



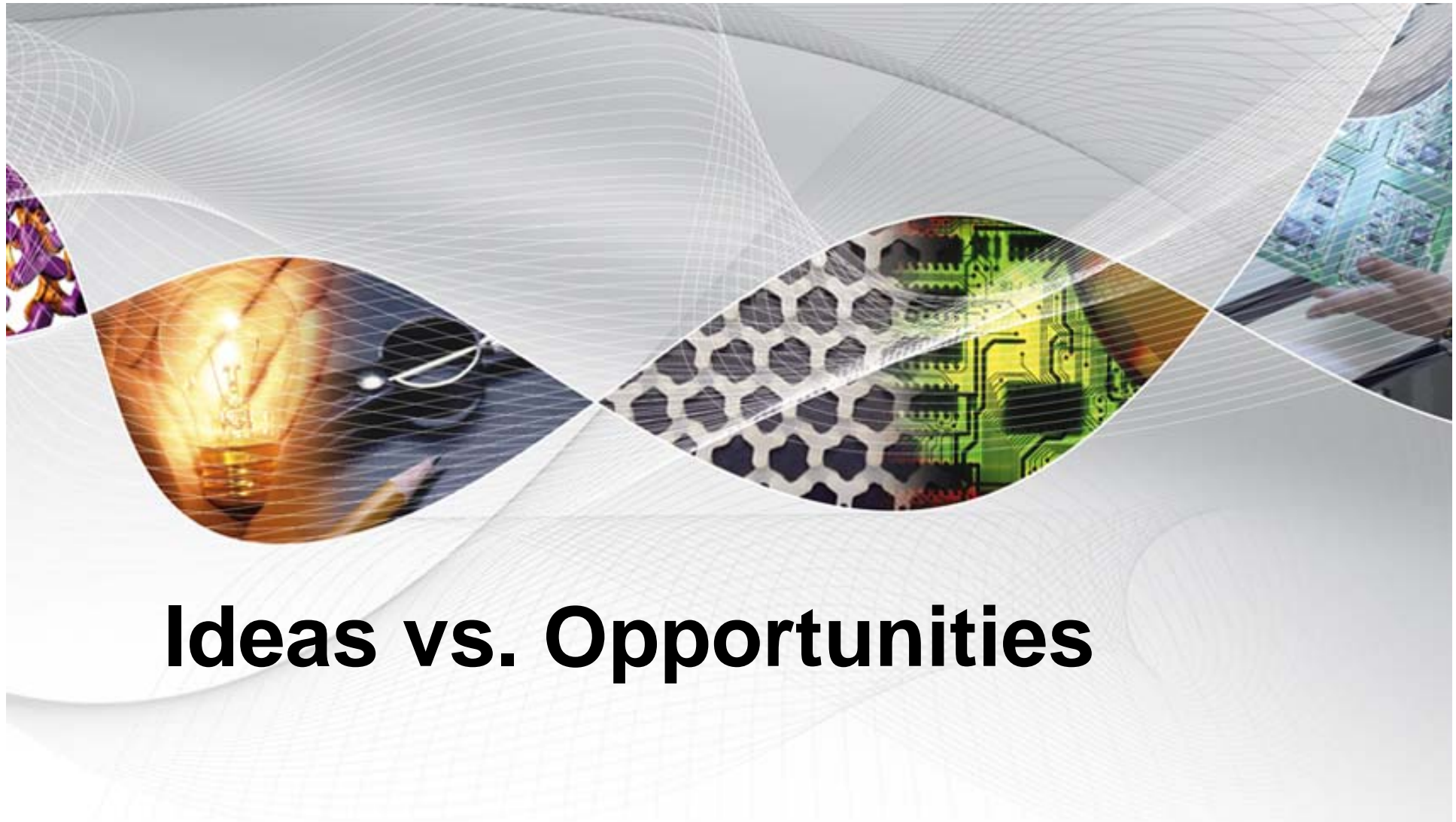
# Ideas to Opportunities

**UCL Business PLC**



## Talk Outline

- **Ideas vs. Opportunities**
- **Who are UCL Business?**
- **Intellectual Property**
- **Lunch**
- **Funding Opportunities**
- **Case Study**
- **Q & A**



# Ideas vs. Opportunities

# When an Idea becomes an Opportunity - Transference

- Fulfils a concept of need : solves a problem or delivers advantage
- Has sufficient clarity in the proposition to overcome inertia
- Perceived as worth sacrifice to obtain
- There is the will, energy and positioning to make the transition from idea to opportunity happen

## Assessing Market Fit

- Does the idea solve an existing problem?
  - No pain, no gain.
- Does the solution offer substantial improvement (faster, cheaper, more accurate) over existing?
- *Who cares? What will they pay?*
  - How much, how often.
- ... Or do you have a technology looking for an application?

