

COLLABORATIVE R&D BREAKFAST

How could Salford drive real change in your business?

30 OCT 24

Council Chamber,
Old Fire Station,
Salford

09:00 - 11.30



University of
Salford
MANCHESTER



**BUSINESS
INNOVATION
SERVICES**



BSE BUSINESS SUPPORT
EXPERTS



Innovate
UK

Agenda



/ 9.30am – 9.45am – Introduction and About Collaborative R+D

- Richard Magennis, Business Engagement Manager - Business Innovation Services at UoS

/ 9.45am – 10.15am – Making your business idea a reality

- Dr. Imrana Mushtaq – Knowledge Transfer Advisor, InnovateUK
- Dr. Alejandro Garcia-Miranda Ferrari - Collaborative R+D Manager, UoS

/ 10.15am – 10.35am – How does it work for the business?

- Konstantinos Zeimpekis – Lead Data Scientist, Vue Group

/ 10.35am – 10.45am – Tax R&D credits

- Chris Cunnane – Business Development Manager, BSE

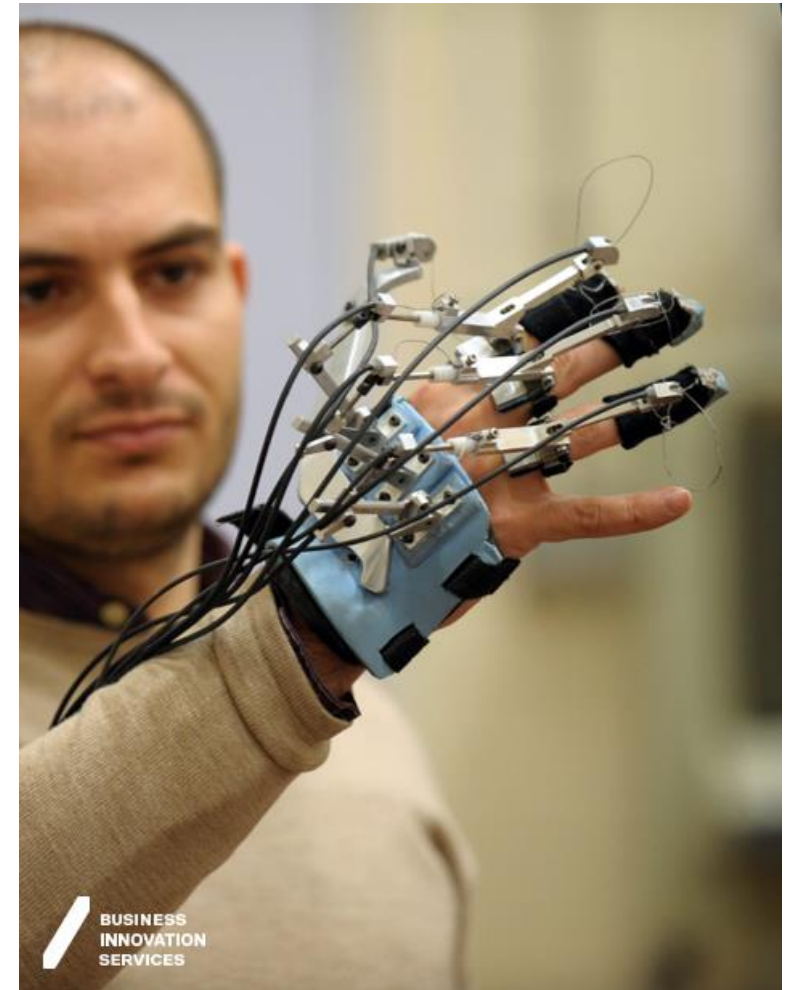
/ 10.45am – 10.55am – Q&A session



Aims of the morning



- / Myth-busting – working with a university
- / Local economic growth
- / Power of partnerships
- / Provide information to local stakeholders
- / Ensure that our research is being used for common good
- / Introduce you to some key sources of information
- / Proof that obtaining funding isn't impossible
- / Showcase our delicious bakery



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Why work with Salford?



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- / Industry and social justice focus at the heart of the university
- / Access to the latest research and some creative minds
- / A key part of the Greater Manchester innovation ecosystem
- / Always what's best for the company
- / Give experience to young professionals
- / Access the most suitable funding streams for your project
- / Ability to pull together different knowledge areas for a solution

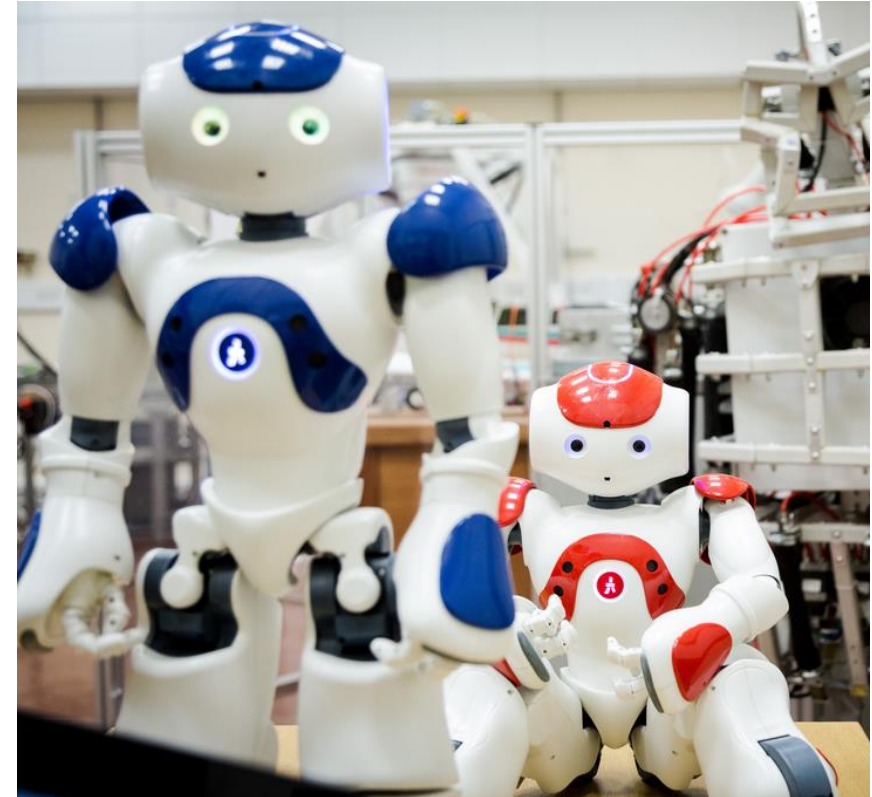


Why work with Salford?



