

Commercialising your ideas with Knowledge Transfer Partnerships

Facilitating Innovation Through Collaboration



Philippa Ryan
KTP Adviser

Knowledge Transfer Partnerships (KTP)
support UK businesses wanting to improve their
competitiveness, productivity and performance
by accessing the knowledge and expertise available
within UK Universities and Colleges.

Funding Organisations

Funded by the **Technology Strategy Board** with a range of other funding organisations:

Technology Strategy Board



Arts & Humanities
Research Council



Engineering and Physical Sciences
Research Council



Medical
Research
Council



**NATURAL
ENVIRONMENT
RESEARCH COUNCIL**



**Science & Technology
Facilities Council**



**The Scottish
Government**



**Llywodraeth Cymru
Welsh Government**



£34m

Grants committed
2011/12

£84m

Business contributions
2011/12

Current year Funding for 800

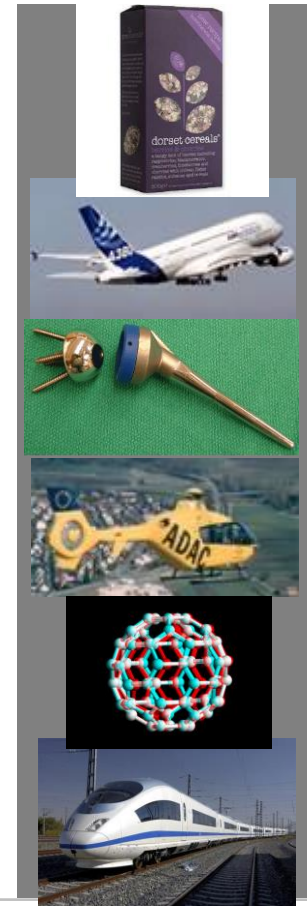
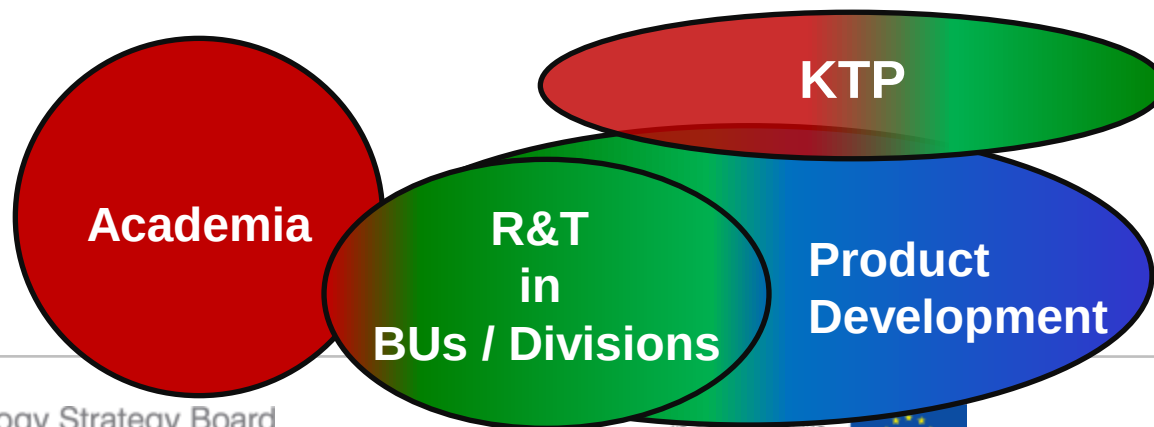
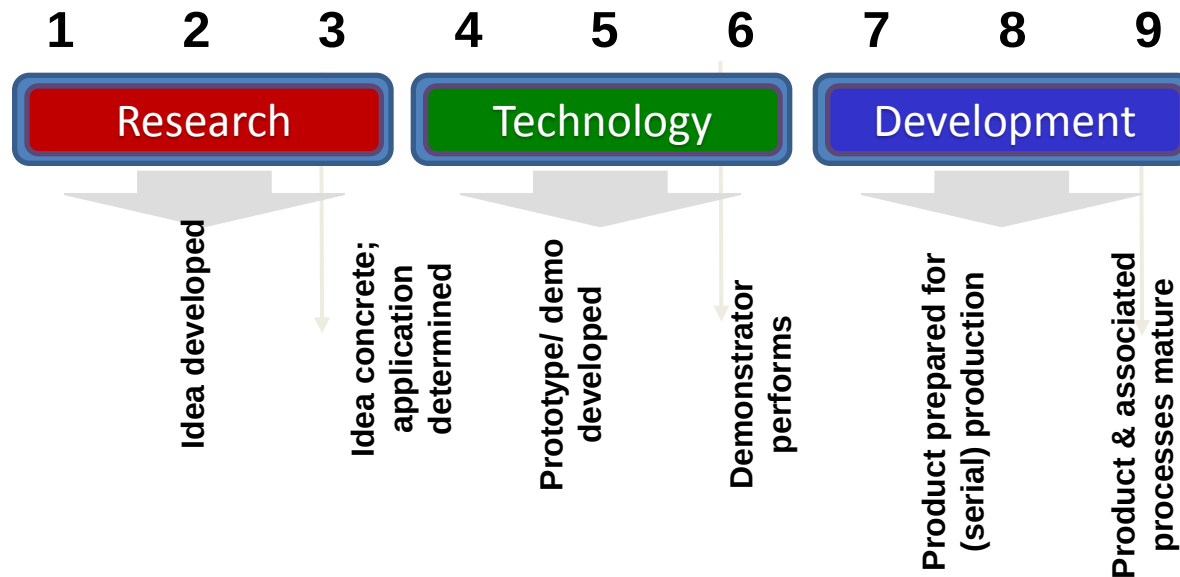
Live Classic
partnerships