## Your Solution (the idea)

- Can you prove it?
  - Demonstrator required for trials and to showcase to investors
- Can you protect it?
  - What IP can you claim to give your business a competitive advantage
- Can you communicate it?
  - Talk about how your solution benefits the customer, NOT about how it works.

# Industry and Market Research

- Route to market
  - Licence or spin-out?
  - Typically:
    - Licence if the technology is a single application or has a single route to market in an existing sector
    - Spin-out if the innovation is a platform technology and has a wide range of applications

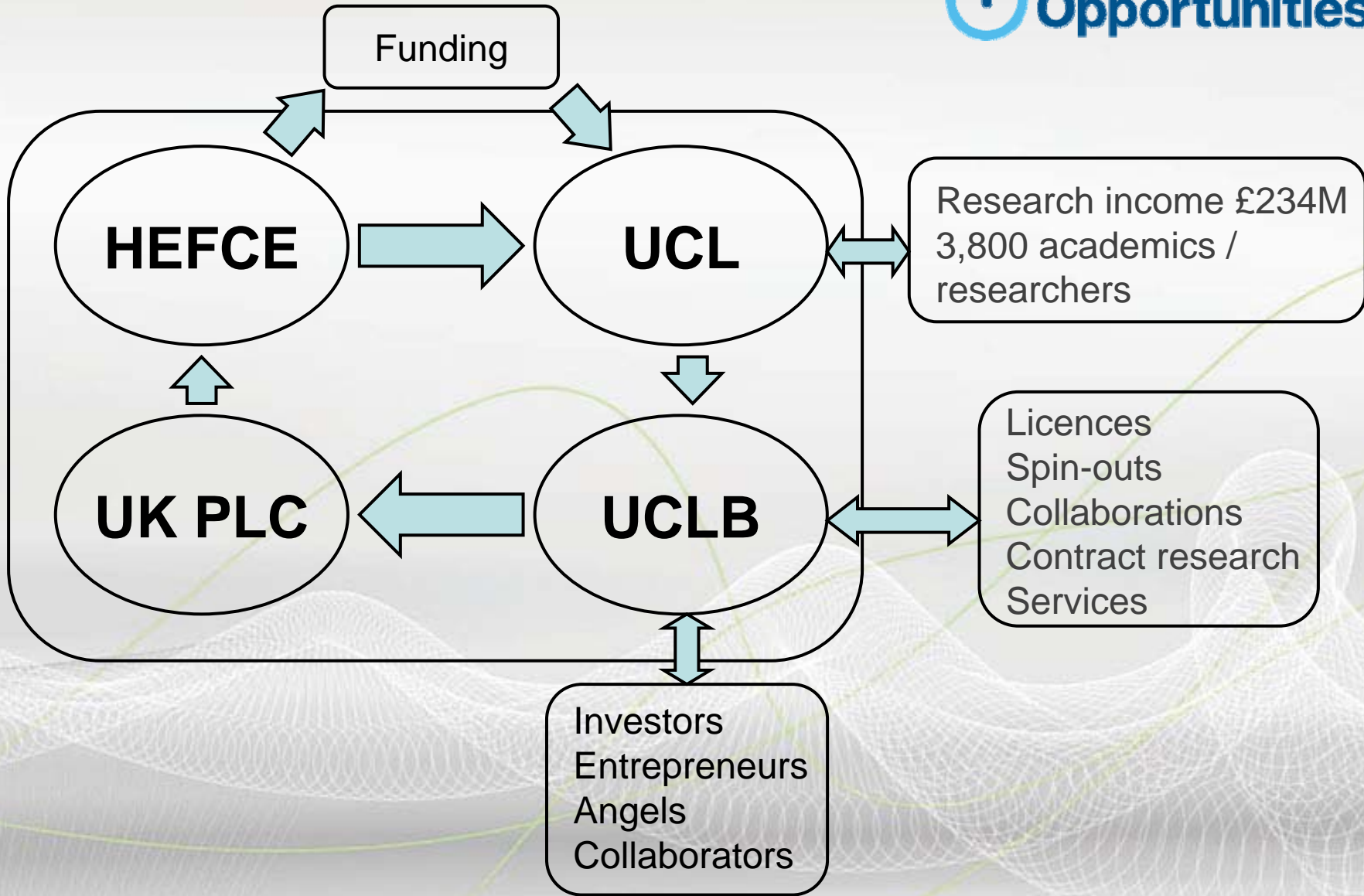
## Why try?

