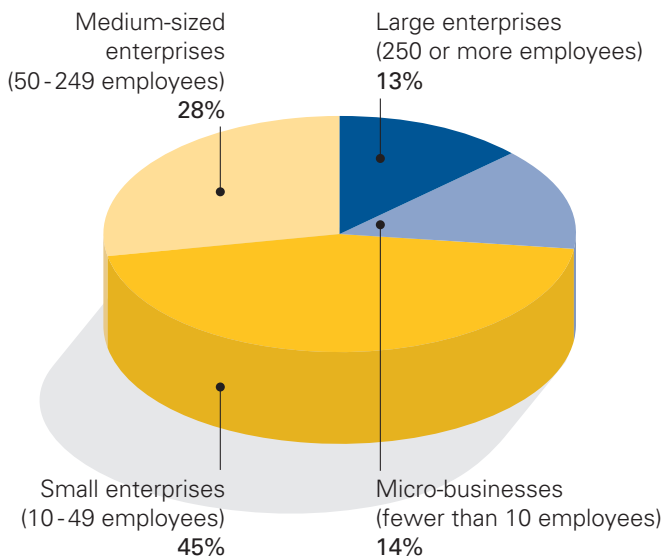
# Highlights of the year

## Progress during a time of change

During the course of 2004/5 over £32 million of grant support was committed to new Knowledge Transfer Partnerships (KTP), augmented by over £53 million from participating companies. This represented an increase of around 16% in both components compared to 2003/4. During the year, grants were offered on behalf of Sponsors to 425 new Partnerships and, at the close of the year, there were 858 active Partnerships with places for 958 Associates. This represents a slight increase in Partnership numbers from the previous year (852) and was achieved against a background of major change during the course of the year and the appointment of the new managing agent.

Fig 1 shows the distribution by company size of the 858 Partnerships. In line with the strategic objective of re-balancing participation in KTP by businesses across the spectrum of company size, the number of large enterprises participating increased by over 22% by 31st of March 2005, whilst participation by small enterprises increased by 8%.

**Fig 1 Distribution by company size of the 858 Partnerships as at 31st March 2005.**

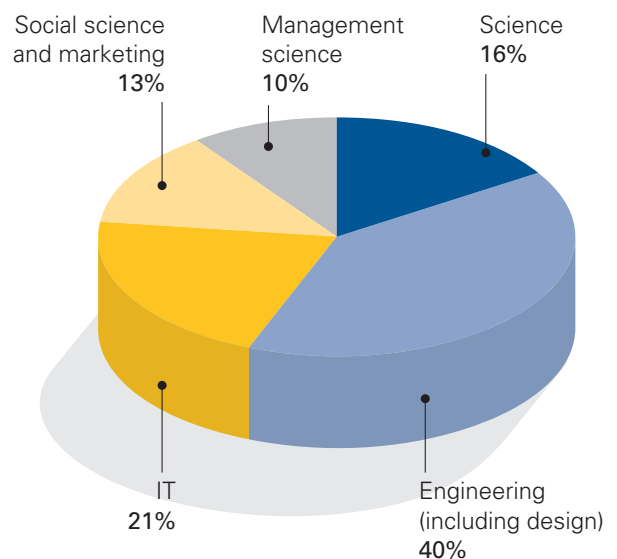


Participants from the knowledge base included Further Education Colleges and Research and Technology Organisations as well as Higher Education Institutions (HEI). In total there were 107 knowledge base organisations taking part. During 2004/5, 83 academic departments became involved with Knowledge Transfer Partnerships for the first time. The number of 5 and 5\* HEI departments participating in new Partnerships by March 2005 had increased by 15% from the previous year to 120 departments.

The main areas of technology/knowledge involved in Knowledge Transfer Partnerships were similar to previous years, with Management Science now represented in around 10% of projects (see Fig 2).

The primary business functions for Associates registered in 2004/5 were similar to previous years, although in 2004/5 management increased from 15% to 23% and marketing and sales contributed around 13% (see Fig 3).

**Fig 2 Main areas of technology/knowledge.**





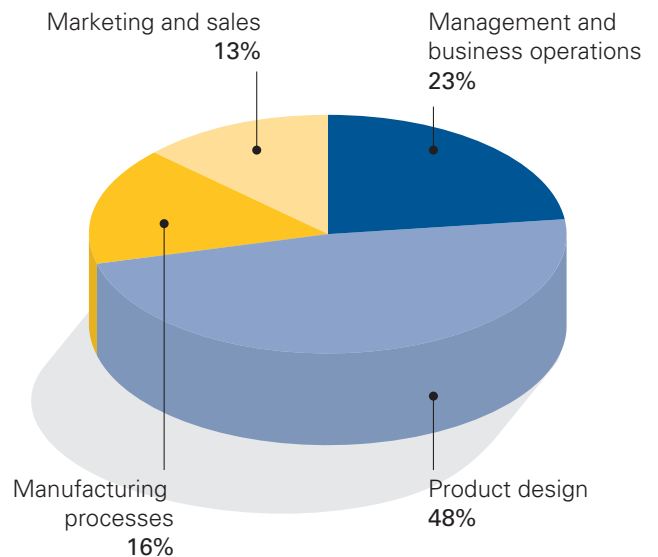
*Award-winning Partnerships for 2004.*

During the year 2004/5, 389 new Associates were recruited to Knowledge Transfer Partnerships. This included individuals recently qualified at NVQ (Level 4) as well as graduates and post-doctoral researchers.

By March 2005, 292 Associates had completed the full term of their contract; of these, 215 (74%) were offered employment with their host company, and 74% of these offers were accepted.

During the year, 1,334 NVQ units were accredited to Associates and 103 Associates gained the full NVQ (Level 4) in Management. Another 15 Associates were expected to gain the full NVQ award when verification was completed.

*Fig 3 Business functions.*



# The KTP delivery team



*The Momena KTP delivery team. Front centre, Dr Debbie Buckley-Golder, KTP Programme Director.*

During the first half of the year, KTP continued to be delivered by TTI Ltd. However, on 1st October 2004, Momena, an operating division of AEA Technology plc, was awarded the contract to manage the KTP Programme and throughout the year delivery of the Programme continued uninterrupted.

The Momena delivery team is based in Harwell, Oxfordshire, and works with a regional team made up of six development managers and 27 Advisers.

There are six Momena staff in the Regional Management team. This team works alongside the Programme Director and the KTP Advisers to deliver the KTP Programme in the regions.

