
UK Nanotechnology Networks: Industry

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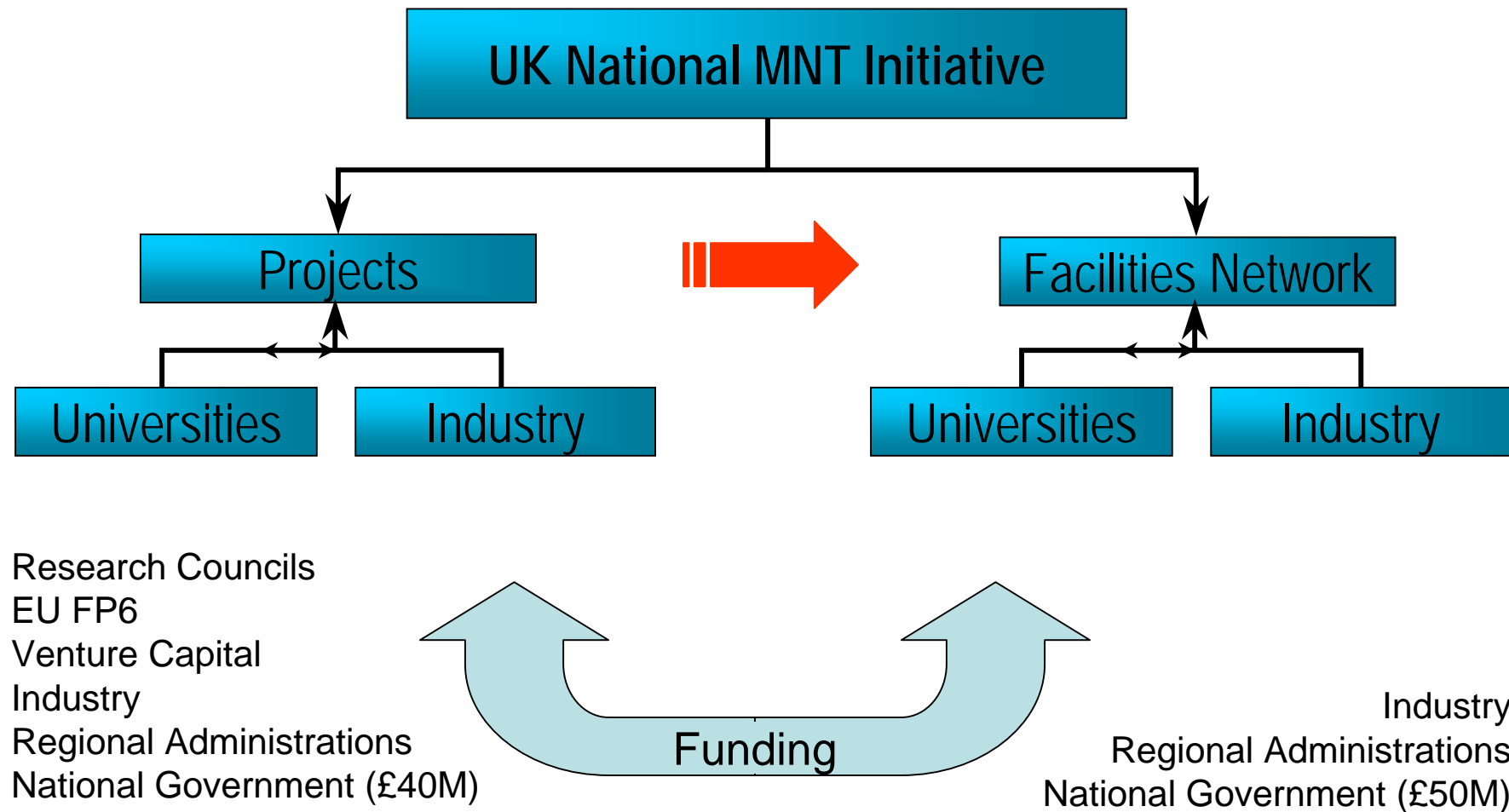
**University of Newcastle upon
Tyne**

Aims of UK MNT Initiative



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- (a) Convince firms and investors of the need to use micro and nano technologies to defend and improve their competitive position, and ease the path for companies to invest in the area.**
 - (b) Increase the number of companies developing and applying micro and nano technologies to products and services.**
 - (c) Ensure that industry and universities have access to world class facilities needed to take the ideas that come from research and turn them into viable technologies, products and businesses, with excellent routes to market.**
 - (d) Ensure that industry working with universities and colleges has access to well trained staff**
 - (e) Ensure a coherent and visible strategy of sustained public investment in micro and nano technology applications that will encourage confident investment by industry and suppliers of private finance.**

UK National MNT Initiative



Role of Regional Administrations (Building a Facilities Network)