Plenty of funding still remains!

Data from 2010/11 Annual Report

Where is KTP on the innovation spectrum?

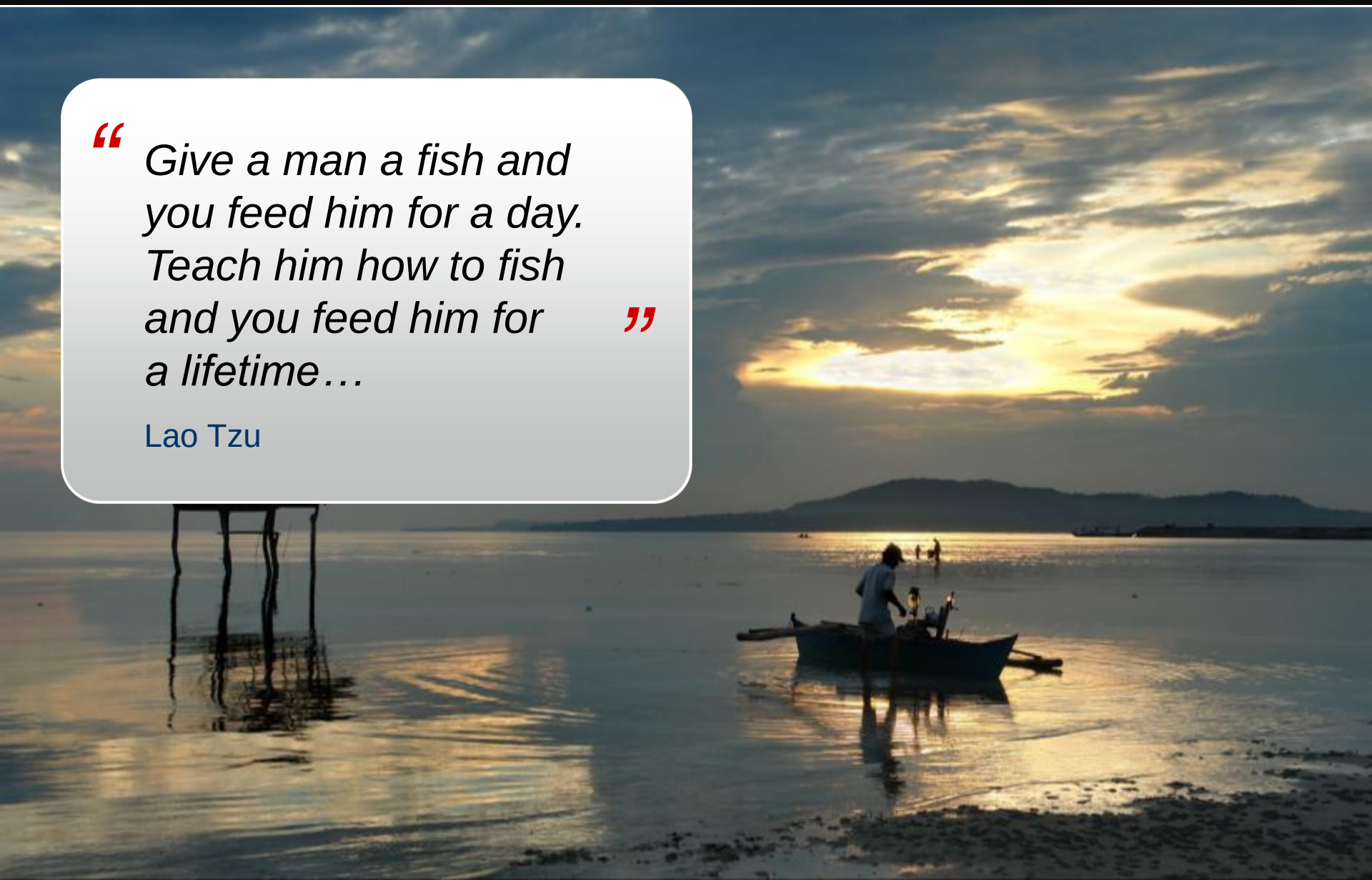
Technology Readiness Level (TRL)