**Sarah Macnaughton** – Regional Manager

**Martin Webb** – Regional Support Manager

**Alexandra Humphris-Bach** – Regional Development Manager (focused on the South West and Wales)

**Alan Hendry** – Regional Development Manager (focused on Scotland)

**Rob Marshall** – Regional Development Manager (focused on the South East, East Anglia and the East/West Midlands)

**Paul Rosen** – Regional Development Manager (focused on the North East, Yorkshire and Humber, Cumbria and the North West)

There are 27 Regional Advisers, including four Senior Advisers (identified by an asterisk below), divided into four Regional Groups: North, South, East and West. There were seven new Advisers during the year 2004/5.

## North Group

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Mr Tony Mitchell\*  
Mr Neil Duncan  
Mr Ken Frame

Dr Gerry Black  
Mr William Morris

## South Group

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Dr Paul Naylor\*  
Mr Brian Cannan  
Dr Raymond McKee  
Dr Martin Fakley

Mr James Best  
Mr Douglas Irish  
Dr Gillian Rysiecki  
Mrs Jan Stringer

# New Regional Advisers

## East Group

Mr Richard Parker-Smith*	Mr Maurice Jones
Mr Andrew Darwent	Mr Mike Willis
Mr John Clayton	Ms Philippa Ryan

## West Group

Mrs Fiona Nightingale*	Dr David Britton
Dr Russ Bromley	Mr Howard Nicholls
Dr Ted Jones	Dr Barry Twite
Mr Philip Ternouth	Ms Jose Freedman

## Focus on delivery

The KTP Management Board has emphasised the importance of focusing on delivery of KTP at regional and local levels. This was reflected within the key strategic objectives set by Momenta for the Management team for the first 18 months of the contract:

- to build and strengthen relationships across the wider KTP community, including KTP offices and centres in universities across the UK, to facilitate the effective use of all available delivery mechanisms for the Programme
- to develop and enhance the Programme's management systems and processes to improve the flexibility and efficiency of delivery, respond to stakeholder perceptions/requirements and enhance Sponsors' value for money
- whilst ensuring the continued recognition of KTP as a 'national' Programme, to enhance 'regional' delivery mechanisms through the appointment of a number of Regional Development Managers (RDMs)
- to develop and implement a strategy for the marketing and promotion of KTP, to enhance the profile and image of the Programme, and to facilitate the achievement of the Sponsors' strategic targets for growth.



*John Clayton*



*Martin Fakley*



*Ken Frame*



*Jose Freedman*



*Philippa Ryan*



*Jan Stringer*



*Philip Ternouth*

# Knowledge Transfer Partnerships Awards

The 2004 Knowledge Transfer Partnerships Awards event was held in London on the 1st December. The event celebrated and recognised the achievements of all participants in the eight winning Knowledge Transfer Partnerships that had been judged as the best of those completed in the preceding calendar year, and the five winners of the 'Business Leader of Tomorrow' Award for current KTP Associates.

The awards were presented by Professor Sir Keith O'Nions, FRS, Director General of Research Councils and formerly Chief Scientific Adviser at the Ministry of Defence.

In addition to the award-winning Partnerships, five KTP Associates won 'Business Leader of Tomorrow' Awards. Having completed the first year of their Partnerships, these five had impressed the judges with their initiative, commitment and drive to deliver a high-quality project.



*'Business Leader of Tomorrow' Award winners.*

## Winning Partnerships for 2004

### Best Knowledge Transfer Partnership 2004

University of Northumbria at Newcastle and P&L Systems Ltd

### Award for Engineering Excellence

University of Portsmouth and Infranor Ltd

### Best Application of Social Science or Management

Coventry University and Touchstone Housing Association Ltd

### Award-winning Partnerships

University of Newcastle Upon Tyne and Cambridge Life Sciences plc

Cardiff University and Richards, Moorehead and Laing Ltd

Queen's University, Belfast and Consarc Design Group Ltd

Napier University and Cànan Ltd

Loughborough University and Scientific Vacuum Systems Ltd

## Business Leaders of Tomorrow for 2004

Ben Chadwick, Salt Union Ltd and Liverpool John Moores University

Sarah Nunn, Young's Home Brew Ltd and University of Wolverhampton

Ryan Maughan, KC Engineering Ltd and University of Durham

Saswata Sanyal, Rowe & Co Cornwall (Holdings) Ltd and University of Plymouth

Joe Wotherspoon, Alcoa, Europe, Flat Rolled Products plc and University of Leicester

# Best Knowledge Transfer Partnership 2004

Tom Holmes (the Associate), Neil Smith (University of Northumbria at Newcastle) and Chris Lee (Managing Director, P&L Systems Ltd).



The company's turnover has increased by 41% since the start of the Partnership.

This Partnership was sponsored by the DTI.

## Aim

The aim of this Partnership was to embed a new product development process in the company including concept creation, design for market, user-centred interaction design, 3D CAD, rapid product development and design for manufacture and assembly.

## Background

When the Partnership began in April 2002, P&L Systems Ltd was Europe's largest manufacturer of insect control equipment, with a turnover of £5.8 million for FY 2001. However, although the European market continued to grow, UK sales were flat and a huge opportunity was highlighted in the USA where underdeveloped but overpriced products were market leaders.

The development of new products by P&L Systems Ltd, such as washroom air fragrance dispensers which not only fragrance the environment but sterilise bacteria thus attacking the root cause of odour, is now challenging existing market perceptions. These new developments are supported by a number of worldwide patents.

The combination of new products across new markets has provided substantial growth over the last three years. The expected group turnover for 2004, based on current sales, is approximately £9.7 million (equivalent to a growth of 41% since the start of KTP). With the new design-led thinking at the centre of greater integration between departments, a range of products have been developed which challenge the convention within existing markets and open up new markets.



**The Associate, Tom Holmes, is now a Design Manager at P&L Systems Ltd.**

Design-led thinking was embedded across the entire company thereby shifting company culture and strategy. A huge increase in bottom-line figures is anticipated for 2005 along with continued and significant company growth as the sales of the new hygiene products grow further.

## **Company benefits**

P&L Systems Ltd has set up an innovative external 'Design Group' and has achieved a fully integrated design process and procedure, driving the company's strategic direction. To date, the company has developed 16 ranges of different products, accounting for £2 million (21%) of its turnover.

## **Academic benefits**

The University of Northumbria at Newcastle has written three papers outlining the successful outcomes from this KTP work and presented them at various international design conferences. The technologies derived from the Partnership by the University of Northumbria at Newcastle are now used in commercial applications through licensed product agreements with joint company ownership. Collaborative projects between the university and P&L Systems Ltd provide teaching material across three academic courses.