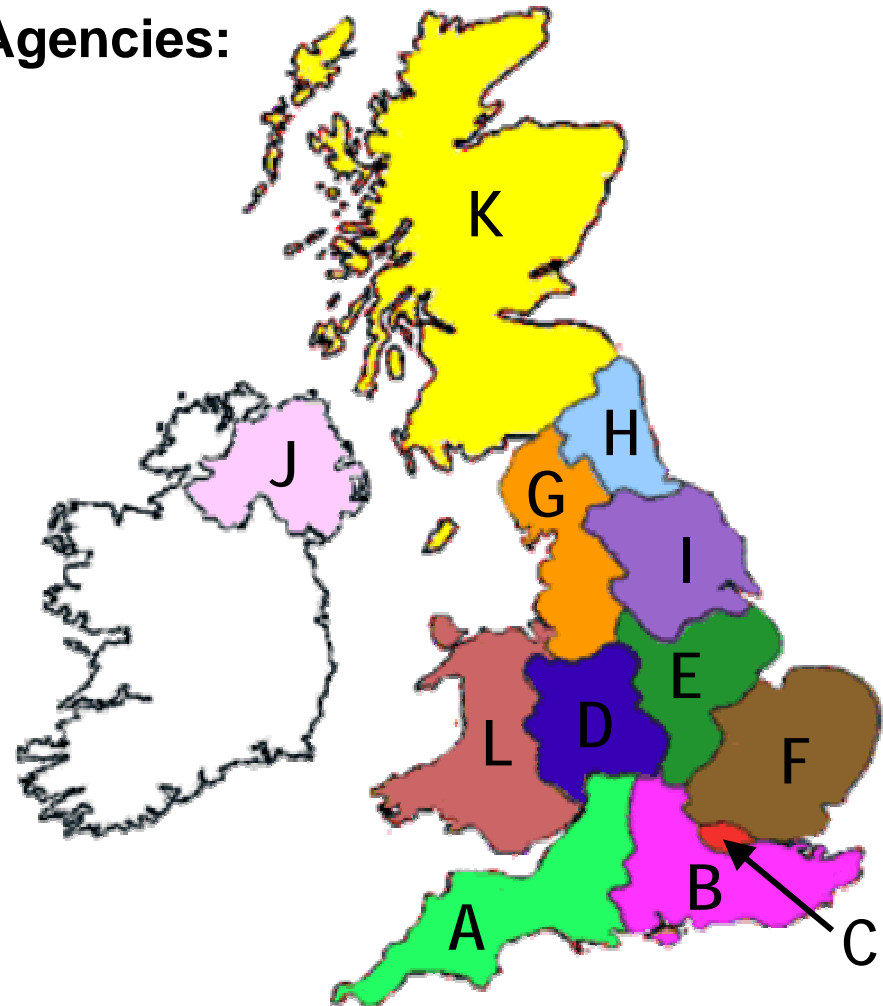


9 English Regional Development Agencies:

- A. South West of England
- B. South East of England
- C. London
- D. Advantage West Midlands
- E. East Midlands
- F. East of England
- G. North West
- H. One North East
- I. Yorkshire Forward

3 Devolved Administrations:

- J. Northern Ireland
- K. Scotland
- L. Wales



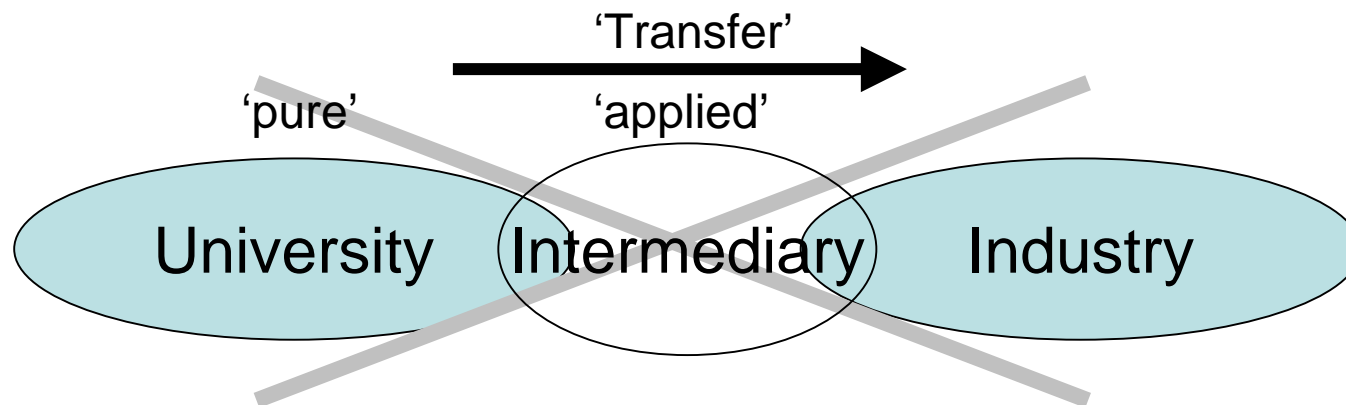
Related to Regional Economic Development Objectives