What is KTP?

*“ Give a man a fish and
you feed him for a day.
Teach him how to fish
and you feed him for
a lifetime...”*

Lao Tzu



Partnership Structure

Associate :—

works in the company but is a university employee (enables access to university facilities)

University :—

Lead Academic plus Academic Supervisor (half day per week) and Admin support



Business :—

strategically important; led by CEO and Company Supervisor

Partnership Benefits



Associate :–

Career development
Learns new knowledge/skills
Enhanced employability

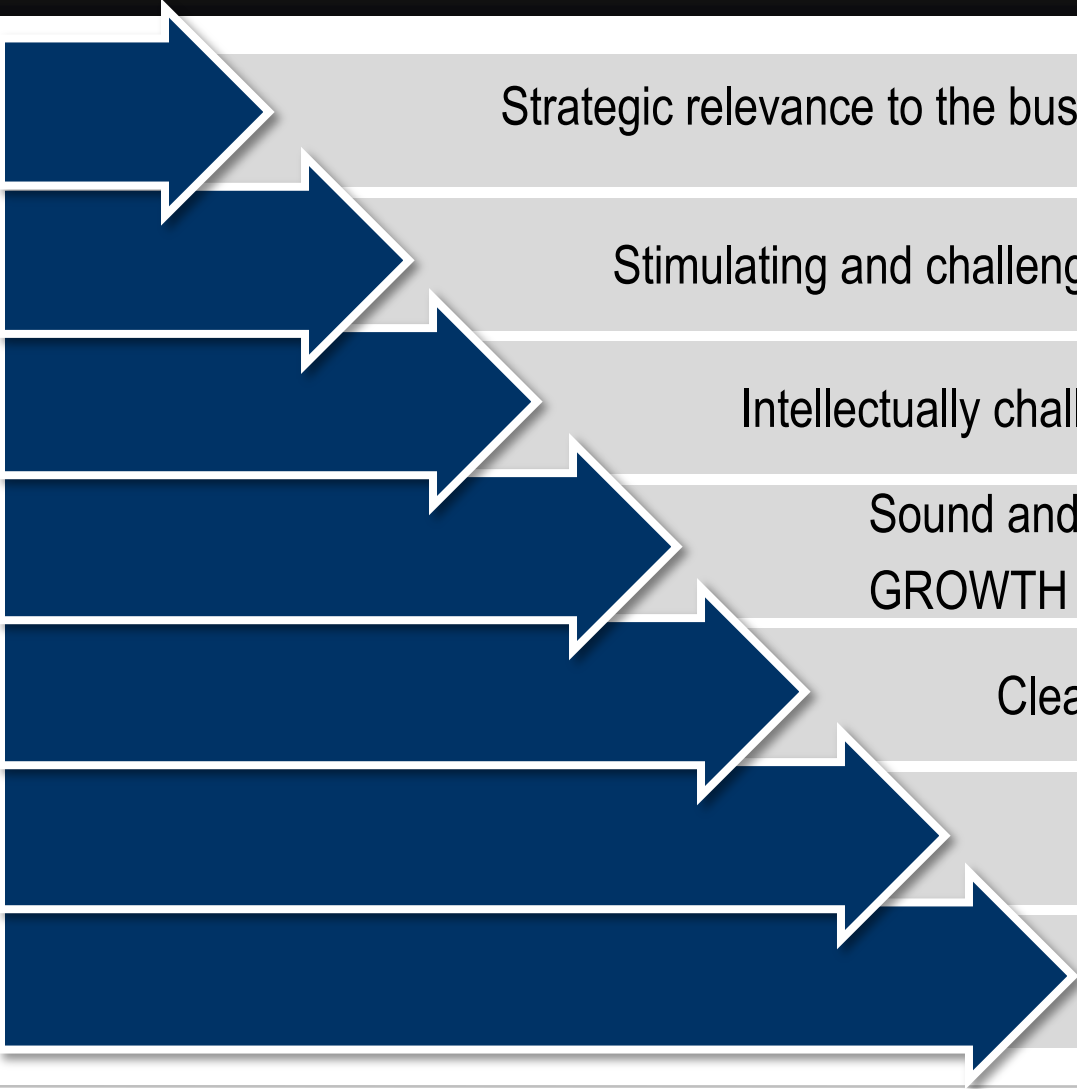
University :–

Enhanced knowledge
Publications/research
Teaching material
REF – Impact!

Business :–

New knowledge/capability
Enhanced performance
and profitability

Project Criteria



Strategic relevance to the business and INNOVATIVE

Stimulating and challenging for the academic team

Intellectually challenging for the Associate

Sound and significant business case – delivering
GROWTH capability (not ‘catch up’)

Clear knowledge transfer

Clear additionality – High Impact

Benefits likely to accrue



Annual budget ~£65k