## **Associate benefits**

The Associate on the Knowledge Transfer Partnership, Tom Holmes, is now a Design Manager at P&L Systems Ltd. During the Programme he had the opportunity to undertake an MA in Design Practice. Tom personally developed or oversaw 16 product ranges into manufacture and filed several patents, so gaining valuable knowledge of Intellectual Property Rights processes. He also developed as a manager of a team of four staff and as a Project Manager working at boardroom level. Tom Holmes won a 'Business Leader of Tomorrow' Award in 2002 for his outstanding work and potential as an individual leader shown during this Partnership.

# Number of Partnerships

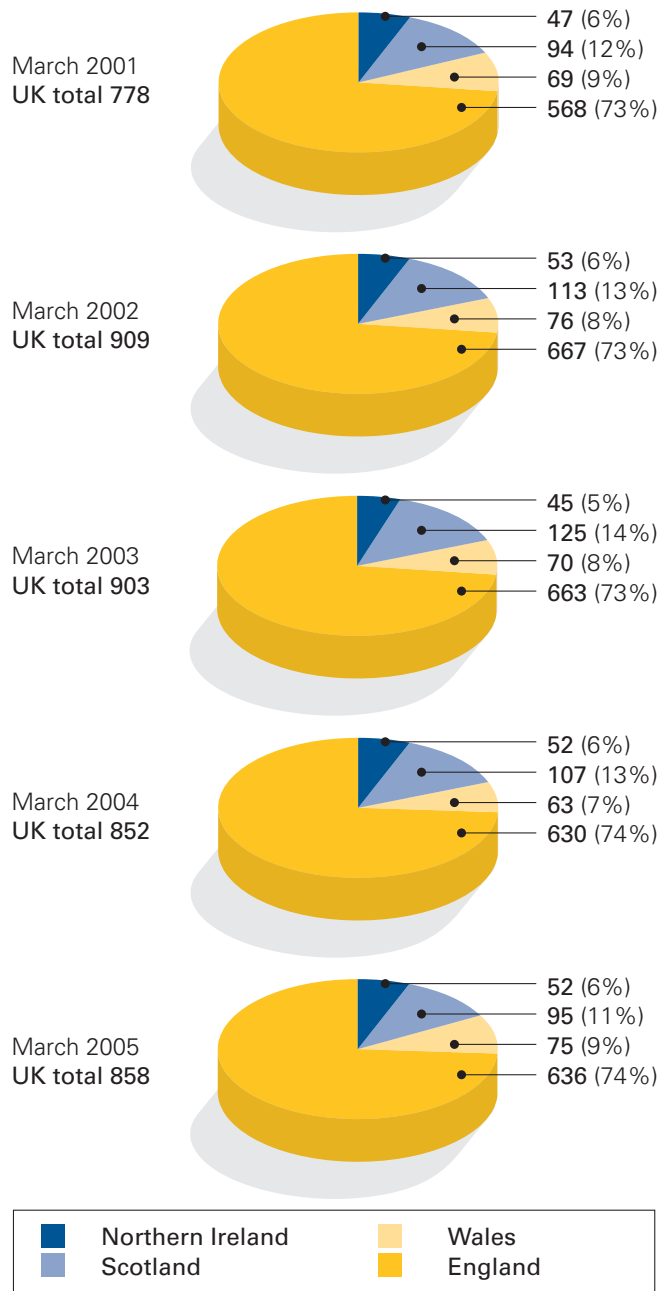
During the year, 506 proposals for Knowledge Transfer Partnerships were submitted to the Partnerships Approvals Group and 457 (90%) were supported or conditionally supported. This compares with 482 proposals considered and 366 (76%) supported or conditionally supported in 2003/4.

A total of 374 Partnerships finished during the year, compared with 244 which ended in 2003/4. As a consequence, there was a small net decrease in Partnerships during 2004/5.

Through the work of the Regional Advisers, Regional Development Managers and KTP offices in universities across the UK, effort is deployed to ensure, as far as possible, that the distribution of Partnerships across the UK relates to the potential for participation. The level of activity in Scotland, Wales and Northern Ireland will also depend to some extent on the additional funding provided by the Devolved Administrations. Differences in the percentage distribution year on year are not regarded as significant.

Of the 425 Partnerships for which grant offers were made in the financial year, 37 were second Partnerships with SMEs involved in existing (one Associate) Partnerships and, in accordance with agreed policy, were funded at the 'first Partnership' rate. There were 12 Partnerships funded at the 'second or repeat Partnership' rate.

