

UK government policy/schemes to support knowledge and technology transfer

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Models and Missions for Transfer Offices

Gilles Capart, Proton Europe, and Jon Sandelin, Stanford OTL 2004

- The Open Science Model: academics publish and industry patents
- The Licence Model: universities license to industry
- The Innovation Model: universities form part of innovation eco-system

'It is relatively more difficult to license out a university invention in Europe than in the US. The European market is much more fragmented ..and the density of technology-based companies is less important. Many licenses from European universities are actually executed with US groups, and do not benefit the European economy.

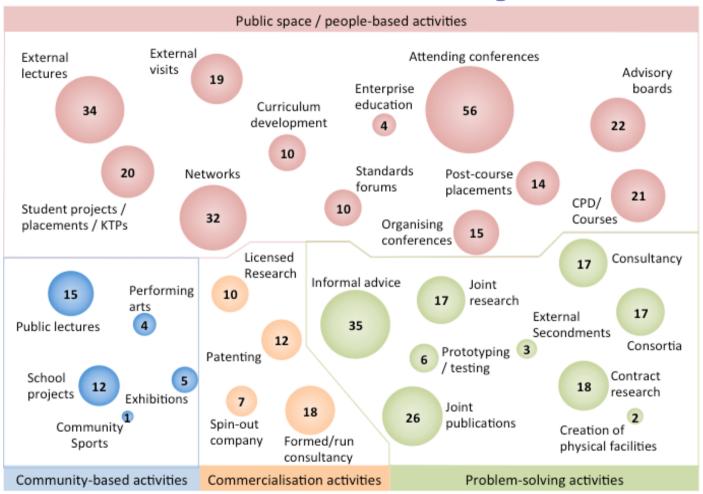
The innovation model is comparatively more developed in certain European countries, notably the UK, Scandinavian countries, Netherlands and Belgium, than in the US. The potential benefits for the public and for the university will also be larger and more regional in character. The basic difference is that European universities have to be more directly involved in the innovation process than their US counterparts for achieving the same result.

Models of, and Missions for, Transfer Offices from Public Research Organizations by Gilles Capart and Jon Sandelin (2004)

Critical Functions of HEIs in the Existing stock of knowledge / technologies / patents Innovation > **Higher Education Base** Graduating students, Research Education research **Innovation** publications conditions of place Policy framework **University Knowledge Exchange** Local leadership Labour market Access to expertise Other Firms Access to finance **Technology** (customers, competitors, • Enterprise culture intermediaries suppliers, etc.) Innovation infrastructure Attract inward **FIRM** Absorptive capacity investment **INNOVATION** Innovation value chain Attract talent Quality of area

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Nature and scale of knowledge exchange mechanisms between academics and external organisations



Number in bubbles is the % of academics engaging at least three times over the past three years in that mechanism, or at least once in the past three years for commercialisation activities.



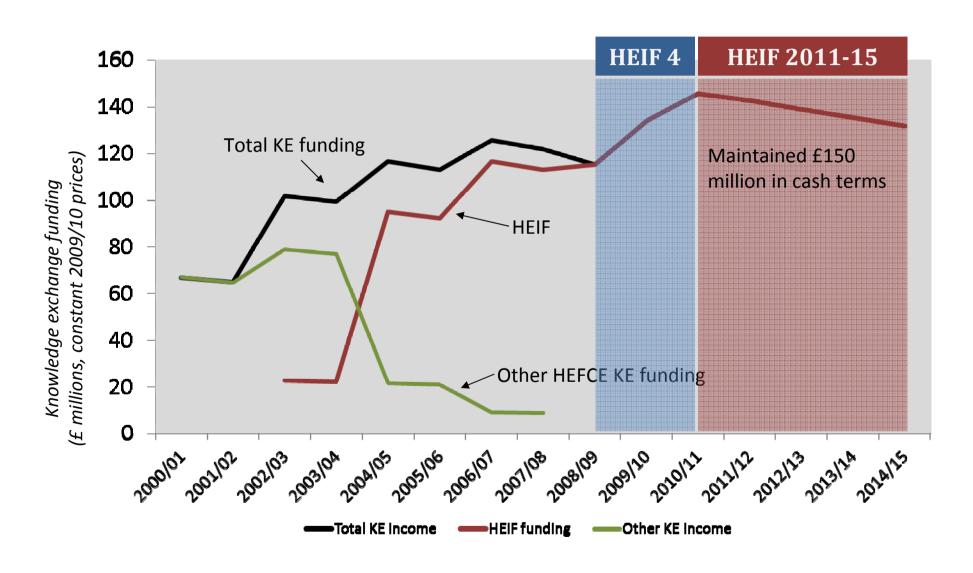
HEFCE: Transition from Technology Transfer to Knowledge Exchange