Includes Training, Travel & Subsistence, Eqt. & Consumables



SMEs contribute 33%



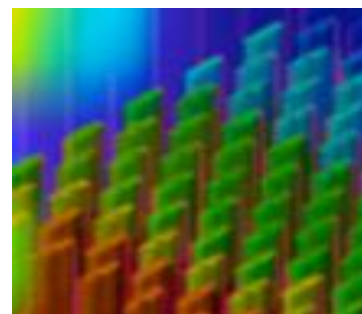
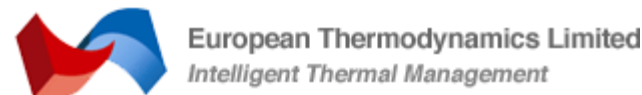
Large businesses contribute 50%



KTP8739 : Cardiff University and

European Thermodynamics Limited, a small sized company that provides thermal management products to improve equipment reliability, for comfort, or for process temperature control.

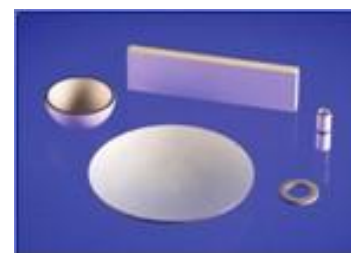
Aim: To establish thermoelectric module fabrication capability in the UK for creating a key energy device in supply chain of energy harvesting systems.



KTP7389 : Glendwr University and

Morgan Electroceramics Limited, a large sized company that manufactures a comprehensive range of piezoelectric and dielectric materials that are used in-house for the production of numerous electrical/electronic components.

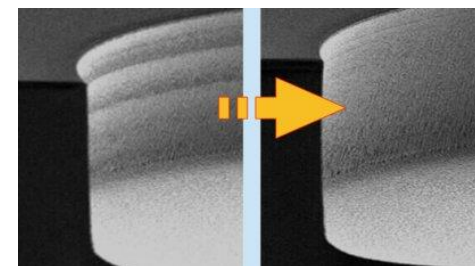
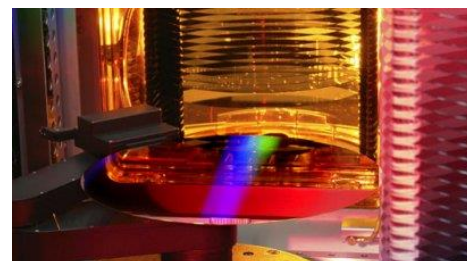
Aim: To increase yield and throughput of the spray dried ceramic powder production facility through systematic improvements in the rheology and dispersion quality of the slips.