*Fig 4 Distribution of Knowledge Transfer Partnerships across the UK.*



## Partnership approvals 2004/5



# Financial commitments by Sponsors

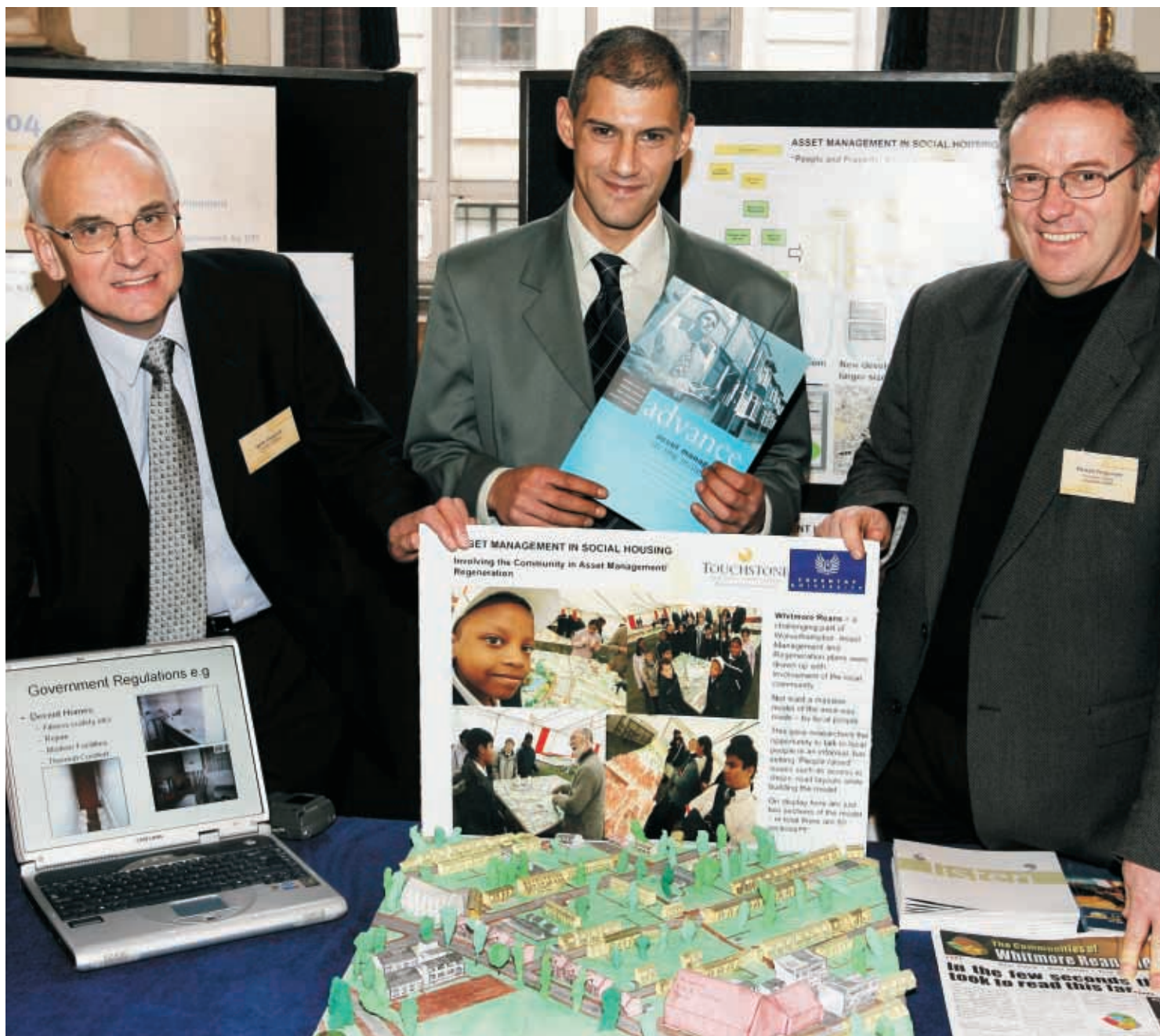
The total value of grants committed to new Partnerships in 2004/5 was £32 million, which represents an increase of £4.7 million or 17% from 2003/4. In addition, over £52.7 million was committed by the participating companies in the form of cash funding for academic partners, Associate salaries and investments required to support the full implementation and exploitation of the Partnerships. This was over and above the commitment of Government grants and represents an increase of £7.2 million or 16% on the previous year. An outline of the financial commitments by Sponsors is provided in Tables 1 and 2.

*Table 1 Knowledge Transfer Partnerships expenditure in 2004/5 by Sponsor.*

Sponsor	Actual expenditure (£k)
BBSRC	143
Defra	450
DH (inc NHSSW)	40
DTI	17,000
EPSRC	2,400
ESRC	912
Invest NI	640
NERC	75
PPARC	3
SE	580
WAG	390
<b>Total</b>	<b>22,633</b>

*Table 2 Number of Knowledge Transfer Partnerships and Associate places, and amount of grant commitment in 2004/5 by Sponsor (includes shared sponsorship).*

Sponsor	No of Partnerships	No of Associate places	Grant commitment (£k)
BBSRC	1.0	1.0	93
Defra	6.0	7.0	532
DH	1.5	1.5	146
DTI	348.5	375	26,026
EPSRC	4.5	4.5	325
EPSRC - CTA	2.0	2.0	169
ESRC	11.5	13.5	1,074
Invest NI	13.5	14.5	922
NERC	1.0	1.0	56
PPARC	1.5	1.5	94
SE	14.5	15.5	1,097
WAG	19.5	23	1,505
<b>Total</b>	<b>425</b>	<b>460</b>	<b>32,039</b>



**Touchstone Housing Association Ltd and Coventry University, School of Science and the Environment, were winners of the 2004 Award for Best Application of Social Science or Management.**

Financially, the company has benefited from an increase in sales turnover of £978,000, and before tax profit of £412,000, with the sales data based on information obtained from the new Asset Management Information system, developed as part of the KTP work.

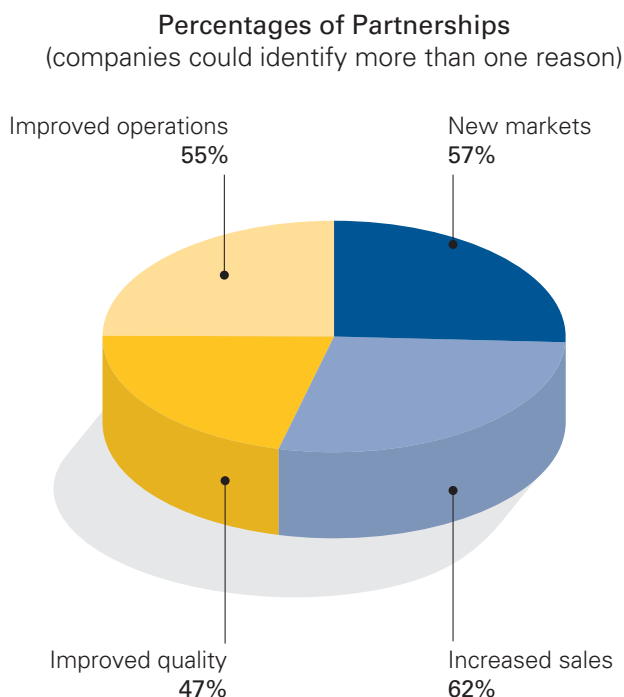
# Outcomes

## Grading

Upon completion of each Partnership, the participants prepare a final report, which is reviewed by two members of an independent grading panel. The reported outcomes that follow are taken from these final reports. The panel grades each Partnership on a scale of 1 to 6, taking into account the success of the relationship between the participants as well as the tangible outcomes.

By the end of March 2005, 243 of the 374 projects completed in 2004 had been graded. Over the 5-year period to March 2005, an average of 54% of Partnerships each year were graded 1 or 2 - that is, were regarded by the assessors as either 'excellent' or 'very good' (see Table 3). In 2004/5, for those graded, this increased to 55% although a higher proportion than previously were graded 2.

*Fig 5 Reasons given by companies for increased profitability in 2004/5.*



*Table 3 Grading for completed Partnerships from April 2000 to March 2005 (shown as percentages).*

Year	2000/1	2001/2	2002/3	2003/4	2004/5
<b>No of completed Partnerships</b>	<b>281</b>	<b>261</b>	<b>294</b>	<b>390</b>	<b>374*</b>
Graded 1 (High)	8%	7%	8%	7%	4%
2	48%	45%	44%	46%	51%
3	21%	25%	25%	25%	30%
4	11%	9%	8%	12%	9%
5	9%	10%	8%	8%	4%
6 (Low)	3%	4%	7%	2%	2%

\*243 graded by March 2005.