Where we have come from	Where we are going to
STEM focus	- All disciplines
Simple 'transmission' model of knowledge	Dynamic exchange model (engagement, not outreach)
Wealth creation ————————————————————————————————————	Innovation, productivity, quality of life, cultural enrichment, civic dev, community regeneration etc.
Large, multi-national businesses————————————————————————————————	Spectrum from global to local/ regional and all users



Evolution of HEFCE Knowledge Exchange Funding

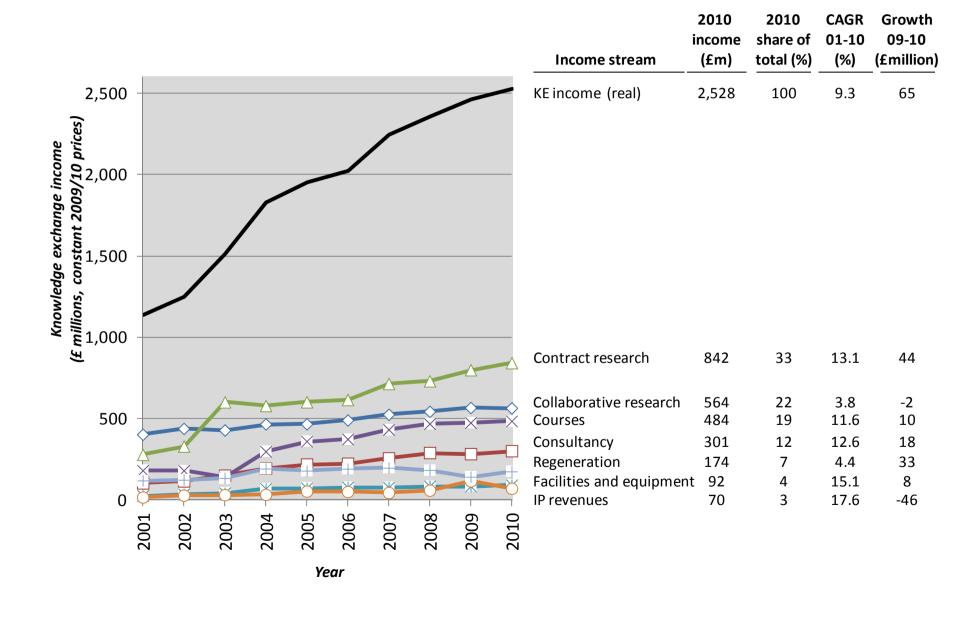






Strong growth in knowledge exchange income

PACEC



Leadership, Strategy and Institutional Structures

Leadership and governance

Organisational systems

Strategy

Institutional culture

Incentives and rewards

Building internal capability within the HEI

KE staff

Internal / external courses Best practice networks

Recruitment

Academics

Internal courses
Workshops / seminars

Mentoring
Informal networks

Facilitating the research exploitation process

Access points for external orgs

Business development

Technology transfer

Consultancy support

Contracts / legal support

Patenting / IP advice

Corporate Relations

Press / communications

Investment funds

Marketing

External fundraising for research

Academic knowledge

Skills and human capital development

CPD / short courses

Lifelong learning

Careers services

Work placements / project experience

Joint curriculum development

Knowledge networks / diffusion

Provision of public space

Alumni networks

KE professional networks

Staff exchanges

Academic – external organisation networks

Exploiting the physical assets of the HEI

Science parks

Incubators

Facilities / equipment

Entrepreneurship and enterprise education

Social enterprise

