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# Investing in Impact: Tackling barriers to University Commercialisation

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# Workshop Objectives

- Understand how university commercialisation links to Knowledge Exchange (KE) and impact
- Identify barriers to university commercialisation
- Use case studies to share experience of tackling these barriers
- Discuss what lessons from these case studies could be applied to other organisations



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# Introductions.....

*Who's in the room?*



# Connecting KE – commercialisation – impact pipelines

## Across UK universities

- Impact is crucial for Research Excellence Framework (REF)
- Knowledge Exchange (KE) attracts extra HEFCE funding
- Levels of commercialisation vary hugely

## University of Sheffield

- Commercialisation seen as one form of KE; managed by separate teams. Impact REF case studies led by another team
- October 2017: Impact added into commercialisation team – strong commercialisation projects provide REF case studies



# Open discussion: KE – commercialisation – impact

- Is your Knowledge Exchange (KE), impact and commercialisation work steered by one coherent strategy?
- Are these different areas managed as one integrated pipeline?
- Does the UK Government's focus on impact have relevance in other countries?



# Barriers to university commercialisation

- 1) Critical mass: universities with small commercialisation pipelines struggle to develop skills and momentum
- 2) Skills gaps: academics are not usually business people
- 3) Geographical splits: UK investment is over-reliant on the golden triangle of Oxford, Cambridge and Imperial
- 4) Traditional delivery models: assumed that projects must spin out for profit
- 5) Language barrier: “tech transfer” is seen as less relevant to some research, eg arts, social sciences



# Open discussion: Barriers to commercialisation

- Do you recognise any of these barriers in your own organisation?
- If so, is it an acknowledged issue and have you had any success in tackling it?
- Which of these barriers are within the control of your organisation; and which need external (eg Government) intervention?



# CASE STUDY 1: Creating an internal investment fund

## **Aim: Build critical mass in commercialisation pipeline**

- Deliver a step change in the number and types of IP supported by University of Sheffield
- Invest in all research with commercial potential
- Allocate £1m per annum
- Become evergreen (eventually!)





# Bridging the funding gap

Grant Funding

External Investors

Internal investment fund

COMMERCIAL

TECHNOLOGY

(if applicable)

### Proof of market (<£10k)

- Hire external experts eg IP, sector analysis

### Proof of concept (£10-50k)

- Translational research, eg build prototypes

### Development to Market (<£150k)

- Equity investment to form spin out
- Sign licence deal
- IP-based industry partnership

### Follow on Investment (<£150k)

- Leverage third party investment

Fundamental research (TRL 1-2)

- Lab demonstration
- Milestoned prototyping (TRL 2-4)
- IP generation / protection

- Scale up (TRL 3-6)

- Demonstration in operational conditions (TRL 4-7)



# CASE STUDY 2: The Northern Triangle Initiative

**Aim: Redress the investment imbalance away from the Golden Triangle**

- Create commercialisation investment fund for Universities of Manchester, Sheffield and Leeds
- Leverage £350m private investment using £5m Connecting Capabilities Fund via HEFCE
- Link to Government's Northern Powerhouse policy



# CASE STUDY 3:

## Incubation at City, University of London

**Aim: Improve commercial skills & support academics who do not have time for commercialisation projects**

- Recruit high skilled PhD, Masters & MBAs to deliver projects
- Create temporary teams to work on market validation, feasibility or business modelling
- Position teams as first employees of potential spin out, with knowledge of the project & potential market



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## Spin-out activity

### *Spin-outs with some HEI ownership:*

- Ascending Power
- Camineo
- City Occupational
- Helix
- Resilsoft
- Thomson Screening
- Totempower
- Virtual Tutor
- Visiomp



### *Formal spin-outs, not HEI owned:*

- Citifluor
- City Technology



**totempower**  
energy systems ltd



**CITY TECHNOLOGY**



**ADELARD**

### *Staff start-ups:*

- Adelard
- Placr
- Potters Bar
- Sengenia
- Visiomp Research





# CASE STUDY 4: Redbrick Molecular Spin Out

## **Aim: Use diverse delivery models to enhance our research strength**

- Created by Universities of Leeds and Sheffield (each invested £150k)
- Company limited by guarantee, ie all profits fund academic research
- Manufactures strategic building blocks and scaffold chemicals for medicinal chemistry:
  - Academics invent + publish new synthetic organic chemistry techniques
  - Industry customers purchase catalogues of building blocks
- Unique membership model allows other UK universities to participate
- Academics get direct industrial feedback and maximise impact



# Open discussion: Tackling barriers to commercialisation

- Did you learn anything new from these case studies?
- If so, is there something that you could implement in your own organisation?
- Having reflected on the barriers to commercialisation, and the case studies, which barrier do you think is most difficult to tackle?



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# Conclusions.....

*What have you learnt from today's discussion, to take back to your own organisation?*