## Participating companies

Final reports from Partnerships indicated that, as a result of participation in Knowledge Transfer Partnerships, companies achieved increased profitability through the changes summarised in Fig 5.

In 81% of cases, participants reported that the results achieved would be significant to the future performance of the company concerned; this compares with a similar figure (80%) in 2003/4. Almost all of the knowledge base partners reported that they had benefited

**On average, three new jobs were created as a result of each Associate project.**

**Table 4 Benefits from participation in Knowledge Transfer Partnerships (average per Associate project).**

	2003/4	2004/5
One-off increase in profit before tax	£37,779	£49,909
Annual increase in profit before tax after Partnership completion	£172,015	£227,350
Investment in plant and machinery	£115,842	£105,862
Number of new research projects initiated	3.6	3.2
Number of research papers published in refereed journals	1	1
Number of other articles published	1	1
Intellectual property agreement between partners	61%	67%
Expectation of commercial benefit from application of intellectual property	18%	24%
Plans for further collaboration	61%	66%

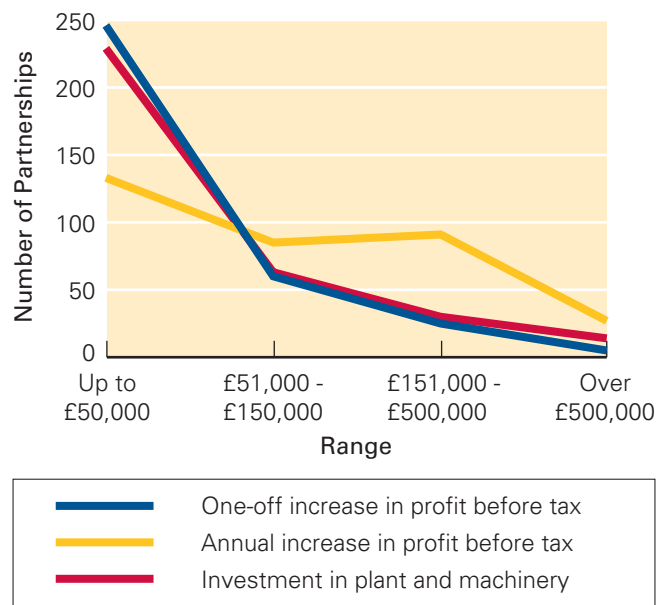
considerably from participating in the Partnerships: 93% benefiting through staff development (88% in the previous year), 88% reporting benefits to research (previously 80%) and 85% reporting benefits to teaching (previously 82%). A summary of benefits from participation is given in Table 4.

The highest one-off increase in profit before tax was £1.7 million. The highest annual increase in profit before tax after Partnership completion was £20 million. The highest reported investment in plant and machinery was £7 million.

The one-off increase in profit before tax, the annual increase in profit before tax after Partnership completion and the investment in plant and machinery vary considerably across Partnerships, as indicated opposite in Fig 6. However, the pattern observed is very similar to those of previous years. In addition, over the 5-year period 2000/1 to 2004/5, an average of

three new jobs were created in each participating business as a result of each Associate project.

**Fig 6 Increases in profit before tax - variations across Partnerships.**



“ The company confidently predicts fee income over the next three years of at least £200,000 as a direct result of successful completion of this Partnership. ”

Spokesman for **Richards, Moorehead & Laing Ltd** and **Cardiff University, School of Engineering.**

# Outcomes

## Benefits for companies from each £1 million of Government expenditure

Fig 7 Comparison of numbers of jobs created within companies over four years.

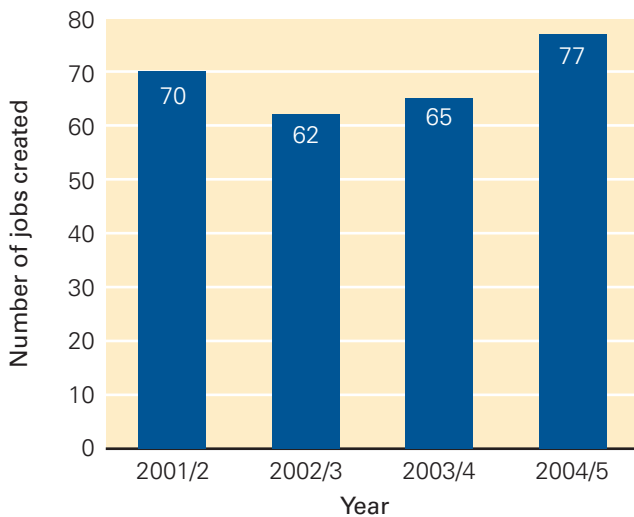


Fig 8 Comparison of numbers of company staff trained over four years.

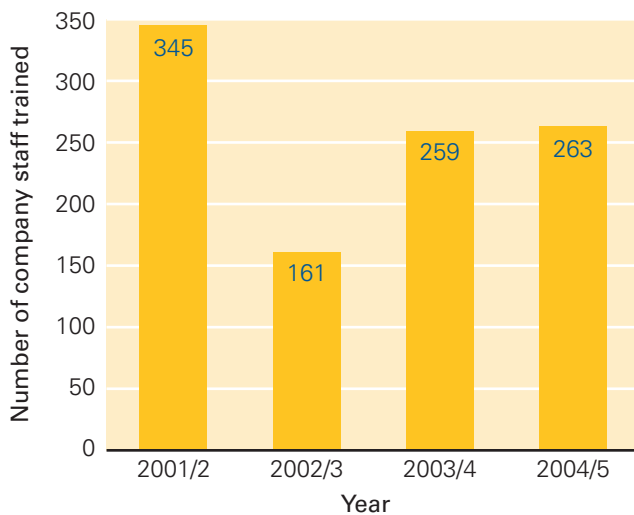


Fig 9 Profit and investment benefits to companies over four years.