KTP7901 : Swansea University and

SPP Process Technology Systems Limited, a large sized company that designs and manufactures a range of market leading plasma etching and deposition systems used in the production of semiconductors and related devices.

Aim: To develop Atomic Layer Deposition and nano structure growth process capability on a plasma enhanced deposition system utilising Liquid Delivery system.



KTP7414 : Cardiff University and:

Power Planning Associates Limited : A small company supplying strategic energy consultancy services relating to the development of power and energy systems.

Aim: To create an online detection and location of defective overhead line components using travelling wave transients and pattern recognition techniques.



KTP8666 : University of Sheffield and:

Williams Grand Prix Engineering Limited : A
large company – Formula One Racing

Aim: To develop high-fidelity computer models of high-speed electromechanical flywheel storage and power system model, to analyse their dynamic performance and develop robust control strategies



KTP 8802 : University of the West of England
and:

Ecotricity Group Ltd : A medium size company involved in green electricity, development and operation of wind parks and the retail of electricity to business and domestic users.

Aim: To build, develop, test and prepare for market an innovative home energy storage product and control system, demonstrating successful operation and achieving regulatory compliance.

ecotricity



KTP8917 : University of Southampton and:

TSL Technology Limited, a small company providing electromechanical, instrumentation and micro-hydraulics equipment, power electronics and motors for the energy and marine industries.

Aim: To design and develop power electronic converters to enable grid connectivity for small off shore renewable and other renewable energy sources.



Knowledge Transfer Partnerships

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

Technology Strategy Board

www.innovateuk.org

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<https://connect.innovateuk.org/web/guest/home>

KTP Adviser for Nanotechnology KTN :

Neil Grice

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Email: neilgricektp@me.com

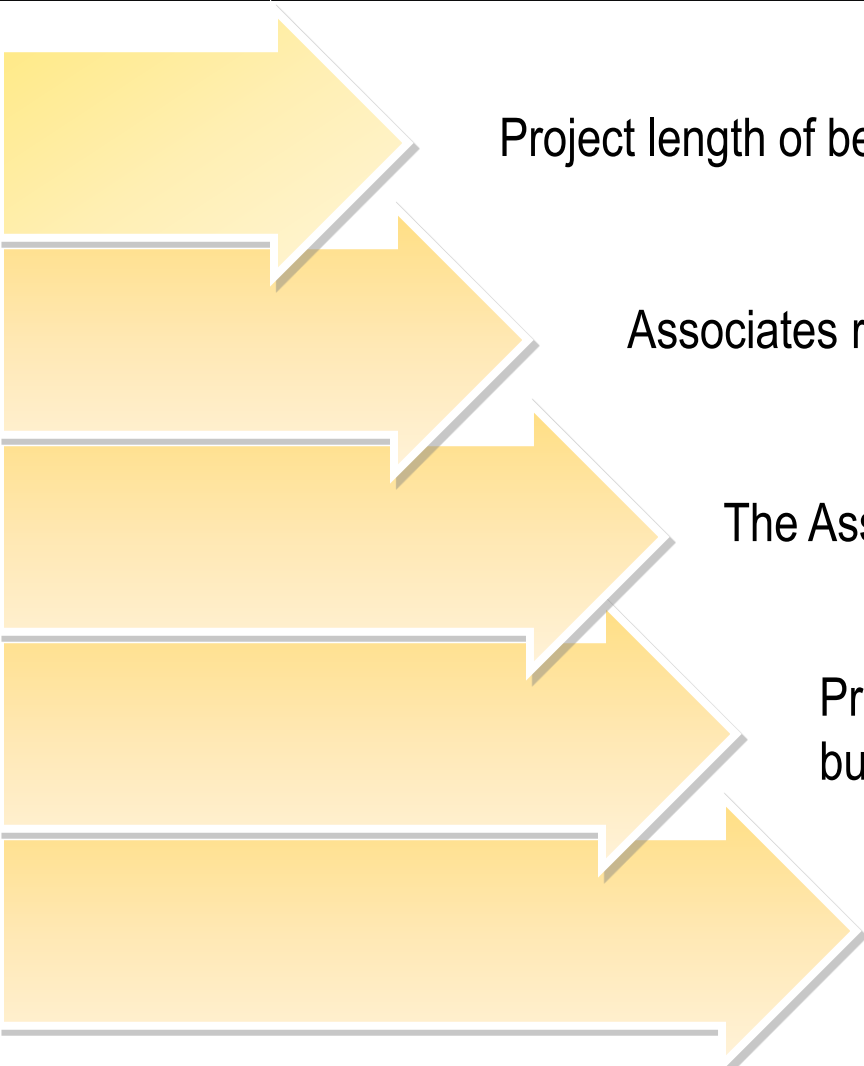
KTP Adviser for Bioscience KTN :