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Salford
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- / Industry and social justice focus at the heart of the university
- / Over 60 years' experience delivering collaborative partnerships
- / Over 13,000 projects delivered with non-academic partners over the past ten years
- / Our Knowledge Transfer Partnerships have generated a projected return on investment of over 600%
- / 1 in 7 of our full-time PhD students are part of our industry PhD scheme



Innovation across the UK



/ 2020-22 - 36% of UK businesses active in innovation

- 36% SMEs
- 50% Large businesses

/ Decrease from 2018-20 – 45%

/ Main drivers of innovation were:

- Improving quality of good and services
- Meeting regulatory requirements
- Replacing outdated products and services
- Upgrading and changing processes

(UK Government, 2024)



Why Collaborative R+D?



Some barriers to innovation:

- / Short-term thinking
- / Mindset (in general or in leadership)
- / Fear of upsetting the status quo
- / Fear of failure

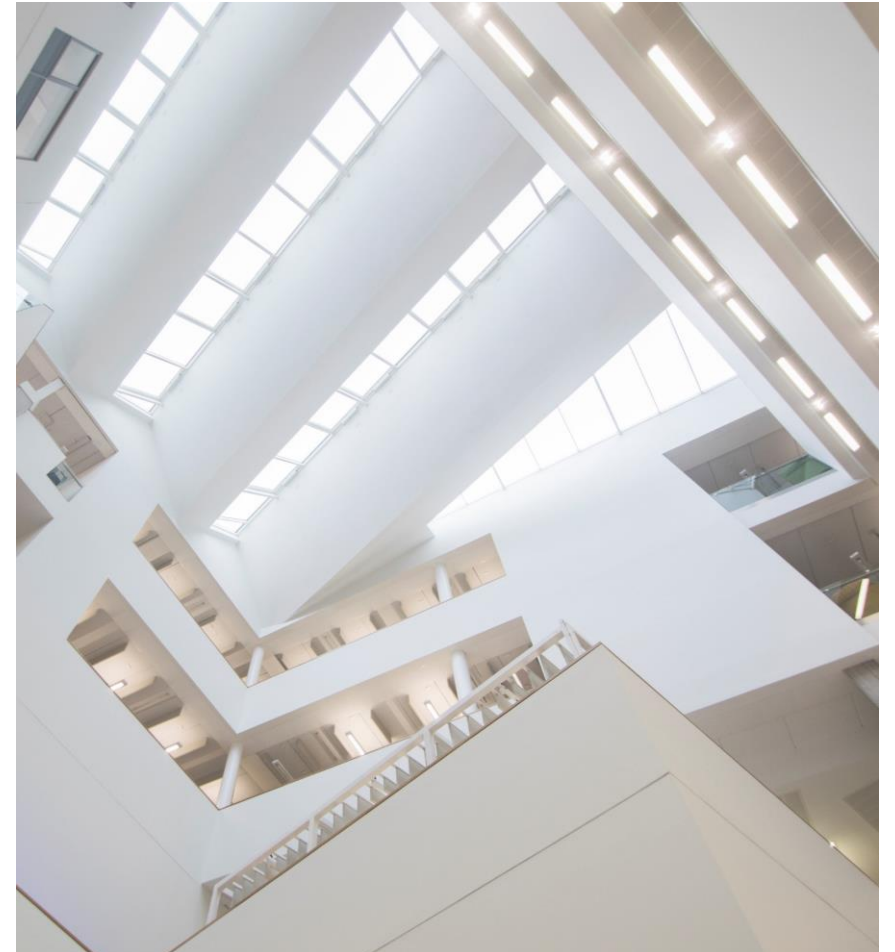
Benefits of innovation:

- / Increased adaptability
- / Growth
- / Competitiveness
- / Productivity
- / Market relevance and future-proofing
- / Positive change and mindset
- / Empirically driven change



Our main aims:

- / Grow the local and regional economy
- / Support businesses to transform their operations through the implementation of new innovative technologies and processes.
- / Drive positive change in industry
- / Connect businesses to the right support across Greater Manchester
- / Act as a platform for new and emerging business and sectors
- / Lead via a collaborative, co-creative challenge-led approach, helping to create sustainable business for the future.



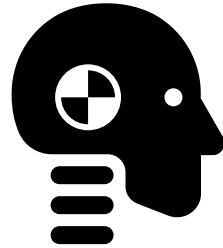
Mission and purpose



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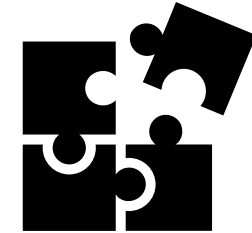
Develop new products
and services



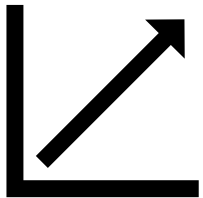
Test and trial ideas
and products



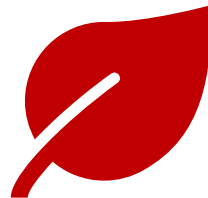
Help you access
funding for R+D



Develop solutions to
business problems



Identify new growth
opportunities



Support you on your
journey to net zero



Deliver bespoke
professional training



Conduct Research

Supporting businesses together at different stages of their journey



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Ideation /proof of concept / prototyping for a new innovative project