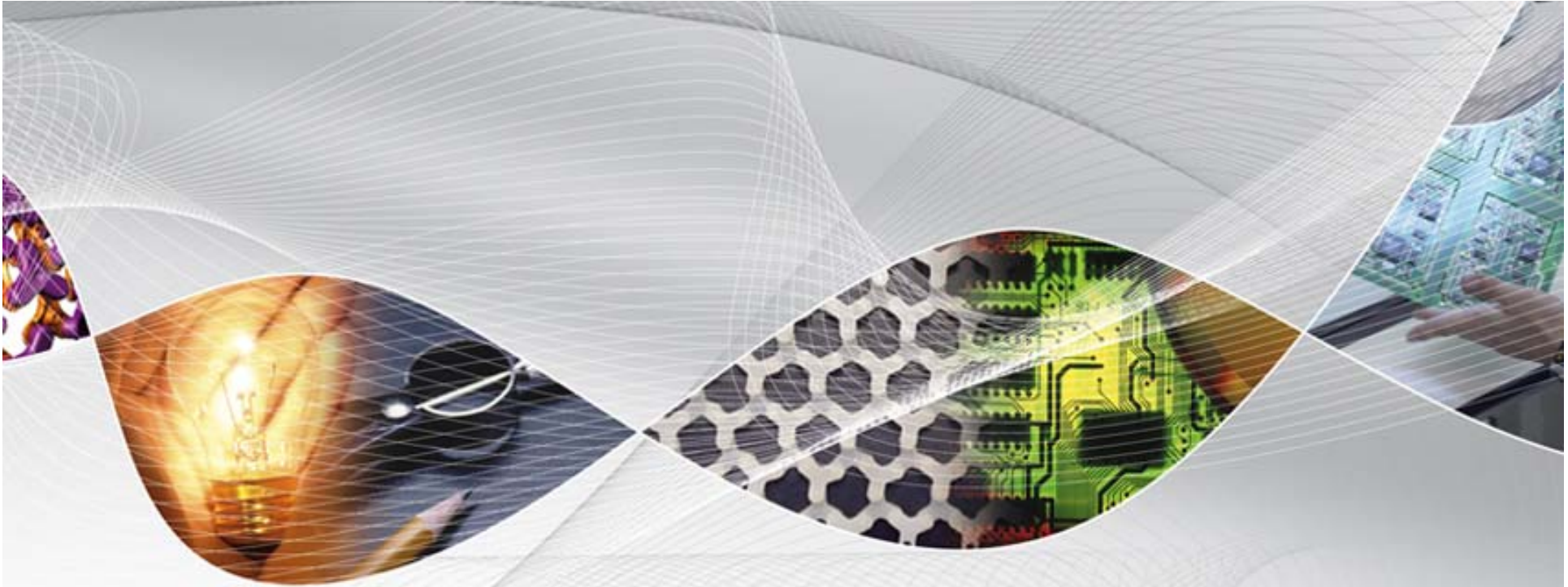
- Financial reward
- Academic progression
- Institutional benefit (government funding)
- New skills: business, marketing, financial
- Opens up other career paths

# Revenue Share

Net Cumulative Income	Exploitation Fee	Contributors	UCL Central Funds	Department
<£50k	%30	%50	%10	%10
>£50k	%30	%30	%30	%10

- The *Net Cumulative Income* is what remains after the costs directly associated with commercialisation are subtracted from the gross income.
- The *Exploitation Fee* is intended to cover the overall costs of commercialising an IP portfolio over the long run, including the cost of the infrastructure such as staff and facilities needed to support the commercialisation efforts.





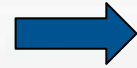
# Who are UCL Business



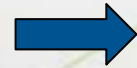
# UCL Business PLC

- Commercial arm of University College London
- Wholly-owned by UCL
- Financially self-sufficient
- Interface between UCL and industry
- Turnover approx. £5m with 40 staff
- Profits fed back into UCL

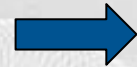
# Where does UCLB fit in?



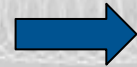
UCL Business PLC is responsible for technology transfer and commercial transactions for University College London.



UCL Consultants Ltd, (UCLC) is the consultancy office of UCL representing UCL staff undertaking private consultancy work for external organisations.