Philippa Ryan (East Midlands)

Tel: 01949 876484 / 07944 355538

Email: pryan@theiet.org

The Features of KTP



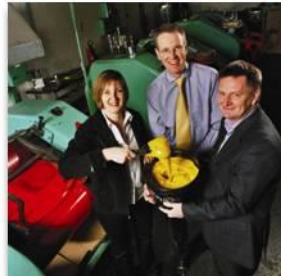
Project length of between 6 months and 3 years

Associates recruited by Academic and Business partners

The Associate is employed by the Academic partner

Project located at business premises with
business supervisor

Academic Supervisor spends approx. half
a day per week at the business premises



Available for:

Companies of all sizes from all industrial sectors

Also:

- Charities and not-for-profit organisations
- Education institutions (LEAs and schools)
- Health organisations (hospitals and NHS Trusts)
- Councils and Local Authorities



Benefits per Associate project:

Increase in annual profit before tax	~ £284,000
Investment in plant and machinery	~ £114,000
New jobs created	3
Business staff trained	29
New research projects initiated	3
Commercial benefits from application of IP	~28%



- **Higher Education Institutions**
- **Further Education Institutions**
- **Research and Technology Organisations**
- **Public Sector Research Institutes**

IMPACT

- Research Income
- Published papers
- Teaching materials, case studies and projects (88%)
- New research themes – commercial relevance (87%)
- Staff development – commercial awareness (92%)
- Higher degree registrations
- Graduate career opportunities
- Exploitation of IP developed during project (26% expect commercial benefits)
- Strategic relationship with business (81%)

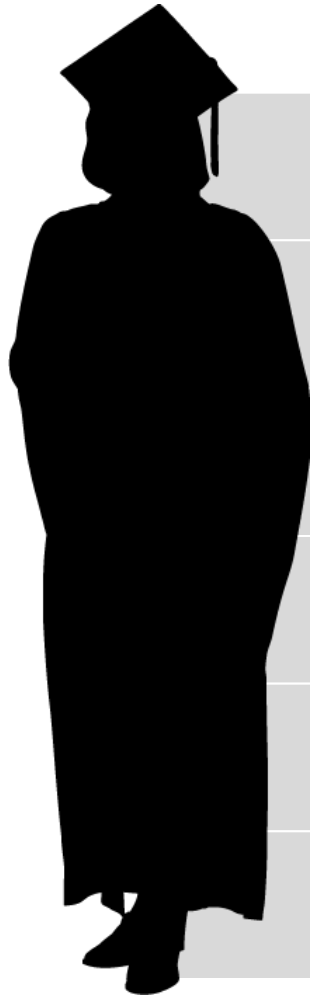




Recently Qualified with:

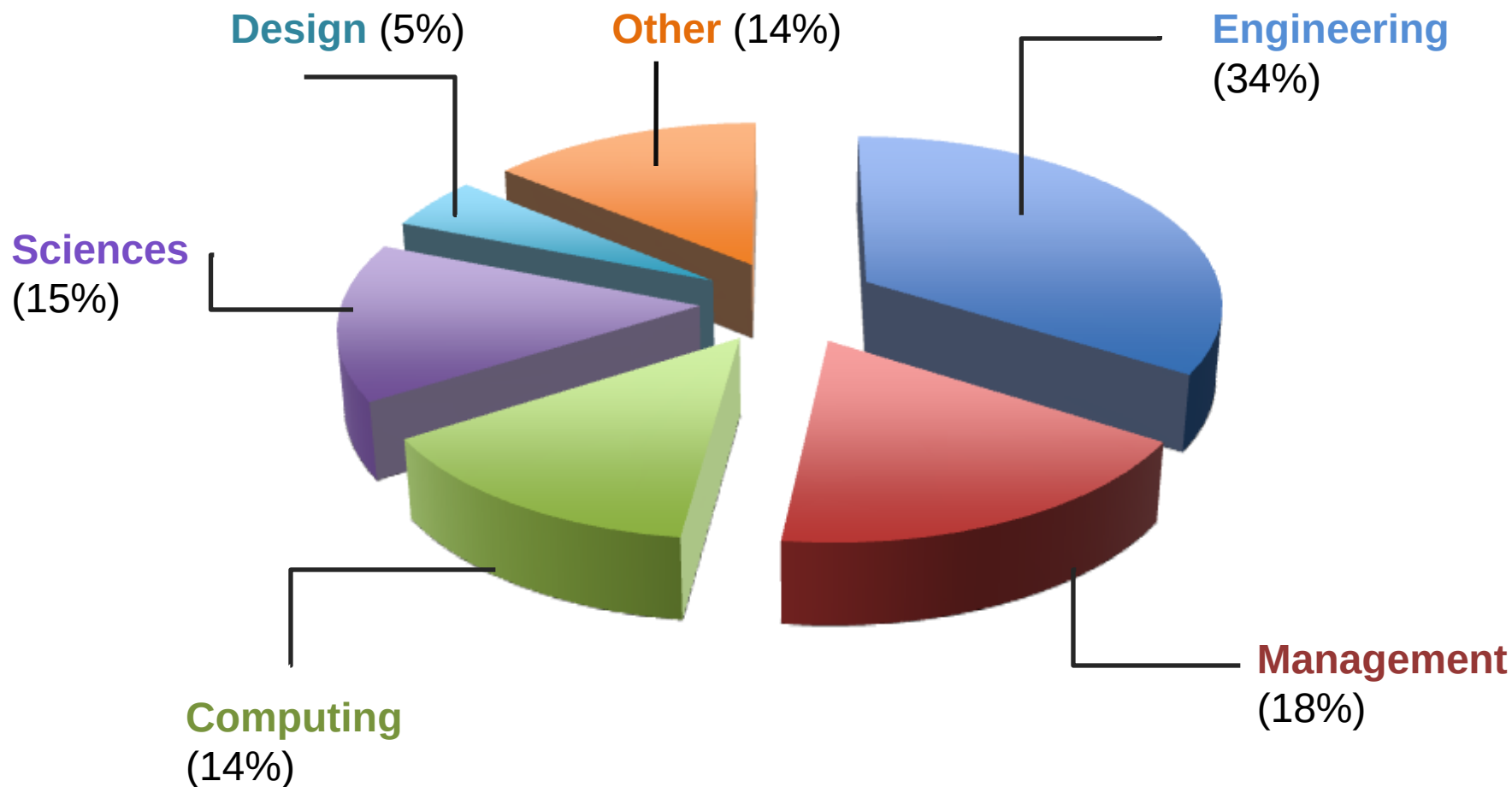
- First degree ~ 76% hold 1st or 2(i)
- Higher degree ~ 56%
- Average age 29 years
- All disciplines
- From any university world wide

Associate Benefits



- Part of one of the country's largest graduate recruitment schemes
- Competitive salary PLUS £2k per annum personal development budget
- Employment within chosen academic discipline and Project Ownership
- Fast-track career development
- Opportunity to register for higher degree during project
- 73% of Associates offered employment by host business

KTPs by Subject Area



Data from 2010/11 Annual Report

- Knowledge Management Systems Developer
- Operations and Business Re-Engineering
- Software Developer (scheduling; environmental systems)
- 3D Body Scanning Developer
- Data Mining and Analytics Developer
- Building Energy Management Engineer
- Composite Materials and Structures Analyst
- Supply Chain Development Engineer
- Organic Materials Chemist
- Big Data Analyst
- Electronics Systems Design Engineer