Development of a new product or service which use emerging technologies



Transformation of existing products or service to remain competitive



Embedding a new technology into existing processes and operations



Commercialisation of your innovation and taking it to market

GM Ecosystem



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Collaborative R&D Team

Dr Alex Garcia-Miranda Ferrari CSci MRSC

Collaborative R&D Manager; Research Knowledge & Enterprise

A.Garcia-Miranda.Ferrari@salford.ac.uk



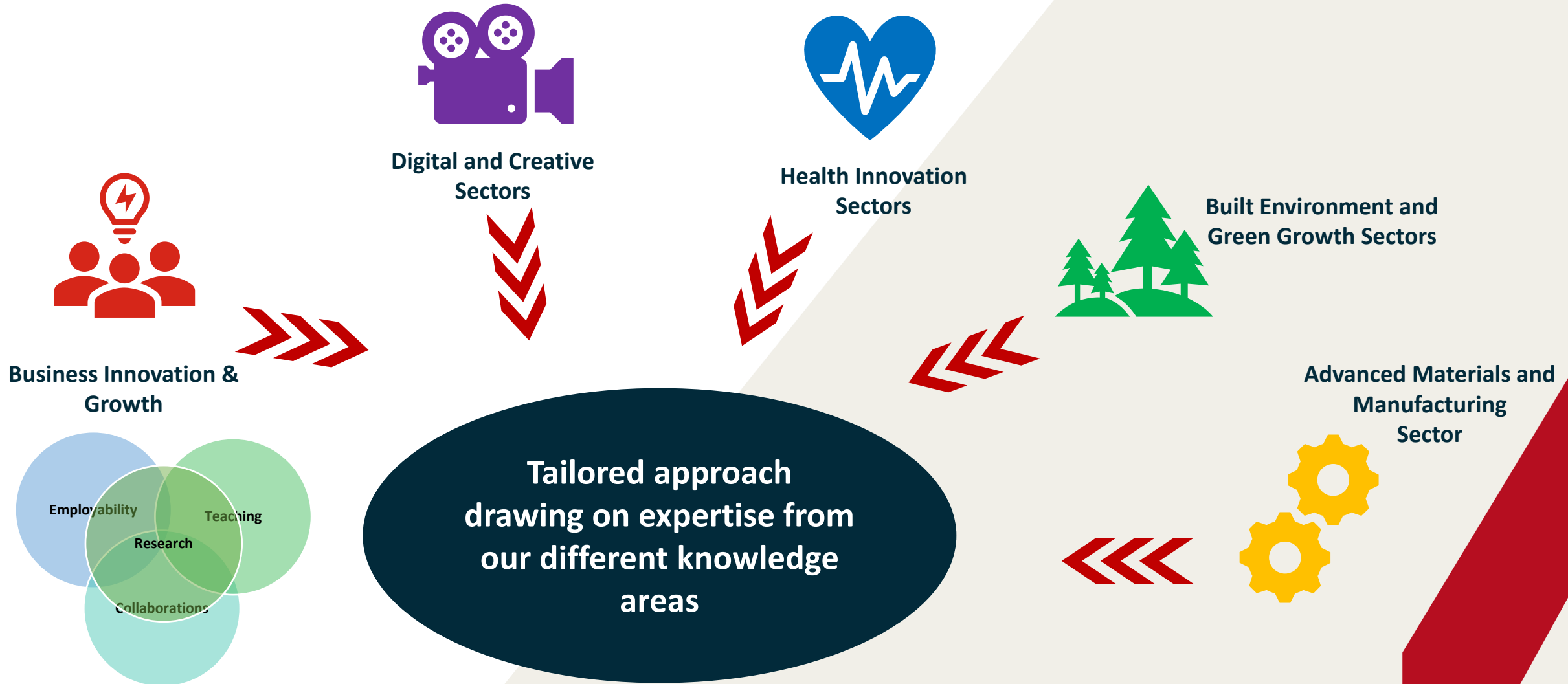
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Agenda

- Funding Development at UoS
- Collaborative R&D
- Types of funding
- What could be next?
- Support provided

Key Industry Pillars



Funding Development



The CRD team is part of the wider Funding Development Team.

We are experts in research planning, collaborative R&D and research communications. We are here to help you navigate the external funding landscape by developing strategies for upscaling research ideas into successful projects that deliver meaningful impact...



Research Support



Funding
Development



Fellowships and
Grants Academy



RKE Communications
Support



Collaborative
R&D

- Work with industrial partners on long-term strategies
- Provide writing support on applications
- Project manage grant applications

Who is the CRD team?



Collaborative R&D

- Bring academics and industry partners together to deliver knowledge transfer projects
- Support the development of collaborative applications to funders such as Innovate UK
- Provide project management support

What do we provide?



Innovative project of clear strategic relevance to the business




Sound business case



Wealth creation in the private sector



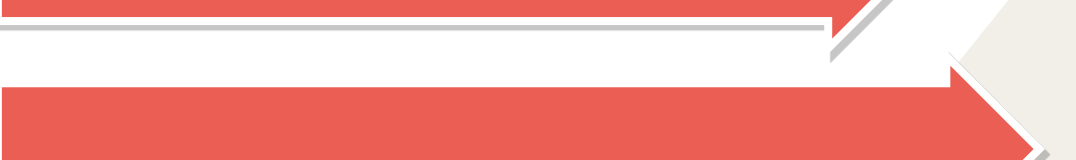
Stimulating and challenging for all partners




Demonstrating a step change in innovation



Clear knowledge transfer



Quantifiable impact for all three partners



What could be next?



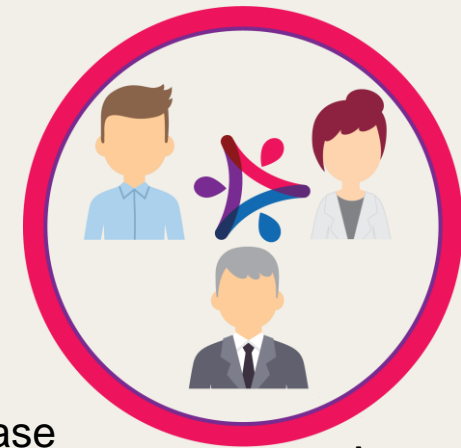
Knowledge Transfer Partnerships

KTPs are a three-way partnership to create and embed new capabilities into businesses so they can achieve their strategic objectives, transform their business and deliver substantial financial returns.

Innovate UK
Technology Strategy Board



Business
Strategic plans for growth



Knowledge Base
Specialist Knowledge
& Expertise

Associate
Project Manager

3-way partnership

What are Knowledge Transfer Partnerships (KTPs) by Innovate UK?

KTPs *create* and *embed* new capabilities into businesses so they can achieve their strategic objectives, transform their business and deliver substantial *financial returns*.