UCL Advances stimulates collaboration among researchers, business and investors driving innovations that benefit society and the economy



Advising on applications to the Research Councils, UK Charities and negotiating UCL's contracts with industrial and government sponsors, both in the UK and overseas

# UCL Business PLC

- £4.2m invested in 12 projects.
- £1.17m invested in Proof of Concept (POC) projects since 2004
- Total equity portfolio at £40m+
- 41 spin-outs
  - Approximately 75% are bio-related
- Licences
  - More than £2 million annually earned

# What Do We Offer?

- Commercial Experience
  - Business Managers have worked in industry
- Support for researchers
  - Source of Help and Advice
- Legal Expertise
- Contacts
- Funding
  - Knowledge of funding sources, both commercial and governmental

# Knowledge Transfer Activities

IP Leveraged  
Product Development

Strategic R&D  
Collaborations

Forming & Supporting  
Spin-Out Companies

Consultancy  
Engagements

Licensing IP

Assessing &  
Protecting IP

Industrial  
Research

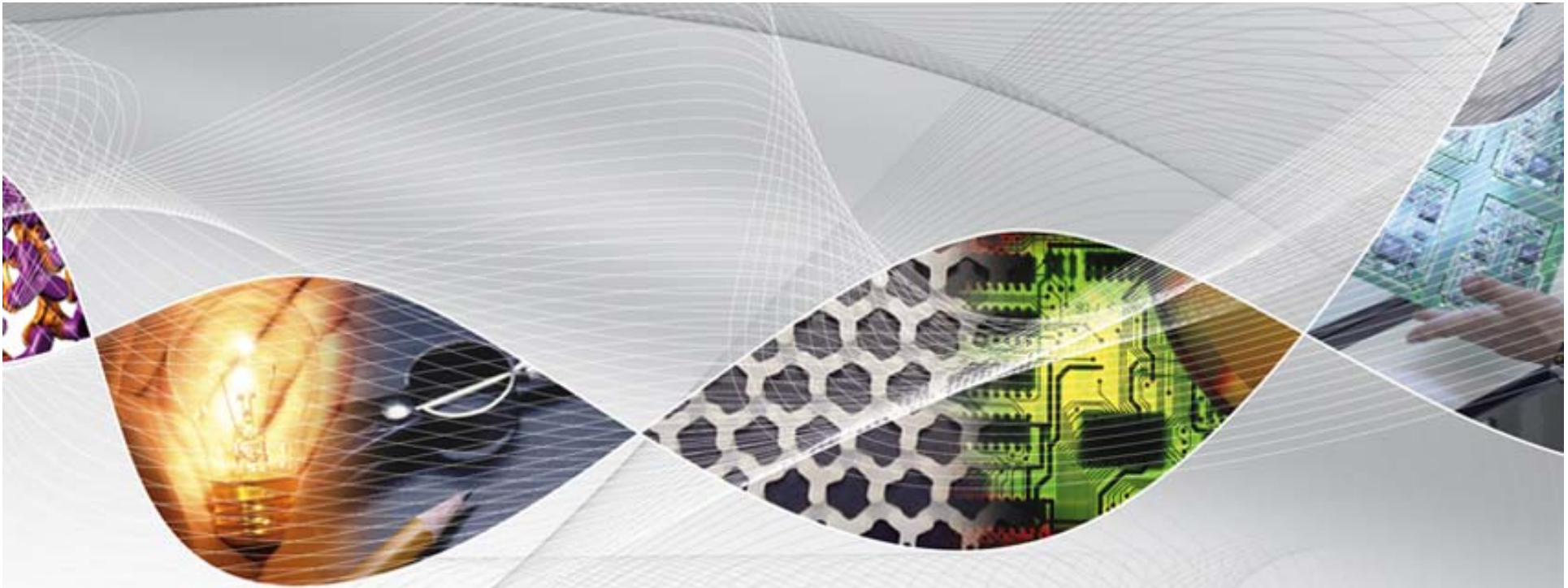
IP Development  
(Technology + Commercialisation Strategy)

## UCL Business - Activities

- Knowledge Transfer / Technology Transfer
- Commercialising patented and non-patented technologies
- Deal with Intellectual Property
  - Issues before they become problems
- Prepare Agreements
  - Confidential Disclosure Agreements
  - Material Transfer Agreements
- Preparation of commercial contracts

