Strengthening linkages between education, research and industry to improve innovation performance

Dr Malcolm Parry OBE
Director of the Surrey Research Park, University of Surrey
Supply side - university traditions

University cultural heritage influences links

- Classics/ theology
- Medicine
- Agriculture
- Science
- Engineering

Academic contracts
Supply side - university traditions

Links need
- Subject mix
- Quality research
- Infrastructure
- Policy
- Management
- Incentives
- Funding

Business environment
## Innovation as an economy advances

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After Richard B. Dasher, Stanford University

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Incubation - targets for big firms

(idea for drawing based on Christensen 1997 and Dasher 2013).
Incubation - targets for big firms

Large companies: develop new technology for existing market

Large companies: find new market for existing technology

Execution risk
High

Low

Market risk
High

Low

Large companies: incremental product development

(idea for drawing based on Christensen 1997 and Dasher 2013). Photo A380: Julian Herzog
Incubation - targets for big firms

Typically, only start-up companies will carry both risks

Example: Bullfrog computer games,

Large companies:
- develop new technology for existing market

Low

Large companies:
- incremental product development

Market risk High

Execution risk High

Acquisition or licensing

Low

Large companies: find new market for existing technology

Acquisition or licensing

(idea for drawing based on Christensen 1997 and Dasher 2013). Photo A380: Julian Herzog
Science parks and the value chain

Mobilising resources
Skills
Access to finance

Science and Technology Parks
- Pre incubation in specific technologies
- Pre and full incubation facilities and programmes
- Grow on space
- Deliver knowledge transfer support

Selection
Competition
Demand

Failure

Open innovation
Develop business skills
Business to business
Business to consumer
Business to government

Knowledge creation
Number of ideas
Entrepreneurship
Openness to ideas
Functional links for innovation

- Policies/management to allow interaction
- Financial support for interaction

Knowledge creation

- Number of ideas
- Relevance of ideas
- Openness to ideas

Entrepreneurship
Functional links for innovation

Policies/management to allow interaction
Financial support for interaction

Tech/Knowledge Transfer office
National Tech/Knowledge transfer policy/agency
Funding
Business skills
Incentives for business to engage
Infrastructure

Number of ideas
Relevance of ideas
Openness to ideas

Knowledge creation

Entrepreneurship

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Policy - Technology Strategy Board (TSB) – UK innovation agency

Catalysts
Catapults
Collaborative R&D
Demonstrators
Feasibility studies
IC tomorrow
Innovate UK
Innovation vouchers
International programmes

Knowledge Transfer Networks
Knowledge Transfer Partnerships
Launchpads
Micro and Nano Technology Centres
Missions
Small Business Research Initiative
SMART awards
_Connect

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www.innovateuk.org/deliveringinnovation.ashx
Technology Strategy Board
Financing commercialisation

Catalysts
Catapults
Collaborative R&D
Demonstrators
Feasibility studies
IC tomorrow
Innovate UK
Innovation vouchers
International programmes

Knowledge Transfer Networks
Knowledge Transfer Partnerships
Launchpads
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Small Business Research Initiative
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www.innovateuk.org/deliveringinnovation.ashx
Technology Strategy Board
Collaboration for commercialisation

Catalysts
Catapults
Collaborative R&D
Demonstrators
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Innovation vouchers
International programmes

Knowledge Transfer Networks
Knowledge Transfer Partnerships
Launchpads
Micro and Nano Technology Centres
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Small Business Research Initiative
SMART awards
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Technology Strategy Board
Networks and partnerships

Catalysts
Catapults
Collaborative R&D
Demonstrators
Feasibility studies
IC tomorrow
Innovate UK
Innovation vouchers
International programmes
Knowledge Transfer Networks
Knowledge Transfer Partnerships
Launchpads
Micro and Nano Technology Centres
Missions
Small Business Research Initiative
SMART awards
Connect

www.surrey-research-park.com www.innovateuk.org/deliveringinnovation.ashx
The Surrey Research Park: infrastructure

- Pre-incubation and business incubation and grow on space
- Medium sized research facilities
- Large research centres and HQ
Surrey incubation

Staffing
• Director
• Support
• 3 part time Entrepreneurs in Residence
• Mentor group
• Entrepreneurs Panel

Services
• Investment Club – 6 per annum
• Co-working
  - Pre revenue £150 pm
  - Post revenue £300 pm
  - Independent companies £50 pm
• Coaching and mentoring
• Numbers – 70 in system

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Skills

- Quality of graduates
- Post graduate courses
- Business school priorities
- Entrepreneurs club
- Entrepreneur in residence
- Technology Transfer Office
- Regional leadership role
Summary

- Historic and economy matter
- What helps form links
- Role for SMEs
- Technology value chain
- National Innovation agency helps
- Programmes to support links
- Wider role for universities
Thank you

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