786 nationally active projects (10 at UoS)



700+ businesses (80+% of closer collaborations after)



£200m+ currently invested



£5 returned per £1 invested



Company driven partnership with an academic team



Strategic Projects 12 - 36 Months



Funding 67% SME 50% Large



Any Business Any Size



Full-time Associate (graduate) Project Manager



Associate based at business, employed by the HEI



Joint Supervision



Academic time 10%

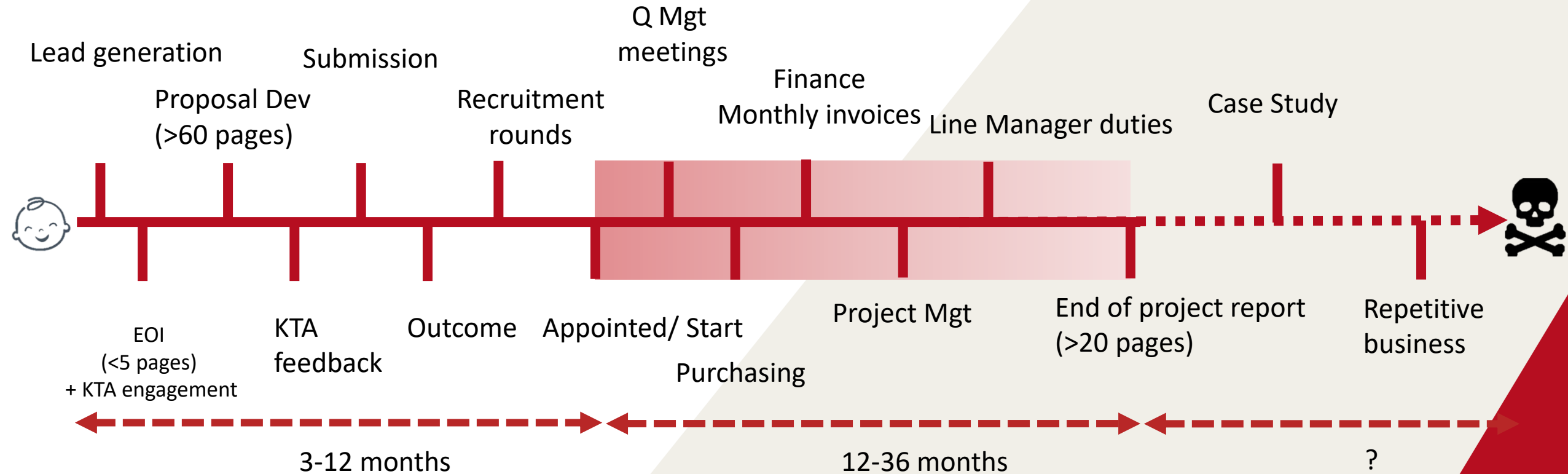


Associates often go on to be employed by Business

Technology Readiness Level (TRL) from 3 to 6 (inc. feasibility, prototype dev to bring closer to market at scale demonstration)

Evaluation Process: impact, innovation, challenge and cohesiveness

CRD; End-to-end approach



What could be next?

- For more information on how to collaborate with us:

[Collaborative R&D | University of Salford](#)



- For more information on our latest updates:

[Business Innovation Services at Salford: Posts | LinkedIn](#)



- For more information on KTPs:



[Knowledge Transfer Partnerships - YouTube](#)

Collaborative R&D



Email us here



University of
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a.garcia-mirandaferrari@salford.ac.uk



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Knowledge
Transfer
Partnerships



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Knowledge Transfer Partnerships

Dr Imrana Mushtaq

30th October 2024

Innovate UK Business Connect

Innovate UK KTN exists to **connect innovators with new partners** and new opportunities beyond their existing thinking – **accelerating ambitious ideas** into real-world solutions.



UK Research
and Innovation

Innovation Hub – Connecting businesses to funding and support (ukri.org)



All government business innovation support in one place, summarised and easy to find, to save you time and effort

Find funding and support

- ☆ Use the finder to search for funding and support
- ✓ Find expertise relevant to your company
- ✉ Learn where to make an application
- ☆ Browse thought leadership articles
- ✓ Search upcoming events
- ✉ Designed for innovative companies like you

FIND FUNDING AND SUPPORT

Our partners



<https://ukinnovationhub.ukri.org>



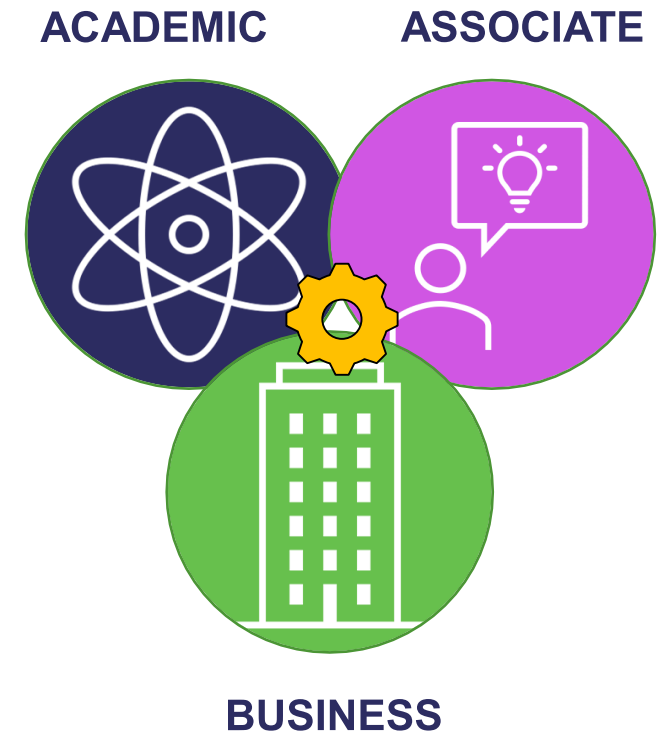
Introducing Knowledge Transfer Partnerships (KTP)

KTP is:

A three-way partnership that provides

- **expertise** to innovate
- **funding** to enable
- **resource** to deliver transformational positive change

This change can be economic, societal or environmental



Profile of a KTP Project

WHO

Any size, any sector including virtual UK based business & third sector

- Classic KTP
- Management KTP
- Public Sector mKTPs

WHAT

Any subject that is innovative, business-led, strategically relevant

Demonstrates:

- Innovation
- Commercial impact
- Embedded capability
- Knowledge transfer

WHY

Delivers quantifiable benefits for all three partners

Creates economic, societal & environmental impact

Early-Stage Businesses

Can be funded, but:

- Must have funding in place already, to meet burn rate to point when profits are consistently generated
- Spin-outs OK, provided University has no more than 50% equity





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Knowledge
Transfer
Partnerships

What are the benefits ?



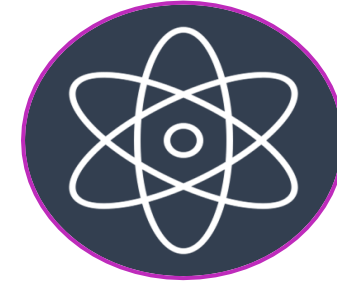
Business

- Access to **academic expertise**
- Accelerated, **de-risked innovation**
- **Competitive** advantage
- **Increased Revenue** and **profit** growth
- **New or improved products/services/ processes**
- **Potential for new IP**
- Positive **societal / environmental** impact.
- **Ongoing collaborations** with academia to unlock new opportunities.