# UCL Business - Activities

- Investing in the commercial development of research
  - Review and select commercial projects
  - Fund Proof of concept (POC)
  - Plan Project development
  - Financial Investment (independently or jointly)
- Develop commercially valuable research
- Build spin-out companies and exit



# What is Intellectual Property

# What is Intellectual Property?

- **Patents**
  - protect how something works
- **Copyright**
  - protects ideas, literary works, software
- **Designs**
  - protect how something looks
- **Trade marks**
  - protect 'designation of origin'

# What is Intellectual Property?

- **Database rights**
  - protect collections of data

## Also

- **Confidential Information or Know How**

## Why protect IP?

- Protect your intellectual capital
- Required to attract investment necessary to develop technology
- Generate revenue for researchers, department, UCL
- Acts as a collaboration incentive for industry
- Recognition for your work

# IP Ownership

- As employees of UCL, UCL owns IP developed by staff
- Students may own their own IP but this often assigned to UCL to allow commercialisation
- UCL assigns IP to UCLB to allow development
- UCL Business revenue shares with inventors, department and UCL

# Patents

- Patents are for “**technological innovation**”,
- Inventions must be **new** - not known anywhere in the world prior to the filing date
- Inventions must have an ‘**inventive step**’ - not obvious, a simple adaptation or combination
- Inventions must be industrially applicable and have a ‘**technical effect**’

# Patents

- Granted by the state in exchange for disclosing the invention and payment of **fees**
- Patents last for 20 years if maintained
- Granted the right to stop others from making or using commercially your invention
- Patent applications must provide a clear and complete description of invention

# Potential discovery/invention

- What do you do if you think you have made a potentially valuable discovery?
  - Do not disclose your invention
  - Contact UCL Business
  - Complete an Invention Disclosure Form (IDF)
- Think about what you want to do
  - Would a patent be more valuable to you than maintaining secrecy?

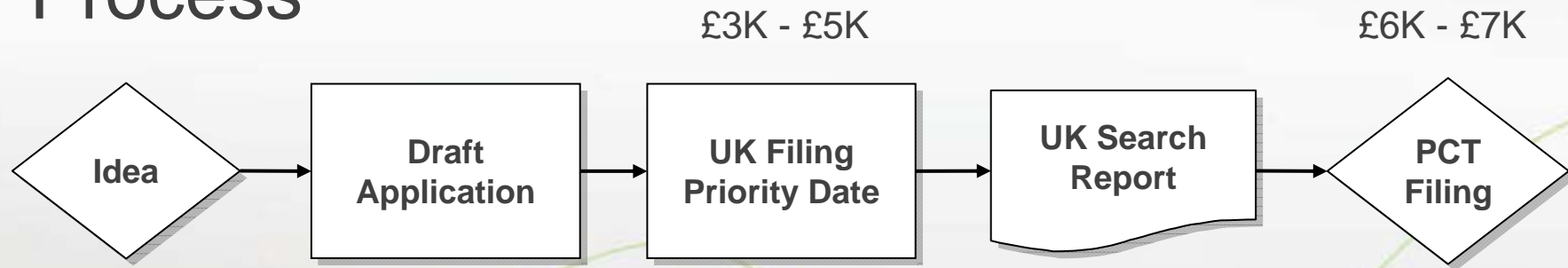
# UCLB & Patents

- We assess Invention Disclosure Forms
  - Can it be patented
    - Novel, Inventive, Commercial, Valuable?
    - Unencumbered?
    - Enforceable?
    - Has it been disclosed?
  - Should it be patented

Is there a commercial opportunity

# Patent Process

## Process



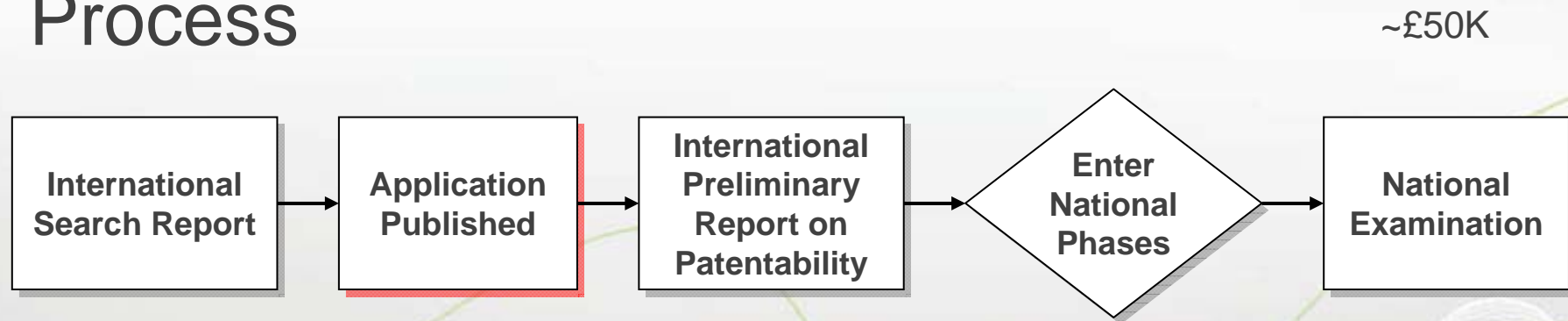
**No Publication** → **Prefer No Publication**

