

# UNLOCKING INNOVATION

## Introduction to Knowledge Transfer Partnerships

SCCS PhD Consortium 2024

[fiona.pilgrim@ei.ed.ac.uk](mailto:fiona.pilgrim@ei.ed.ac.uk) KTP and Social Science Commercialisation Executive



THE UNIVERSITY  
of EDINBURGH



EDINBURGH  
INNOVATIONS



West of Scotland  
**KTP Centre**  
Supporting you from idea to impact



North of Scotland  
**KTP Centre**  
Innovation through collaboration



East of Scotland  
**KTP Centre**  
Collaboration • Innovation • Impact

## Knowledge Transfer Partnerships

For nearly 50 years, Innovate UK Knowledge Transfer Partnerships (KTP) have brought together forward-thinking businesses and organisations, academics and graduates to solve complex innovation challenges which help our economy, society, and environment.

### Scotland's regional KTP Centres

Simple access points for organisations looking to tap into academic expertise and scope a KTP

Application development and submission support resulting in nearly 100% success rate

### Who can apply?

- A UK-based **business** or organisation with an innovative idea or challenge
- A registered UK **knowledge base** (university) with the expertise to deliver the innovation or solve the challenge
- A suitably qualified graduate or postgraduate recruited as an **associate** to drive the project forward to delivery

## KTP features

- Project length of between 12 & 36 months
- Average costs ~£100-115k per annum split between an Innovate UK funding grant and the “business” partner.
- The Associate is employed by the university but recruited jointly to work exclusively on the KTP project
- Project and Associate are located at the company’s premises with joint business partner and academic supervision
- Structured project management includes regular local management committee meetings

Grant rate is  
50% for large companies /orgs,  
67% SMEs ,  
75% small charities

100% of directly incurred costs are paid to the university including 0.1FTE academic supervision costs (approx. half a day a week) which can be split across more than 1 supervisor and knowledge base



## “Business” partner eligibility and suitability

- Can include many types of company including charities, CICs and Public sector organisations
- UK registered – Innovate UK want to grow the UK economy
- Sufficient employees (3FTE minimum) to support project and embed new knowledge
- Ability to fund project cost contribution; 50%~£55k/year, 33%~£37k/year or 25%~£28k/year (rate dependant on company scale)
- Ability to support the exploitation of the project and commercialisation costs
- Public sector restricted to Management KTP

Spin outs are eligible provided they don't already have access to necessary academic expertise and university has <50% equity stake.

In it for the long term; KTP is not a quick fix but a strategic growth project. The skills and capabilities built within the project, remain in the business.

Characteristics	EPSRC IAA	KTP
Aims	To create impact from research.	To solve a company's specific innovation challenge.
Main Driver/Beneficiary	Society and academic/university.	Company.
Duration	Up to than 12 months (at university).	12-36 months.
Stage and scale of activity	Post basic research such as industrially relevant collaborative research, proof of concept and demonstration - prototyping, small-scale demo, KE, support for adoption.	Specific context application and adoption. Associate based full-time within the company to develop new or improved product or service and build company's long-term capacity.
Academic commitment	~ 5% FTE Supervision for 100% associate or secondment.	10% FTE Supervision role for 100% FTE Associate.
Research Associate	Based at university unless secondment.	Based at company and must be openly recruited.
Type of partner	Any.	Registered in the UK. Not public sector unless Management KTP. At least 3 employees.
Cost to partner	30% of IAA amount (max £60k) in cash required for collaborative projects.	25-50% of ~£110,000 per annum dependent on type and scale of company.
Primary impact and assessment focus	Reach and significance of impact (as in REF). Strong impact case.	Economic impact for the company with potential for wider benefits within 5 years. Strong business case - innovation, impact, challenge, coherence.
Success rates / Frequency of calls	40% successful. EPSRC IAA Open call 2/year. Harmonised IAA 1/year.	Over 90% successful with support of KTP Centre. KTP competition calls open 5-6 times a year.
Decision notification	Within 1 month.	8-10 weeks followed by recruitment of Associate.

**The Carbon Removers  
(Carbon Capture Scotland)**  
capture, remove and  
sequester biogenic CO<sub>2</sub>

**University of Edinburgh**  
Geosciences

## The challenge / innovation

- Existing CO<sub>2</sub> storage projects are offshore and aim to serve industrial emitters of fossil CO<sub>2</sub>
- Can a small, depleted nearshore oil and gas field offer storage capacity to small, rural sources of biogenic CO<sub>2</sub> to enable the greenhouse gas removal required to meet Scotland's Net Zero goal?

## Project stage

Grant for 30-month project  
awarded June 2024

Recruiting KTP Associate

## Proposed solution

Define how to re-purpose an existing nearshore reservoir into permanent CO<sub>2</sub> storage capacity and transfer expert geological knowledge of CO<sub>2</sub> storage site development into The Carbon Removers



**Alfred H Knight Energy Services** provide testing, sampling and supervision operations across the solid fuels and energy sector.

**University of Strathclyde**  
Pure & Applied Chemistry

### **Project stage**

Due to complete 30-month project February 2024

[Further information](#)

## **The challenge / innovation**

- Wood pellets can self-heat posing a serious health and safety risk for suppliers and significant loss of much-needed material for consumers e.g. power producers.
- Can causal factors be identified and tested to predict and avoid risk and loss during shipping and storage?

## **Proposed solution**

Embed multidisciplinary capability in biochemistry, and environmental, energy and chemical engineering to develop robust analytical methodology to support the creation of risk index for self-heating ability of biomass pellets for use within the biomass supply chain



**Norwell Engineering**  
(Elemental Energies Group)  
Engineering and subsurface  
consultancy  
**Robert Gordon University**  
Computing, Engineering and  
Technology

## The challenge/innovation

Need to satisfy statutory requirements governing identification and management of risks and uncertainties associated with injectivity, capacity and containment of CO<sub>2</sub> in legacy wells.