Associate

- Unique **career springboard**, applying subject expertise to solve a **real-world challenge**.
- Valuable **leadership**, management and project management **skills**.
- Competitive **salary & generous professional development budget**.
- **Mentoring & coaching** provided by Knowledge Transfer Adviser.



Academic

- **Opportunity to apply research to a real-world challenge**.
- Generates conference, **journal papers** and **case studies**.
- **Enriches** teaching materials & **inspires** student projects.
- **Source of valuable research income**.
- Fosters **strategic relationship** with business & develops commercial awareness.

Knowledge Transfer Adviser (KTA) Support

- A National Network of highly experienced Advisers with remit to support KTP delivery
- Locally based Expert Support and Advice throughout the project lifecycle
- Support and monitor the project
- Mentoring for KTP Associate
- Interface with other Business Connect resources/networks/sector specialists





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£50m

Funding

Budget

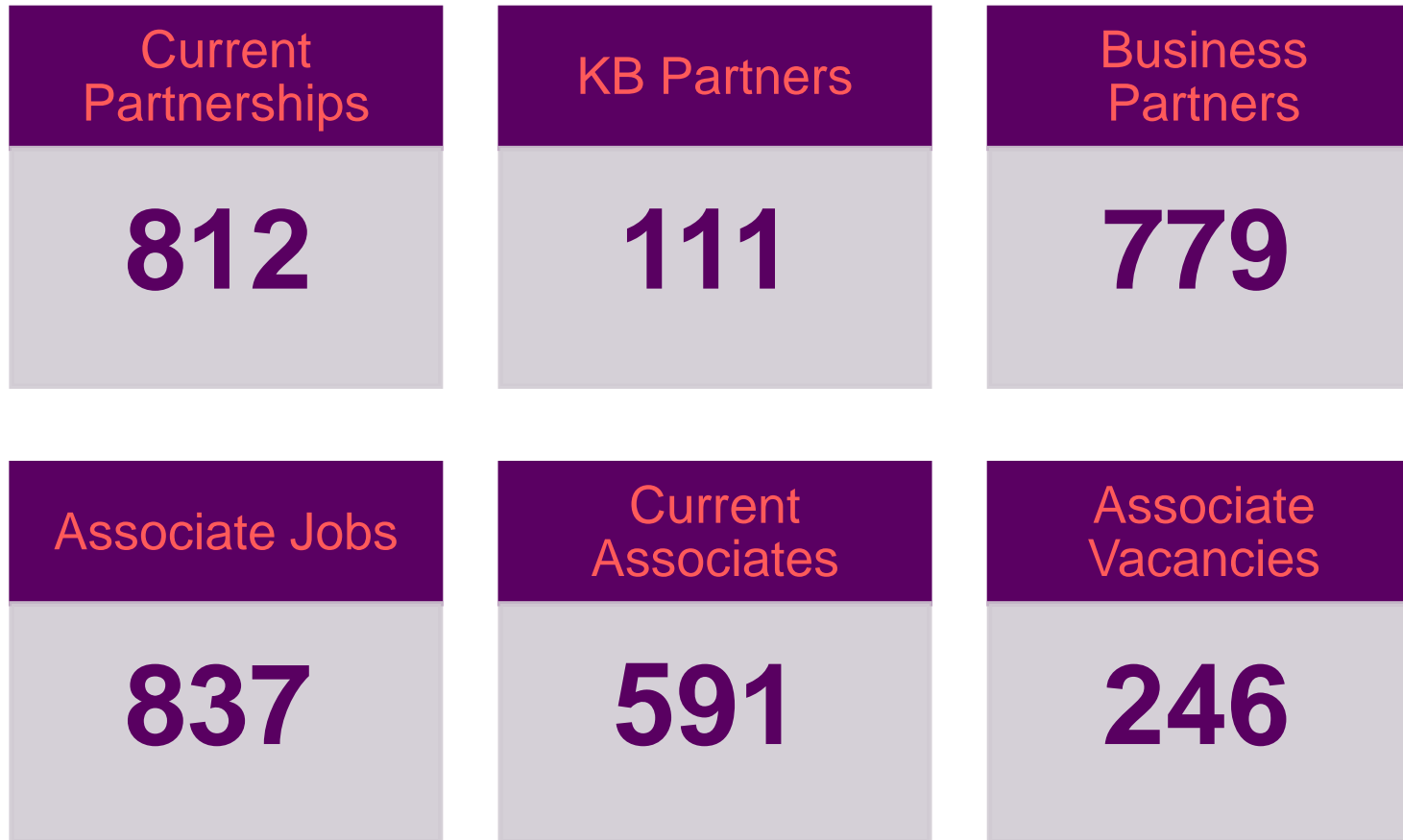




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Transfer
Partnerships

KTP in Numbers (June 2024)



Example of KTP Costs

	Eligible costs	SME project: Innovate UK grant at 67%	SME project: SME contribution 33%	Large business project: Innovate UK grant at 50%	Large business project: large business contribution at 50%
Contribution to associate employment costs	45,000	30,150	14,850	22,500	22,500
Associate development	2,000	1,340	660	1,000	1,000
Travel and subsistence	1,250	838	413	625	625
Equipment, consumables, and other costs	2,000	1,340	660	1,000	1,000
Knowledge base supervisor	8,000 for example	5,360	2,640	4,000	4,000
Estate costs	0	0	0	0	0
Additional associate support	18,000 for example	12,060	5,940	9,000	9,000
Grant payable or business contribution		51,088	25,163	38,125	38,125

KTP Costs

Standard KTP Budget
Approx. £100K - £120K
(per year)

Grant rates
3rd Sector: 75%
SME: 67%
Large Companies:
50%

Cost Category	Standard Costs (per year)
Contribution to associate employment costs	£45K (£48K in London)
Associate development	£2K
Travel and subsistence	£1.25K (Standard can ask for more)
Equipment, consumables, and other costs	£2K (Standard can ask for more)
Knowledge base supervisor	Varies
Estate costs (This includes the use of existing facilities and anything chargeable within the knowledge base. Normally this will be zero as the associate is located at the business partner's premises.)	Varies
Additional associate support (These are the costs for managing the associate, such as computing, personnel admin, learning resources and secretariat support to the LMC)	Varies



How KTP applications are assessed



IMPACT

- Significant ROI for project + 5 years?
- Competitive advantages?
- New market Opportunities?
- Environmental / societal benefits



INNOVATION

- Applies recent research to development of new or improved products services or processes
- Leads to significant commercial advantage and embedded capability



CHALLENGE

- Challenging to all parties?
- Does it stretch the team?
- Ambitious but achievable?