## Timeline

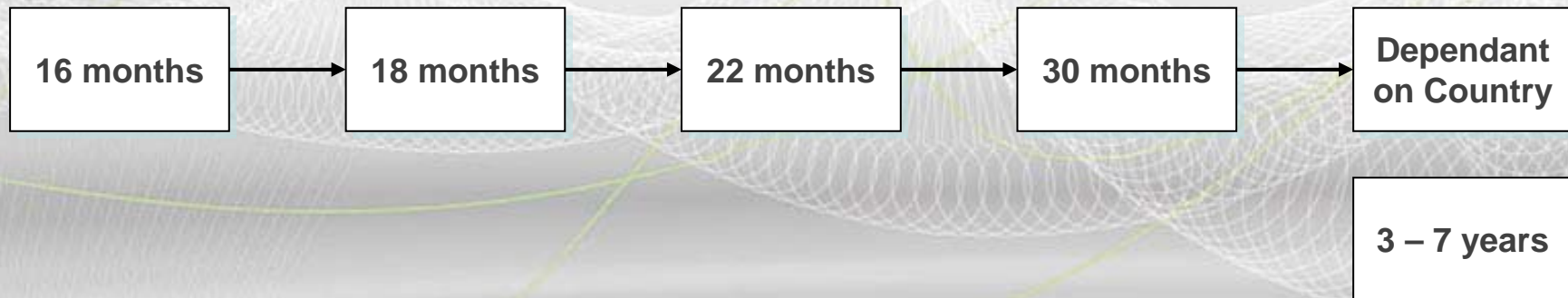


# Patent Process

## Process



## Timeline



## Background IP

- Other people have IP...
  - ...you might need to use this!
    - Licensing
    - Cross-licensing
- If your opportunity is large people may claim infringement of background IP
- Be clear on what has been used where!

# Copyright

- Protects a wide range of materials...

Books, technical reports, manuals, computer software, databases, engineering, technical or architectural plans, paintings, sculptures, photographs, music, songs, plays, dramatic works, promotional literature, advertising, films, videos, cable or radio broadcasts

# Who owns copyright

- Usually the first creator or author...  
...or their employer if produced in the ordinary course of their employment
- A contractor will retain ownership unless their contract is explicit to the contrary
- Even if the creator sells their rights, they have 'moral rights' over how their work is used

## Academic Licences

- Researchers have access to a wide range of software and tools under ***academic licences***
- These often have restrictions on developing commercial products.
- Open Source licences can also put restrictions on commercial development
- Check position before substantial development effort!

## Got the IP – Now What?

- Patents cost money to get and maintain
- Universities do not keep defensive IP
- Do not have resources to maintain patents if commercialisation is not happening
- University IP is protected to maximise the commercial potential of its research

# Commercialisation Routes

- Two broad routes
  1. License to an established company
  2. Commercialise technology through a spin-out company

# Exploiting IP

- **Licensing** is a key tool for managing the commercial exploitation of IP
- Very relevant to spin-outs also
  - License your channels to market in return for royalties
- Licences enable custom control over use of IP
  - State permissions regarding modifications, distribution, field of use, territory etc.
- UCLB manages the customisation and negotiation of licence agreements for a commercial return.