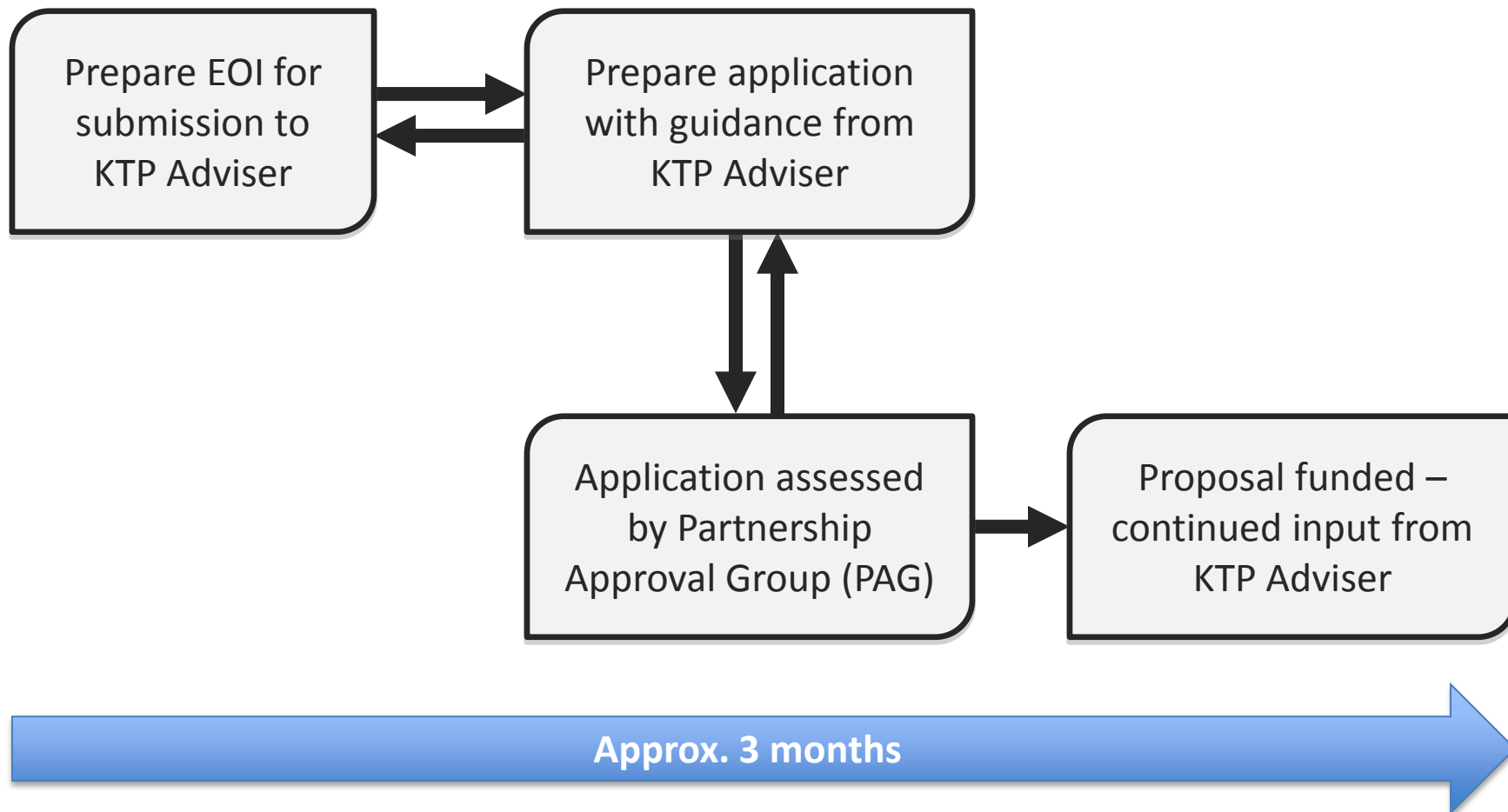
Understanding company needs

- What issues are you facing?
- Strategic change or operational problems?
- Short, medium or long term?
- What expertise is missing?
- Technical, business processes or markets?

Consider:

- Timescales
- Cost
- Risk
- Level of expertise
- Fit with KTP/sKTP criteria
- Alternatives offered by the University or others

The Application Process



Technology Strategy Board funding

The Toolset: A range of Tools with different objectives / characteristics

Smart

SBRI Government challenges.
Ideas from business.
Innovative solutions.

**Collaborative
R&D**

_connect

Knowledge
Transfer
Partnerships

Knowledge
Transfer
Networks

Launchpad

CATAPULT[®]


eurostars[™]

**Innovation
Vouchers**

**Innovation and
Knowledge Centres**

**Entrepreneur
Missions**