COHESIVENESS

- Is it credible?
- What knowledge is being transferred?
- Embedding new capabilities?
- Transformational?

The KTP Process from concept to completion



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Knowledge
Transfer
Partnerships

“If you look at history, innovation does not come from giving people incentives; it comes from creating environments where their ideas can connect”

Steven Johnson

www.ktp-uk.org



Data Science Presentation

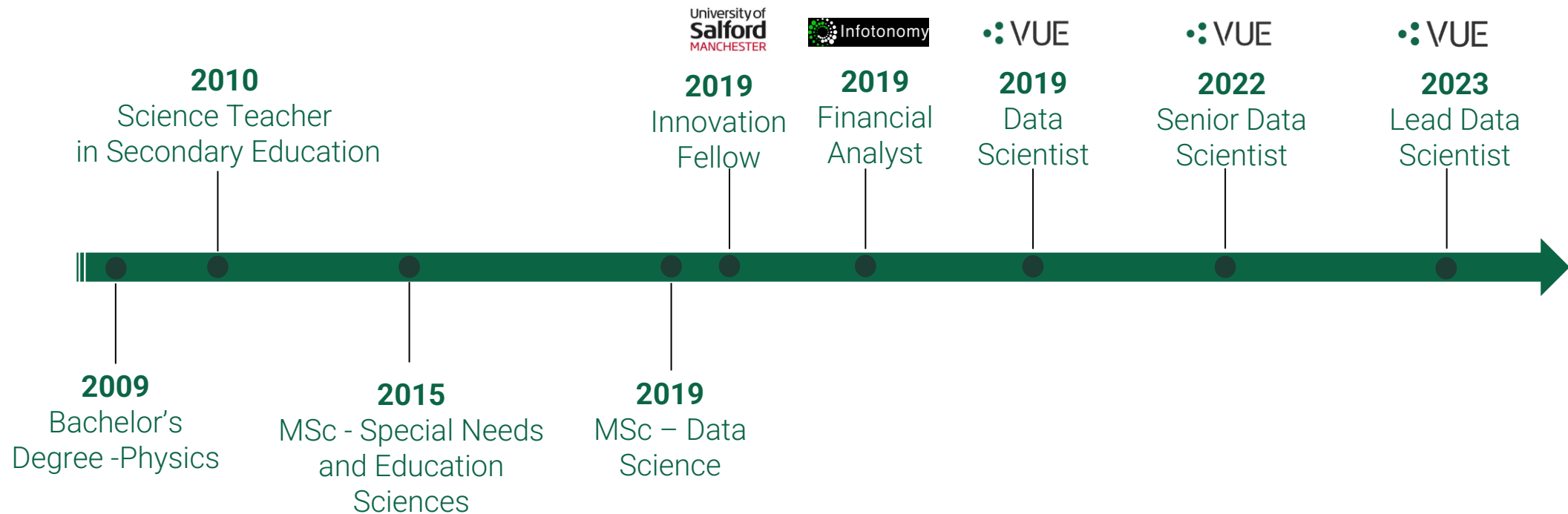
30/10/2024

*Konstantinos Zeimpekis, Lead Data
Scientist VUE*

Contents

- 3 My Background
- 4 About VUE
- 5 VUE & The University of Salford Projects
- 6 KTP Project- The Problem
- 7 KTP Project- Objective, Outcome & Future Plans
- 8 KTP Project- Initialisation Process
- 9 KTP Project- Process During Project
- 10 KTP Project- Growth

My Background



About VUE:

From our beginnings in 1999 with fitting reverse cameras to quarry vehicles, we have become experts within the camera and telematics solutions industry, based on years of experience. We offer robust solutions from an established dependable partner; delivering in-house software, hardware and customer support that focuses on prioritising customer needs.

VUE remains a family-owned company founded in Manchester and continues to operate right where it started. We have a dynamic outlook, and our work is underpinned by values of care, integrity, a one-team mentality and striving for excellence.

VUE & University of Salford Projects

2019	Driver Behaviour Scoring Models using Machine Learning	Konstantinos Zeimpekis Lia Stanway
2021	FNOL Identification using Videos Analysis and DL	Mitesh Rajan
2022	Apply ML for recommendations on Fuel Fleet Transition to EV	Prasad Siripurapu
2023	Exploring Unsupervised Methods In Crash detection	Hamidreza Satarshamsabadi Prasannavardhini Premkumar
2024	MSc Data Science	Moneesha Gautam

KTP Project – The Problem

When an event occurs:

1. Be sure that it was an actual accident
2. Inform the relevant parties



KTP Project – Objective, Outcome & Future Plans

Objective

Develop an innovative First Notification of Loss (FNOL) system

Outcome

Prototype solution with above 90% accuracy using both videos and telematics data

How will we use the prototype in the future?

Connect the service to the pipeline to automatically classify an event as an accident or not and then inform the relevant parties




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Knowledge Transfer Partnerships

Recruiting graduates for innovative companies for over 40 years!

Position: Data Scientist – KTP Associate
Based at: VUE Limited, Media City, Greater Manchester
Salary: £30,000 - £35,000
Vacancy ref: 1871122 **Application closing date:** Thursday 15th October **Anticipated Start date:** December 2020

An exciting opportunity has become available for a Computer Science or Statistics Graduate to develop a market disrupting model, using machine learning, to detect and classify driving incidents in real time from telematics and video data. This position is a 24-month fixed term contract, with an additional £4k per annum dedicated training budget tailored towards your personal development.

Qualifications we require:
As a minimum, you will hold a 2:1 BSc (Hons) in Computer Science, Statistics or related discipline.

About VUE Ltd:
VUE Ltd are a Fleet Risk Management Partner – with industry-leading and insurer-approved solutions. Video Telematics and dedicated software solutions combining to mitigate risks for fleets.
Find out more by visiting: <https://vuesgroup.org/>

About KTP:
This position forms part of the Knowledge Transfer Partnership (KTP) funded by Innovate UK. It's essential you understand how KTP works in partnership with business and the University, and the vital role you will play if you successfully secure a KTP Associate position.