## Your Choice: How to work with us

- Decide not to engage in commercialisation (but you still have a duty to inform us of ideas with potential)
- Look for some additional finance through consultancy
- Expand your research capacity by developing industrial or public sector activities
- Develop technologies for licence
- Get involved in starting a company
- Go with a spin-out away from academic life

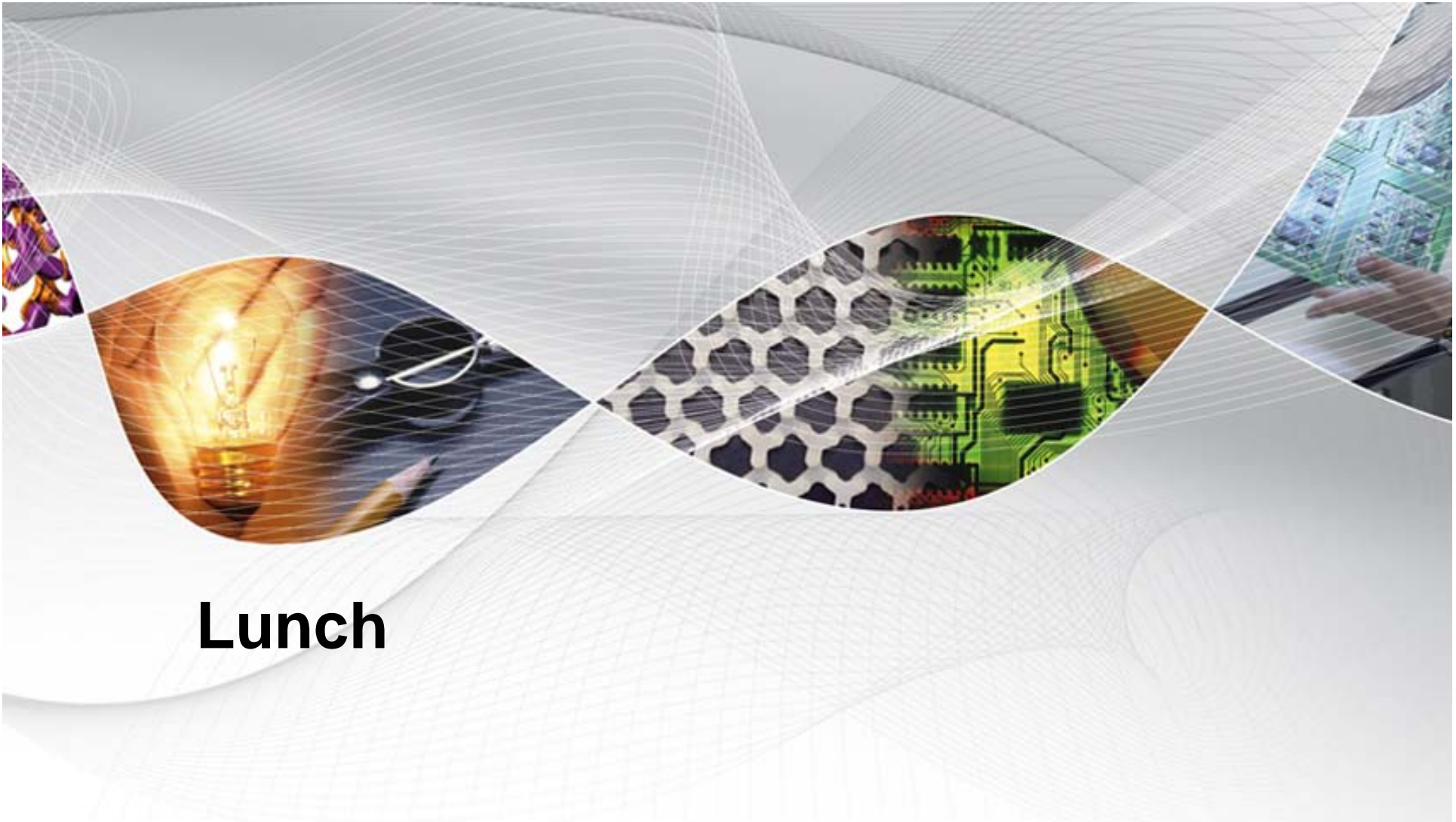
UCL Advances, UCL Business & UCL Consultants will help you

## Some points to remember

- We don't take the decision to patent lightly – it costs about £70,000
- If UCL Business bear the cost of patenting we need to see a return on investment – you must assist in the commercialisation to a level mutually agreed
- Don't make the details of your invention public before filing a patent application.
- To get a patent, your invention must not have been disclosed publicly anywhere in the world before you apply - even by yourself.