Enterprise and entrepreneurship training

Supporting the community / public engagement

Outreach

Volunteering

Social cohesion / community regeneration

Widening participation

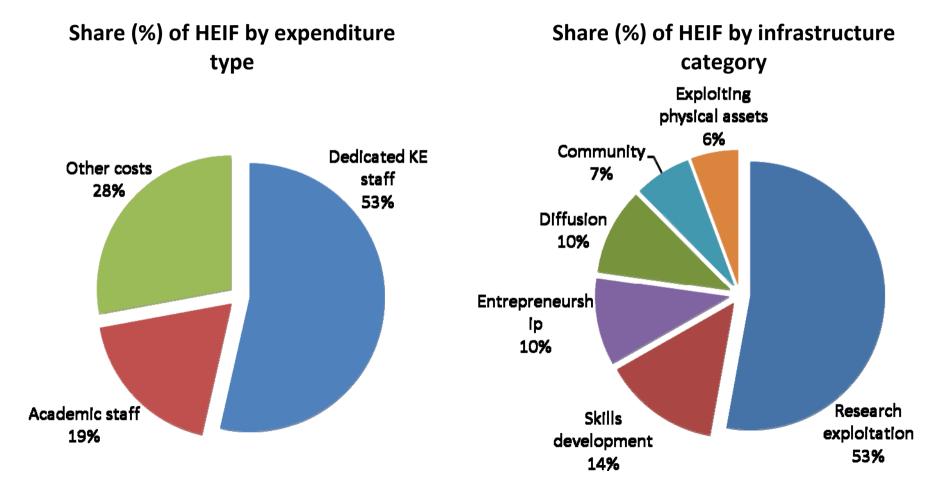
Awareness raising / knowledge diffusion

Involving public in research

Knowledge Exchange Support Infrastructure: HEIF investments



Total HEIF investment: £150 million per annum over 2010/11 – 14/15



Other Sources of Funding Knowledge Exchange (% strategies)



Research exploitation

HEIF: £318 million

Other funds:

Reinvesting KE income 78%
RCUK 55%
TSB 50%
European funding 45%
RDA 40%

Skills development

HEIF: £84 million

Other funds:

Reinvesting KE income 44%
Core teaching 42%
Course fees 32%
RDA 28%
European funding 26%

Knowledge diffusion

HEIF: £62 million

Other funds:

Core research33%Core teaching30%Reinvesting KE income25%RDA20%RCUK18%

Entrepreneurship and enterprise education

HEIF: £63 million

Other funds:

Core teaching42%European funding30%RDA27%Reinvesting KE income24%Donations / alumni22%

Exploiting physical assets

HEIF: £34 million

Other funds:

Reinvesting KE income 52% RDA 30% European funding 25% RCUK 21% Internal resources 16%

Civic / community

HEIF: £41 million

Other funds:

Reinvesting KE income 36% RDA 27% HEFCE 26% Donations / alumni 23% Core teaching 19%

1



Thank you for listening

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HEFCE weblinks

- KE policy: http://www.hefce.ac.uk/econsoc/buscom/
- HEIF: http://www.hefce.ac.uk/econsoc/buscom/heif/
- HE-BCI Survey: http://www.hefce.ac.uk/econsoc/buscom/hebci/
- Evaluation: http://www.hefce.ac.uk/pubs/hefce/2009/09_15/
- Research working papers: http://www.hefce.ac.uk/econsoc/buscom/3stream/research.htm