Please visit: www.salford.ac.uk/ktp
If you have questions about this or other KTP vacancies contact:
E: hresourcing@salford.ac.uk
Job Ref: 1871122

Academic Team:
The Academic team at the University of Salford consists of Dr Tarek Gaber (Lecturer, School of Engineering & Environment) and Prof Sunil Vadera (Professor of Computer Science, School of Science, Engineering and Environment).

The successful candidate will possess ...

- ◆ Knowledge and experience of statistical methods and a wide range of data mining methods
- ◆ Experience of working with databases and different software development methods

Essential skills we require as a minimum:

- ◆ Knowledge of data mining tools and languages (such as *Scikit learn, Keras, Tensorflow and Python*)
- ◆ An in depth understanding of software and data mining methodologies
- ◆ Inquisitive, curious and critical with a methodical approach to resolving novel problems and challenges

Apply now: Job Ref: 1871122
<https://tinyurl.com/y6khtb0>



KTP Project – Initialisation Process

- 1. Idea and University Discussion:** Discuss project ideas with the university to identify potential collaboration opportunities. Professor Sunil Vadera, Dr Tarek Gaber.
- 2. University Planning:** The university drafts a project plan, aligning academic expertise with business needs.
- 3. Final Plan and Deliverables:** Mutually finalise the project scope, deliverables, and timeline.
- 4. Job Advertisement:** Advertise the KTP Associate role, specifying required skills and qualifications.
- 5. CV Collection:** Receive and review applications to shortlist suitable candidates.
- 6. Multi-Phase Interviews:** Conduct interviews in stages to assess candidate fit.
- 7. Offer:** Extend a job offer to the selected candidate.
- 8. Acceptance:** Confirm the candidate's acceptance and finalise the start date.
- 9. Project Start:** Begin the KTP, with the Associate starting work on agreed deliverables.

KTP Project – Process during the project

Process During KTP

Daily Meetings:

Associate and Company Supervisor review progress and address immediate tasks.

Biweekly Meetings:

Associate meets with Academic Supervisor to discuss academic input and project alignment.

Monthly Meetings:

Joint meetings with Associate, Academic, and Company Supervisors to review overall progress and adjust plans.

Quarterly Meetings:

Associate, both Supervisors, and KTP University Adviser meet to assess milestones and strategic direction.

Supervisor Time Commitment

Academic Supervisor:

Half a day per week for guidance and academic input.

Company Supervisor:

Daily oversight to ensure smooth project execution and goal achievement.

KTP Project - Growth

Associate's Professional Growth

- Gained hands-on experience in a live business project.
- Benefited from collaboration with University Supervisors.
- Utilised a training budget (e.g., conferences, AWS MLOps training).
- Started a PhD with the University of Salford.
- Employed full-time by VUE.

VUE's Growth

- Developed a working prototype with full understanding of its design and function.
- Ready to integrate the solution into existing pipelines.
- Strengthened partnership with the University.

My Professional Growth

- Progressed from Data Scientist to Supervisor, then Senior Data Scientist.
- Gained experience in CV scoring and interview processes.
- Expanded my network with industry professionals.
- Represented both VUE and The University of Salford.

Thank you for listening

•• VUE

Collaborative R&D Networking Breakfast

R&D Tax Relief – Oct 2024



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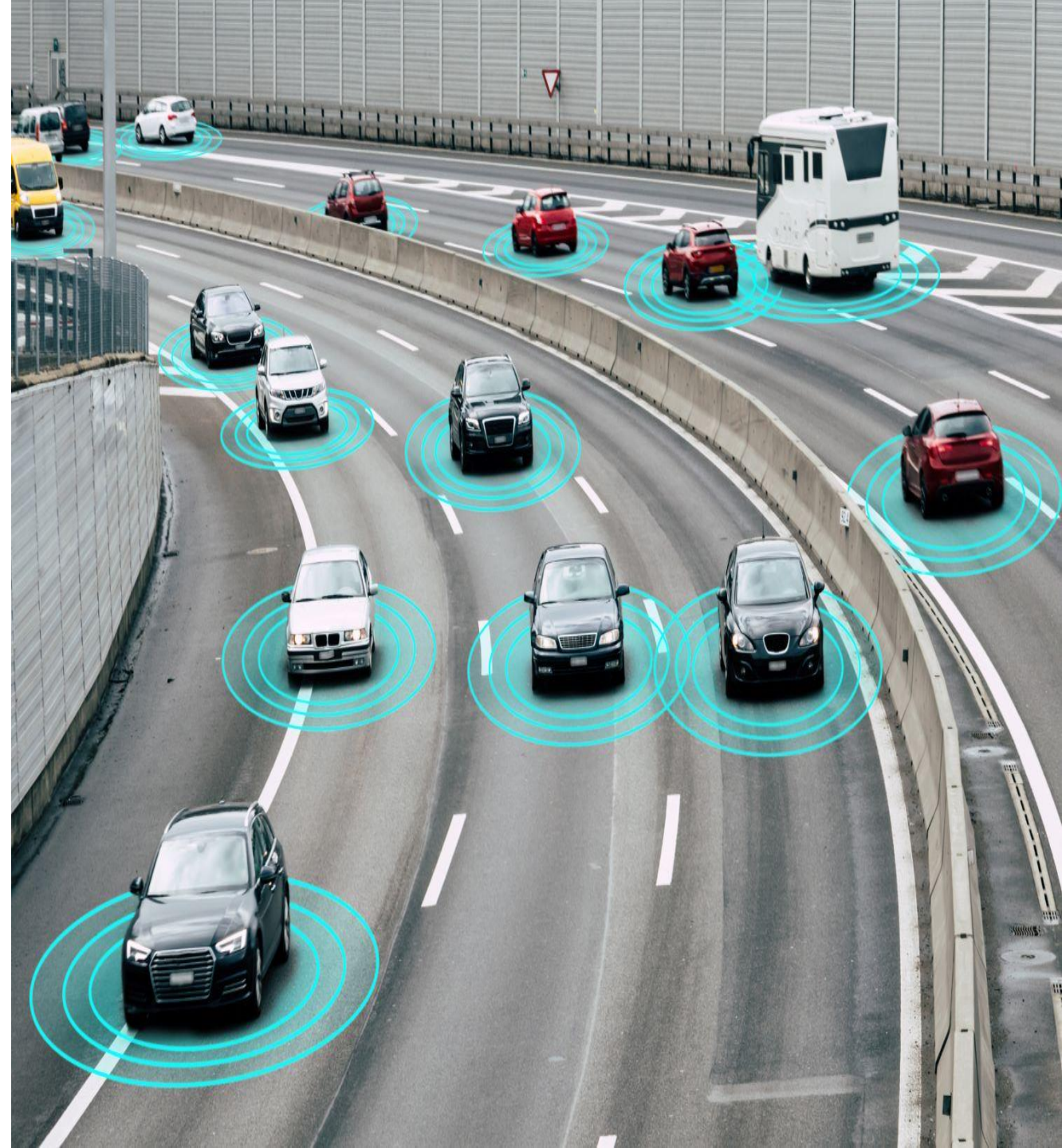