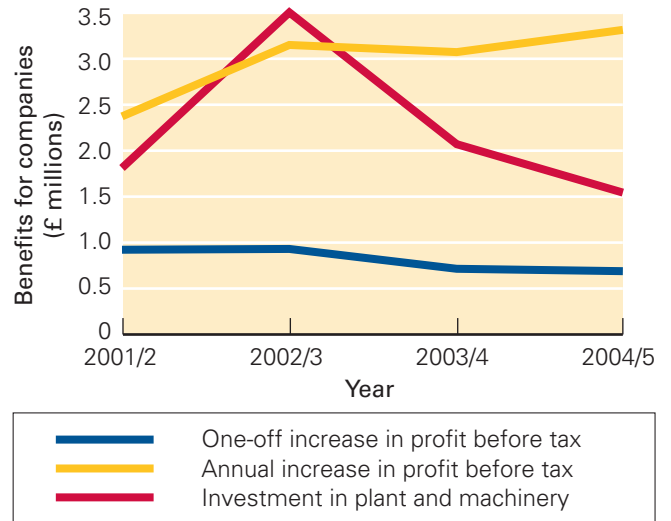
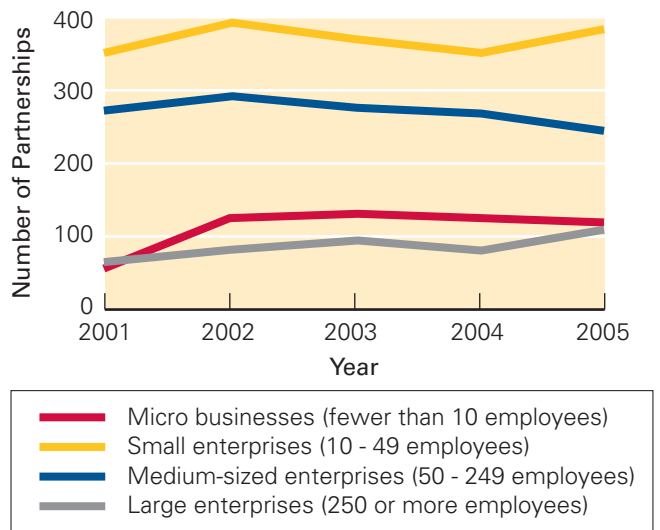


Fig 10 Knowledge Transfer Partnerships portfolio by size of enterprise 2001 - 2005.



During the year, 365 new Partnerships were established with SMEs and 60 with large companies. Information on the overall portfolio of Partnerships at the end of the year by company size is given in Table 5 opposite. Both the proportion of Partnerships and individual projects (Associate places) with large companies increased by 2% from the previous year, to 13% and 15% respectively.

Table 5 Knowledge Transfer Partnerships portfolio by size of enterprise (March 2005).

	Micro-businesses (fewer than 10 employees)	Small enterprises (10 - 49 employees)	Medium-sized enterprises (50 - 249 employees)	Large enterprises (250 or more employees)	Total
Number of Partnerships	118	384	246	110	<b>858</b>
Proportion of portfolio (%)	14%	45%	28%	13%	<b>100</b>
Number of Associate places	120	409	288	141	<b>958</b>
Proportion of portfolio (%)	12%	43%	30%	15%	<b>100</b>

Table 6 Knowledge Transfer Activity by industrial sector (2001 - 2005).

Industrial sector	March 2001		March 2002		March 2003		March 2004		March 2005	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
Aerospace	8	(1)	8	(1)	9	(1)	7	(<1)	5	(<1)
Agriculture, Forestry, Fishery	19	(2)	23	(3)	19	(2)	19	(2)	8	(1)
Bricks, Cement, Glass manufacture	7	(1)	5	(<1)	7	(<1)	6	(<1)	14	(2)
Chemical manufacture	35	(4)	28	(3)	35	(4)	25	(3)	27	(3)
Construction	17	(2)	39	(4)	45	(5)	41	(5)	34	(4)
Education, Administration	-	-	-	-	-	-	-	-	12	(1)
Energy, Water	21	(3)	14	(2)	18	(2)	24	(3)	10	(1)
Finance	-	-	-	-	-	-	-	-	2	(<1)
Food, Drink, Tobacco	45	(6)	61	(7)	59	(7)	65	(8)	36	(4)
Footwear, Textile manufacturing	9	(1)	16	(2)	21	(2)	16	(2)	9	(1)
Furniture, Games, Jewellery	-	-	-	-	-	-	-	-	17	(2)
Instrument, Electrical manufacture	123	(16)	122	(13)	115	(13)	110	(13)	112	(13)
IT, Multimedia	130	(17)	150	(16)	136	(15)	108	(13)	105	(12)
Medical (inc Medical device manufacturing)	-	-	-	-	-	-	-	-	34	(4)
Membership professional organisations	-	-	-	-	-	-	-	-	4	(<1)
Metal goods (inc Vehicle manufacture)	112	(14)	132	(14)	130	(14)	121	(14)	90	(10)
Metal manufacture	45	(6)	37	(4)	23	(3)	16	(2)	46	(5)
Plastics, Paper, Printing industries	52	(7)	63	(7)	55	(6)	48	(6)	37	(4)
Publishing, Media, Sport R&D	-	-	-	-	-	-	-	-	15	(2)
Service industry (inc Distribution)	59	(8)	93	(10)	102	(11)	111	(13)	165	(19)
Sustainability	-	-	-	-	-	-	-	-	11	(1)
Transport	-	-	-	-	-	-	-	-	3	(<1)
Wood	-	-	-	-	-	-	-	-	10	(1)
Other	96	(12)	118	(13)	129	(14)	135	(15)	31	(4)
<b>Total</b>	<b>778</b>	<b>(100)</b>	<b>909</b>	<b>(100)</b>	<b>903</b>	<b>(100)</b>	<b>852</b>	<b>(100)</b>	<b>858</b>	<b>(100)</b>

# Outcomes

## Participating knowledge base organisations

At the end of the year, 414 departments from 100 Higher Education Institutions (HEIs) were involved in Knowledge Transfer Partnerships. In addition, four Further Education Institutions (FEIs) and three knowledge base organisations which were neither HEIs nor FEIs were participating. Thus, altogether there were 107 knowledge base organisations taking part. There were 83 academic departments which became involved in Knowledge Transfer Partnerships for the first time in 2004/5 (since 1st April 1998).

The subject range of the departments is illustrated in Table 7, which also shows figures for the previous four years and records the non-HEI and non-FEI organisations in the 'Other' category. The percentage of 5 and 5\* HEI departments participating in new Partnerships in March 2005 was 29%, unchanged as a percentage from the previous year. However, the actual number of Partnerships has increased from 104 in March 2004 to 120 in March 2005.

*Table 7 Knowledge Transfer Partnerships by academic department 2001 - 2005.*

Academic department	% of 778 Partnerships (March 2001)	% of 909 Partnerships (March 2002)	% of 903 Partnerships (March 2003)	% of 852 Partnerships (March 2004)	% of 858 Partnerships (March 2005)
Agriculture & Food	6	6	5	5	2
Biology	3	2	3	3	3
Chemical engineering	2	2	2	2	1
Chemistry	3	2	2	3	3
Civil engineering	2	2	3	3	3
Computing	17	19	19	16	14
Design	3	4	4	3	5
Electrical engineering	7	6	5	4	4
Engineering & technology	16	12	13	16	21
Management	13	16	19	24	24
Material technology	2	2	2	1	2
Mathematics	1	1	1	1	1
Mechanical engineering	15	16	13	10	7
Medicine	2	2	1	1	1
Physics	1	1	1	1	1
Other	7	7	7	7	8
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>



In a recent DTI review, Knowledge Transfer Partnerships emerged as one of the most successful knowledge transfer mechanisms the Government offers UK businesses.