Developing additional storage capacity for CO<sub>2</sub> storage through building of renewed confidence in legacy well performance for CCUS.

## Proposed solution

To develop novel frameworks and models for assessing the risk of corrosion and CO<sub>2</sub> leakage during injection and storage of CO<sub>2</sub> in abandoned legacy wells using a multi-physics modeling approach.

### Project stage

Grant for 30-month project  
awarded June 2024

Recruiting KTP Associate



## **OpenGoSim Limited**

provide software dedicated to modelling the suitability of potential storage sites for carbon capture sequestration

## **Heriot Watt University**

Maths and Computer Science

## **Project stage**

Grant awarded June 2024

Recruiting KTP Associate

## **Project aims**

To significantly improve simulation software to inform carbon capture sequestration. To advance moves towards net zero by better supporting those companies seeking to capture carbon in reservoirs.

The project will look at improving modelling techniques to simulate well-reservoir coupling, especially important for CO<sub>2</sub> injection into depleted gas fields.



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## Isle of Raasay Distillery (R&B Distillers Limited)

Artisanal distillers of whisky and gin, having a state-of-the-art distillery and hotel.

## University of Strathclyde

Chemical & Process Engineering  
Electrochemical Engineering

## Project stage

Completed 24-month project  
July 2024

[Further information](#)

## The challenge / innovation

Decarbonising the Isle of Raasay Distillery: Waste-to-Energy

## Solution

To embed capability in electrochemical engineering processes for energy storage and conversion, biomass energy, and clean fuel technologies, to develop a holistic energy plan for decarbonisation that can be retrofitted to our current distillery site, and implemented at future planned sites.

## Publication

[Utilisation and valorisation of distillery whisky waste streams via biomass electrolysis: electrosynthesis of hydrogen](#)

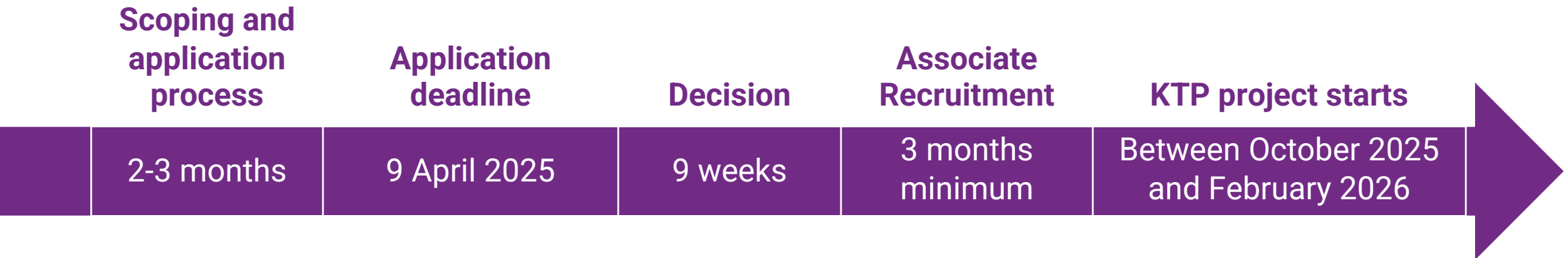
## Benefits

- Opportunity to adopt latest thinking and technologies to increase turnover / profit growth, company / product differentiation, positive societal / environmental impact, new markets / new products / IP
- Access to world class expertise, new thinking, knowledge & approaches
- Access to further opportunities, facilities and networks
- Encourages culture of innovation
- New jobs created (including Associate job)
- Staff development and training
- Helps de-risk change

Valuable income  
Research impact and REF case study  
3 new research projects and 2 publications/KTP  
Opportunity to apply and promote research outcomes  
Access to sector / commercial expertise, data and facilities  
Teaching materials, case studies and student projects  
Strategic relationship with company and introductions to wider sector

## KTP timetable

~6 submission points per year [Dates and deadlines for KTP applicants – UKRI](#)



## KTP Centre project support and services

### Pre award

- Project scoping (in collaboration with University Business Dev)
- Assessment of project fit for KTP funding
- Management of Knowledge Transfer Adviser liaison and gaining authorisation for KTP application development
- Full application development support including costings
- Submission of application through Innovate UK portal and management of queries

### Post award

- Associate recruitment support inc. promotion through centre networks
- Associate induction to KTP; support and training on preparation of LMC paperwork, making financial claims and accessing the personal development budget
  - Financial reporting
- Project administration for project lifetime



## To find out more contact Scotland's regional KTP Centres



West of Scotland  
**KTP Centre**  
Supporting you from idea to impact

University of Glasgow  
University of Strathclyde  
Glasgow Caledonian University  
Glasgow School of Art  
Royal Conservatoire of Scotland

[ktpcentre@ktpws.org.uk](mailto:ktpcentre@ktpws.org.uk)



North of Scotland  
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Innovation through collaboration

University of Aberdeen  
Robert Gordon University  
University of Highlands & Islands  
James Hutton Institute  
University of Abertay  
University of Dundee

[hello@ktpnorth.scot](mailto:hello@ktpnorth.scot)



East of Scotland  
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Collaboration • Innovation • Impact

University of Edinburgh  
Heriot Watt University  
Edinburgh Napier University  
University of St Andrews  
University of Stirling  
Queen Margaret University

[centremanager@ktpcentre.com](mailto:centremanager@ktpcentre.com)



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