## Conclusion

- UCLB are experienced in:
  - Assessing the commercial viability of ideas
  - Patenting process
  - Licence negotiation
  - Supporting Proof of Concept work
  - Spin-out creation
- We want to inspire you to turn your Ideas into Opportunities
- We want to help drive the Opportunities to commercial success



**Lunch**





# Funding Opportunities



# Changing Climate

- Strong 'commercialisation' agenda being promoted by:
  - European Commission
  - HEFCE
  - DIUS
  - Technology Strategy Board
  - Research Councils
  - HEIs

College is responding to this new trend

# Beyond the Research Grant

- Follow-on Funds
  - Research Council scheme
  - Demonstrate an idea's commercial potential
  - Develop research outputs into a commercial proposition
- Research Council Business Plan Competition
- Proof of Concept Funding
  - Designed to move on from funded research and demonstrate the commercial potential of ideas.

# Technology Strategy Board

- **Collaborative research competitions**
  - **Materials:** Sustainable materials and products
  - **Intelligent transport systems and services:** Informed personal travel
  - **Photonics:** Photonics21 - Next generation optical internet access
  - **High Value Manufacturing:** Step Change in Competitiveness; Value Systems
  - **Energy Generation and Supply:** Maximising recovery of UK's oil and gas resources
  - **Energy Generation and Supply:** Fuel cells and hydrogen technologies
  - **Creative Industries:** Accessing and commercialising content in a digitally networked world
  - **Low Carbon Vehicles:** Ultra-Efficient systems for the Market  
Advancement of Hybrid and Low Carbon Vehicles

# Wellcome Trust Translation Awards

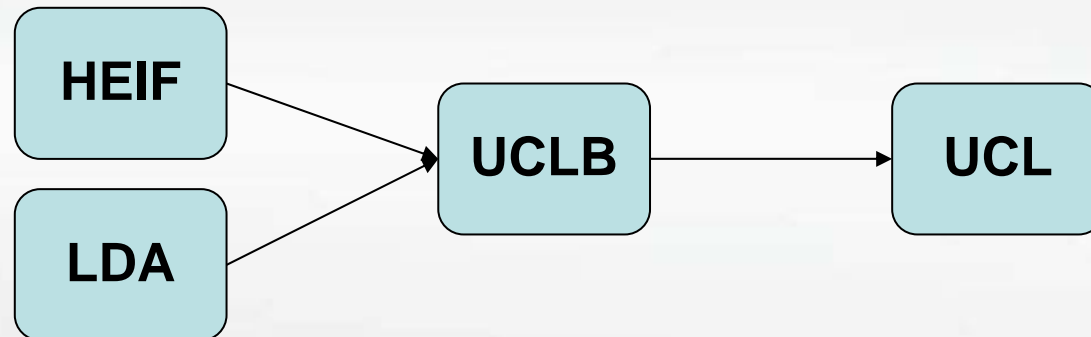


- To bridge the funding gap in the commercialisation of new technologies in the biomedical area.
- Typical value ~ £650K
- A range of disciplines - including physical, computational and life sciences - will be considered.
  - The application of physics, chemistry, computing, engineering and materials science to the development of medical products is entirely appropriate.
- Projects must address an unmet need in healthcare or in applied medical research.
- The important criterion is to develop the innovation to the point at which it can be adopted by another party.

## Other Translational Funds

- Royal Society
  - Mercer Feasibility Award (built environment, clean technology and energy and one in nanoscience/nanotechnology)
- Carbon Trust
  - Applied Research: funding of up to £500,000 to support the development and commercialisation of technologies which have the potential to reduce UK carbon emissions.
- Livery Companies
  - The Armourers and Brasiers' Materials Science Venture Prize.

## Proof of Concept (I)



- Activities that Proof of Concept funding supports
  - Building a demonstrator to show that an invention works in practice
  - Improving an Intellectual Property position (e.g. work to exemplify or broaden patent claims)
  - Market and business analysis to demonstrate the commercial potential of a proposition
  - Adding 'industrial strength' coding and documentation to software

## Proof of Concept (II)

- Criteria for funding:
  - The project meets the objectives of Knowledge Transfer to business
  - Credible technical proposition
  - Solid IPR position
  - Specific commercial / technical steps to be taken to meet the Knowledge Transfer objectives
  - Demonstration of solid academic commitment
  - There are clear and credible commercial next steps once the funding is spent
  - Other sources of funding are not available for enabling those steps
  - Not filling the gap until the next research grant!

## Why try?

- Academic progression
- Institutional benefit (government funding)
- New skills: business, marketing, financial
- Opens up other career paths
- Financial reward

# Speak to Us!

- We are here to assist researchers
  - Email and phone details on website ([www.uclb.com](http://www.uclb.com))
- Speak to us sooner rather than later
  - Disclosing information prematurely can seriously impact on commercialisation options
  - Small issues can develop into large problems
- Early discussions are best

## Contact Details

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