# Outcomes

Table 8 Knowledge Transfer Partnerships with Further Education Institutions, March 2005.

Knowledge base partner	Company partner	No of Associates	Length of project (months)
Armagh College of Further & Higher Education	Rapid International Limited	1	18
Doncaster College	Harvard Engineering plc	1	18
Gorseinon College	Birchfield Interactive plc	1	18
Gorseinon College	BJ Group Limited	1	24
Gorseinon College	Business Systems Services (UK) Limited*	3	18-24
Gorseinon College	Castell Howell Foods Limited	1	24
Gorseinon College	Clynderwen and Cardiganshire Farmers Limited	1	36
Gorseinon College	Dezrez Services Limited	1	24
Gorseinon College	ECS Climate Control Limited	1	18
Gorseinon College	Farsight Security Limited	1	24
Gorseinon College	Gower Business Systems Limited	1	18
Gorseinon College	M4 Broadcasting Limited	1	24
Gorseinon College	Sportrain Wales Limited	2	24
Gorseinon College	Tinopolis Interactive Limited	1	18
Pembrokeshire College	Celtic Vacuum Limited	1	18
<b>Total</b>	<b>16</b>	<b>18</b>	

\*Two separate Partnerships.

Table 9 Knowledge Transfer Partnerships with other research organisations, March 2005.

Knowledge base partner	Company partner	No of Associate places
Building Research Establishment	Unicorn Products Limited	1
Smith Institute	Courier Management Systems Limited	1
Smith Institute	Indeva Energy Consultants Limited	1
TUV NEL Limited	Kelton Engineering Limited	1

“ Because I have had a strategic role in the company and its growth, I have a deep commitment to ensuring that the work we have started is completed and that KC Engineering continues to prosper after the Knowledge Transfer Partnerships Programme has ended. ”

**Ryan Maughan**, Associate at KC Engineering Ltd and a winner of the 'Business Leader of Tomorrow' Award, 2004.

Table 10 Number of Knowledge Transfer Partnerships 2001 - 2005 by research ratings of lead academic department (includes only those Partnerships with Higher Education Institutions).

Research rating by HEFC in 1997	No of Partnerships (March 2001)	No of Partnerships (March 2002)	No of Partnerships (March 2003)	No of Partnerships (March 2004)	No of Partnerships (March 2005)
5*	22	30	24	28	39
5	30	36	62	77	81
4	78	100	98	118	125
3a	101	91	68	75	85
3b	67	72	55	38	43
2	61	80	24	14	14
1	23	12	1	0	0
0	19	33	9	11	23
<b>Total</b>	<b>401</b>	<b>454</b>	<b>341</b>	<b>361</b>	<b>410</b>

## Participating Associates

During 2004/5, 389 new Associates were recruited to Knowledge Transfer Partnerships and 77% held first or upper second-class degrees (see Table 11).

Table 11 Degree qualifications of Associates recruited in 2004/5.

Discipline	Degree classification						Total	%
	1	2i	2ii	3	NVQ/HND	Other		
Agriculture	1	2	0	0	0	1	4	1
Business management	9	34	2	0	1	2	48	12
Design	10	13	3	0	0	0	26	7
Engineering	49	58	21	3	3	13	147	38
Humanities	0	10	3	0	0	0	13	3
Information Technology	12	18	4	0	3	1	38	10
Materials/Metallurgy	1	1	0	0	0	2	4	1
Mathematics	0	2	0	0	1	1	4	1
Science	11	39	9	3	0	3	65	17
Other	10	19	6	1	1	3	40	10
<b>Total</b>	<b>103</b>	<b>196</b>	<b>48</b>	<b>7</b>	<b>9</b>	<b>26</b>	<b>389</b>	<b>100</b>
<b>%</b>	<b>26</b>	<b>51</b>	<b>12</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>100</b>	

# Outcomes

*Table 12 Degree qualifications of Associates recruited since 2000.*

Degree classification	% of 332 recruits in 2000/1	% of 491 recruits in 2001/2	% of 402 recruits in 2002/3	% of 336 recruits in 2003/4	% of 389 recruits in 2004/5
1	19	27	36	33	26
2i	52	54	45	50	51
2ii	23	15	16	13	12
3	2	3	2	2	2
NVQ/HND	0	0	0	0	2
Other	4	1	1	2	7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Table 13 Associates registered on Knowledge Transfer Partnerships, 2001 - 2005.*

	March 2001	March 2002	March 2003	March 2004	March 2005
No of Associates registered	550	726	758	634	593
No with higher degrees on recruitment	182 (33%)	217 (30%)	268 (35%)	237 (37%)	234 (39%)
No affiliated to professional institutions on recruitment	239 (43%)	312 (43%)	331 (44%)	270 (43%)	225 (38%)
Mean age	27.2yrs	27.9yrs	28.1yrs	28.2yrs	27.9yrs
Female	27%	31%	32%	30%	27%

The mean age of Associates at recruitment remains at 28 years. There are currently fewer female Associates than there were in 2002/3 which was a peak year. Over a third of the Associates recruited during 2004/5 have a higher degree.

Information on the nationalities of Associates registered at the end of March 2005 is summarised in Table 14. The proportion of registered Associates from the UK at the year-end was 74%. This compares with 75% at the end of 2003/4 and 76% the previous year.

*Table 14 Associates registered by nationality, March 2005.*

Region of nationality	No of Associates registered, March 2005
United Kingdom	440
India/Pakistan	41
China	21
Other Europe	17
Other Asia	14
Africa	11
Greece	7
Malaysia	7
Germany	6
Sri Lanka	6
Spain	5
Australia/New Zealand	5
South America	5
France	4
North America	4
<b>Total</b>	<b>593</b>



“ The experience that I have gained on this Partnership is far beyond anything that I could have imagined. I am working for a Fortune 500 company, experiencing their culture and best practices. ”

**Joe Wotherspoon**, Associate at Alcoa, Europe, Flat Rolled Products plc and a winner of the Business Leader of Tomorrow Award, 2004.

# Outcomes

## Associate training and development

The Associate Development Training package helps Associates to understand the aims of Knowledge Transfer Partnerships and to develop the management and business skills needed to manage their projects and enhance their careers.

