

**Our speak = output of
papers, citations, etc.**

Electronic Structure and Impact

**Government/Research
Council speak = economic
and/or social impact**

Mike Payne

mcp1@cam.ac.uk

The Worry Report

Increasing the economic impact of Research Councils

**Advice to the Director General of Science and Innovation,
DTI from the Research Council Economic Impact Group.**

14th July 2006

<http://www.bis.gov.uk/files/file32802.pdf>

Recommendation 1 – Leadership

Chairs of Research Councils should ensure that economic impact is given a high profile in Council strategy. Chairs and their Councils should promote a wider awareness and wider debate of the economic impact of Research Council spending.

Recommendation 2 – Influencing

The Research Councils should influence the behaviour of universities, research institutes and Funding Councils in ways that will increase the economic impact of Research Council funding.

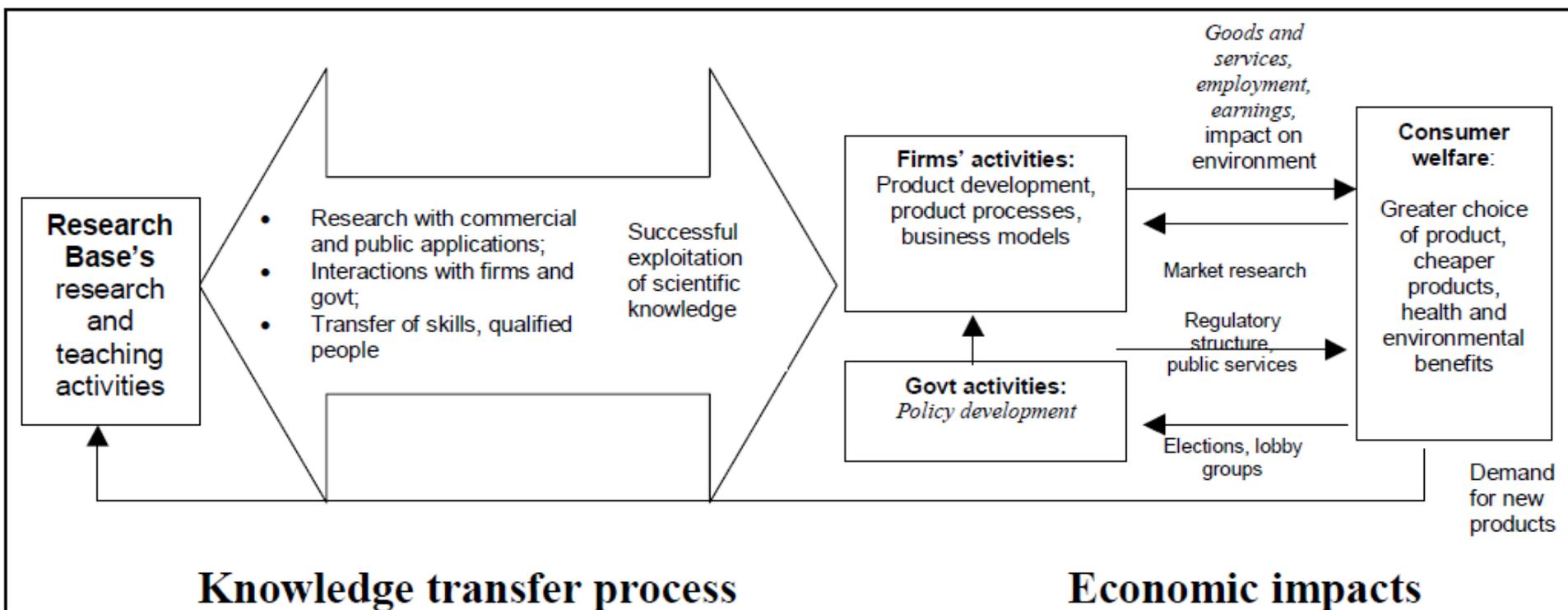
Recommendation 3 – Engagement

Strategic Challenges

RCUK should engage Government, business and the public services in a wide-ranging dialogue to develop overarching, economically relevant ‘research missions.’ These missions should address major strategic challenges for the UK.

Recommendation 4 – Metrics

Research Councils should make strenuous efforts to demonstrate more clearly the impact they already achieve from their investments. It is difficult to measure the economic impact of innovations which may be delayed in time and indirect in consequence. It is important to measure outcomes, however difficult, rather than outputs



Examples of Policy Implementation

- REF – 20% of money allocated to Impact
- UKRPIF – Get money from industry first then apply for Government funding (50%) for co-working – JCMaxwell Centre
- CDTs – EPSRC fund a maximum of 8 studentships from cohorts of at least 10 students – also expect co-design of course with industrial partners
- Infrastructure funding targeted to areas of economic and social impact – e-Infrastructure – Tildesley Report (<http://bis.ecgroup.net/Publications/Science/Science.aspx>)

So How Does Electronic Structure Do?

Goldbeck Consulting Ltd

The economic impact of molecular modelling

Impact of the field on research, industry and economic development.

‘Some reservations and shortcomings notwithstanding, this review found strong and in a number of cases even quantifiable evidence for the transmission of impact of modelling from the research based to economic benefits.’

- Significant use of DFT in combination with other methods.
- Industry, though, want it faster, cheaper, more accurate and with greater functionality.

So How Does Electronic Structure Do?

Industry interactions of the electronic structure research community in Europe

A survey carried out on behalf of the Psi-k network and the
CECAM-UK-JCMaxwell Node



90% of respondents collaborate with industry.