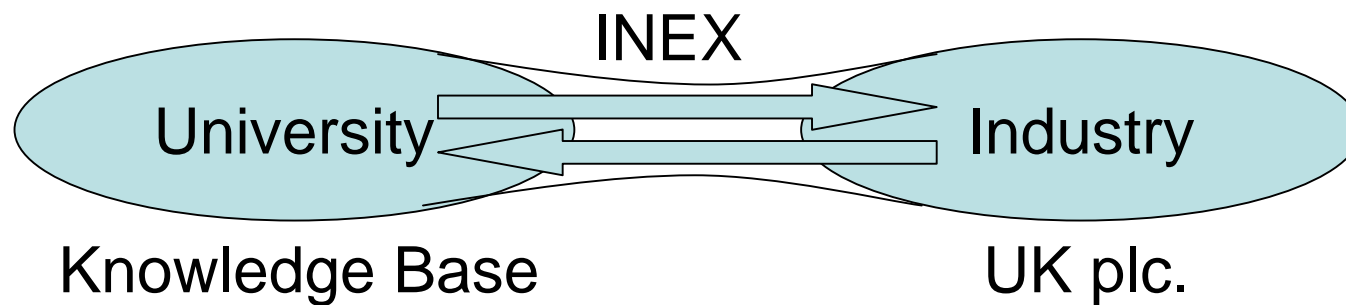
- To seek sustainable regional economic regeneration & growth
- Facilities as catalysts for
 - Regional innovation & knowledge base
 - Development of industrial clusters
 - Utilisation of local business support networks
 - Regional skills development
- In contemporary knowledge economies a successful regional economy depends crucially on the degree of *‘interpenetration of the production and commercialisation of knowledge’*.

Case Study: INEX

<http://www.inex.org.uk>



'Interpenetration of the production & commercialisation of knowledge'



Physical Manifestation



Dedicated building *on University campus* housing

- University People
 - Business development, administrative & engineering staff, researchers, students
- Laboratories & Equipment
 - Clean room (Si, glass, polymers, bio)
 - Support laboratories
- Companies
 - Spin-offs
 - Spin-ins
 - Embedded teams from industry



➤ Integrated academic, industry, entrepreneurial environment

INEX Supports



- Leading-edge research
 - Technology producer
- Advanced training
 - Postgraduate & vocational
- Entrepreneurship
 - Spin-off establishment
 - New company incubation
- Prototype development, fabrication & evaluation
- Small volume manufacturing
 - Particularly, but not exclusively for spin-offs & SME's

Spin-Offs



- 03/1999
 - Protensive (process intensification)
- 01/2001
 - Ever ('bottom-up' nanowire array fabrication)
- 10/2001
 - Orla (genetically engineered pore proteins for surface attachment)
- 06/2003
 - Concordia Diagnostic Sensors (corrosion sensors)
- Q4/2003
 - 2 technologies under consideration for spin-out

Host 6 University Spin-Outs

Prototype Development



- Leading-edge research
 - Technology producer
- Advanced training
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- **Prototype development, fabrication & evaluation**
- Small volume manufacturing
 - Particularly, but not exclusively for spin-offs & SME's

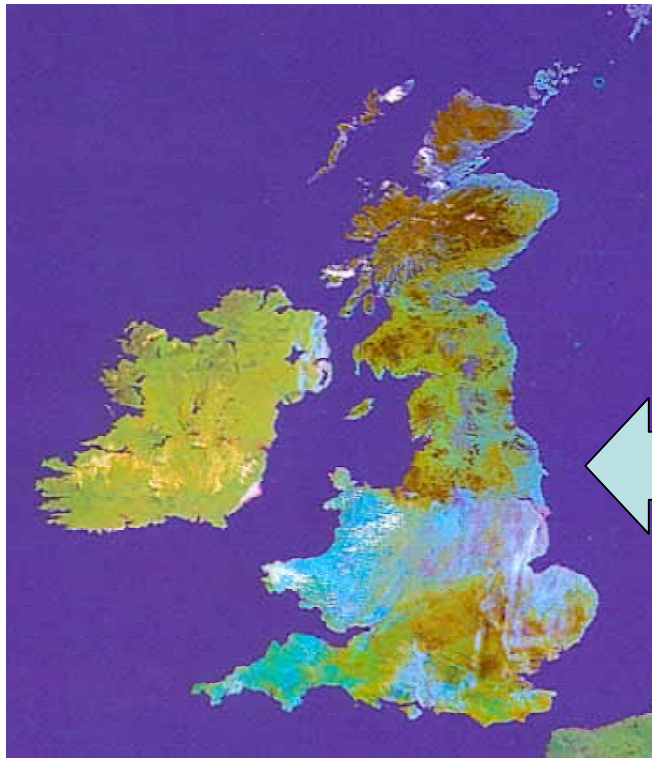
Currently working with 6 large firms and 11 SME's on prototype development/fabrication

Manufacturing



- Leading-edge research
 - Technology producer
- Advanced training
 - *Close to achieving ISO9001 accreditation*
- Enterprise
 - *Production for a spin-off from another university & an established SME*
 - *Offer design to manufacture service in partnership with CRL Ltd.*
 - Spin-off establishment
 - New company incubation
- Prototype development, fabrication & evaluation
- Small volume manufacturing
 - Particularly, but not exclusively for spin-offs & SME's

Other Networks (incomplete)



IRC's (2, primarily academic)
UICfN (1, academic-industry)
Faraday Partnerships (supply chain)
UK MNT Network