The package consists of:

A web-based module - 'An Introduction to the Knowledge Transfer Partnerships' - and three five-day residential modules:

- Managing for Results - includes training in the management of people, information and projects
- People Skills - incorporates managing customer relationships, team working, managing change and managing quality
- Business Leadership and Career Development - relates to leadership and entrepreneurial skills, developing and realising business goals and the challenges faced by growing businesses and how they are overcome.

The package also enables the Associate to achieve an NVQ Level 4 in Management, which complements their academic qualification with a practical, competence-based qualification that occurs naturally from the skills used during their KTP project.

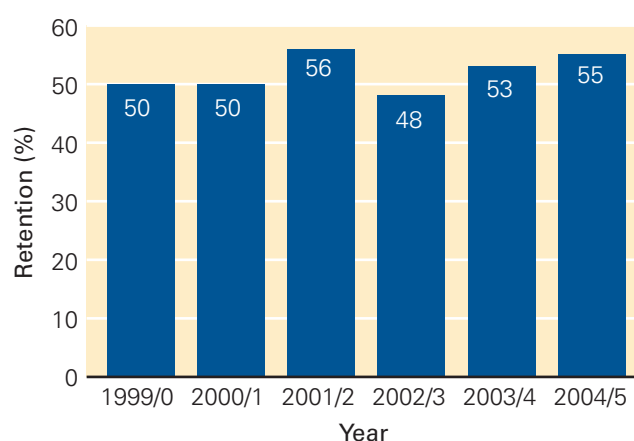
During the year, 1,334 NVQ units were accredited to Associates (compared with 1,416 in 2003/4) and 103 Associates gained the full NVQ (Level 4) in Management (59 the previous year). Another 15 Associates were expected to gain the full NVQ award when verification was completed. Certificates indicating successful completion of KTP projects were issued to 261 Associates (177 in 2003/4).

Of the 199 Associates (from 389 recruited in 2004/5) who did not possess higher degrees on recruitment, 51 (26%) registered for post-graduate awards based on learning achieved during their Associateships. In addition, 38 recruits holding higher degrees registered for further post-graduate work.

## Associate careers

During the year, 292 Associates completed the full term of their contract. Of these, 215 (74%) were offered employment with their host company and 74% of the offers were accepted. Thus, 55% overall accepted employment with their host company immediately following the successful completion of their Associateship. The percentage of Associates staying with their company partner after completion of their contract during the period 1999-2005 is shown in Fig 11.

*Fig 11 Associates remaining employed by company Partners after completion of their projects (1999 - 2005).*



To continue assessing the longer-term effects of participation in Knowledge Transfer Partnerships for graduates, a postal survey was carried out in early 2005. From 155 graduates who completed their contracts in 2001/2, replies were received from 17 (11%). This compares with a 16%



*Associate, Dr Ana Gallardo (centre), has accepted a job as Immunosensor Project Manager with Cambridge Life Sciences plc following the award-winning Partnership with the company and the University of Newcastle Upon Tyne.*

response to a similar survey carried out in early 2004. Data summarising the responses are given in Table 15 below, with the corresponding figures for 2003/4 shown for comparison. Of those who

responded, all but one said that KTP had been of positive benefit to their career and the majority are still employed by the company partner.

*Table 15 Summary of the responses to a postal survey carried out in early 2005.*

	2003/4	2004/5
Employed in UK industry	90%	82%
Still employed by company partner	62%	64%
Employed in Academia	3%	6%
Earning over £30,000 per year	41%	24%
Registered for higher degree during Associateship	41%	53%
Of those registered, percentage awarded higher degrees	67%	55%
Affiliated to professional institutions	76%	71%
Knowledge Transfer Partnerships benefited career	97%	94%

“ The two-year Partnership enabled me to utilise my academic skills in identifying advantages, listening to customer needs and translating these into sustainable project tasks whilst also carefully managing the finite resources available to implement the proposed strategy. ”

**Sarah Nunn**, Associate at Young’s Home Brew Ltd and a winner of the ‘Business Leader of Tomorrow’ Award, 2004.

# The future

The KTP Management Board, which consists of representatives from each of the Sponsors, sets overall policy. The current and future direction of Knowledge Transfer Partnerships is set out in the Strategic Plan 2004 - 2007 and agreed by the KTP Management Board. It is implemented through annual operating plans.

## In summary the plan aims to:

- use the public sector budgets available to promote high quality knowledge transfer appropriate to the needs of the business
- build a portfolio of projects that are in tune with the social, technological and economic priorities of the UK
- serve a broad cross-section of UK firms, regardless of size, and support those projects that promote the greatest added value, taking into account their impact on all participants
- work alongside other public sector support measures, and aim to provide part of a holistic package of business support
- expand and develop the number of organisations sponsoring Knowledge Transfer Partnerships
- maintain around 1,100 live projects at any one time.

A list of current Advisers and the Strategic Plan 2004 - 2007 can be found at [www.ktponline.org.uk](http://www.ktponline.org.uk)



*Academia, Associates and companies working together. The Associate is Louise Davies, the Partnership is between Cardiff University and Richards, Moorehead and Laing Ltd.*

## Further information

Knowledge Transfer Partnerships is one of the DTI's business support products.

Day-to-day management is contracted out by the Government. Policy responsibility resides with the Government and is led by the DTI acting on behalf of all the public sector bodies providing funding. A full list of Sponsors is given on the inside front cover of this report.

If you would like further information on the benefits Knowledge Transfer Partnerships can offer participating companies, knowledge base organisations or recently qualified individuals, visit the website [www.ktponline.org.uk](http://www.ktponline.org.uk) or call **0870 190 2829** or e-mail [companies@ktponline.org.uk](mailto:companies@ktponline.org.uk)

**You can also obtain information about Knowledge Transfer Partnerships from the following business support organisations:**

In England - Business Link network  
[www.businesslink.gov.uk](http://www.businesslink.gov.uk) or call **0845 600 9006**

In Scotland - If you are in the Lowlands, contact Business Gateway  
[www.bgateway.com](http://www.bgateway.com) or call **0845 609 6611**

In the Highlands and Islands, contact the Highlands and Islands Enterprise network  
[www.hie.co.uk](http://www.hie.co.uk) or call **01463 715400**

In Wales - Business Eye  
[www.busesseye.org.uk](http://www.busesseye.org.uk) or call **0845 796 9798**

In Northern Ireland - Invest Northern Ireland  
[www.investni.com](http://www.investni.com) or call **028 9023 9090**



Printed in the UK on recycled paper with a minimum HMS score of 75.

First published September 2005. Department of Trade and Industry.

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DTI/Pub 7864/10K/09/05/NP.

URN 05/1496