Christopher Cunnane

Senior Business Development Manager

chris@randdspecialists.co.uk

0161 672 0776



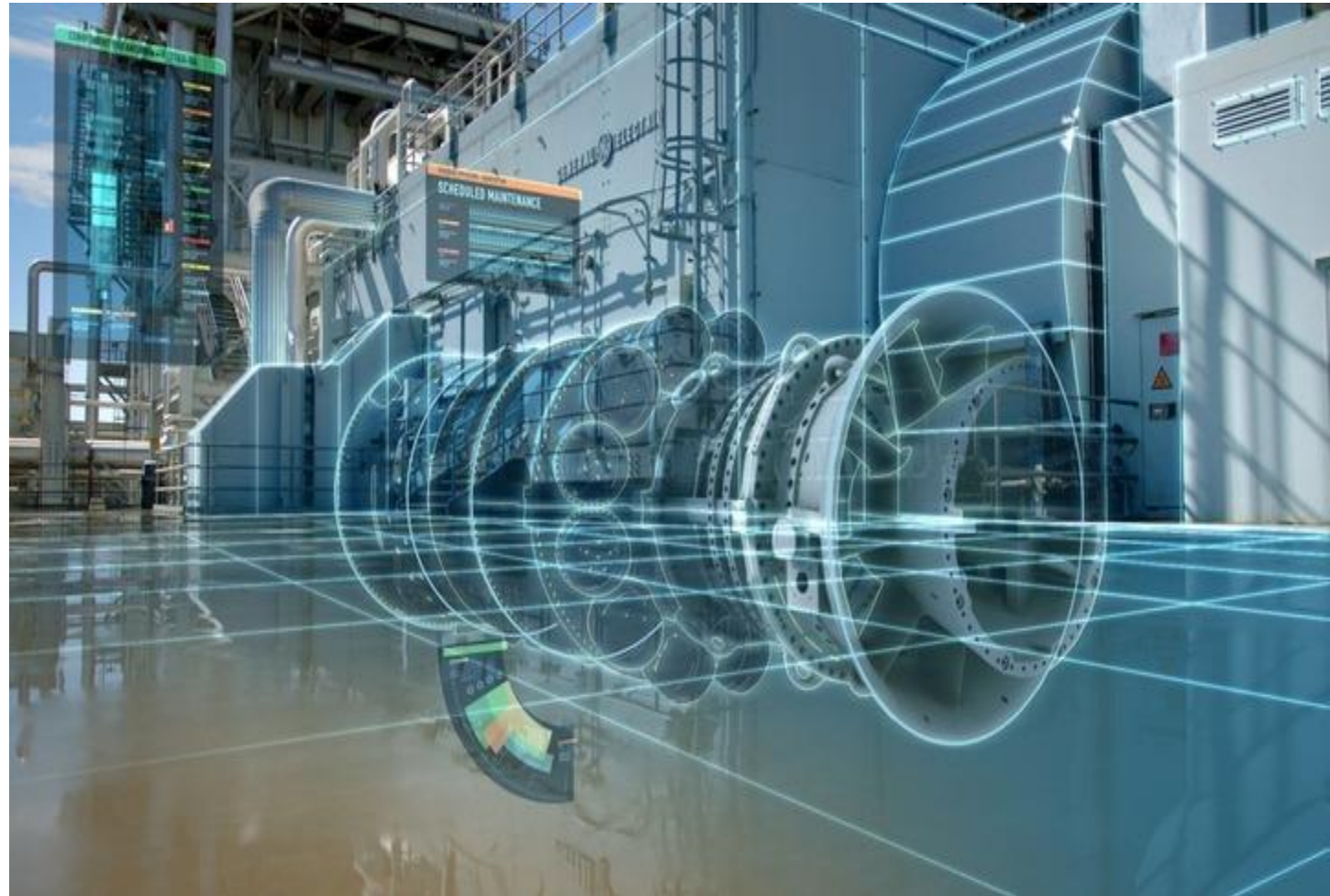
Agenda:

- Overview.
- Who can claim.
- How do you claim.



Overview:

- UK Gov incentive from 2000.
- UK Ltd Companies – all sizes.
- Advancement in Science or Technology.
- Products, processes, services.



Who can claim:

- Number of changes to the scheme.
- SME, RDEC & Merged.
- Loss making, grant funded and Uni collab can claim.



How do you claim:

- Robust technical report.
- Additional Information Form (AIF).
- Pre-notification Form.
- Financial Calculations.
- 20% now being checked by HMRC



Thank you!

Any questions?

Christopher Cunnane

Senior Business Development Manager

chris@randdspecialists.co.uk

0161 672 0776





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Q&A Panel

10 minutes



**BUSINESS
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Business Innovation Growth Fund

Funding Amount:

/ Up to **£10,000 match-funded** by the company

/ The same amount awarded is to be match-funded by the business up to the value of £10,000. Any amount surpassing the total amount of £20,000 (£10K funding + £10k match-funding) will need to be covered by the business.

Application Information:

/ The amount awarded will depend on the size and scope of the project, as well as the potential to form part of a large project in the future. The final amount awarded will be decided upon review by the Business Innovation Growth Fund Committee.

/ All projects to be delivered and completed by **31 July 2025**

/ >> [Application Form Link](#) << - Should take no longer than 1 hour

Project Scope

To be used for:

- / Consultancy (access to existing knowledge through our academics) – costed up using the standard university cost card
- / Student-led consultancy (led by students with support from academics)
- / Facility hire costs can be included if using for prototype or testing

The funding cannot be used:

- / For training for continuing professional development
- / Contract research



Eligibility Requirements



- / Must have a minimum of 5 employees
- / Has been operational for at least 2 years
- / First time working with the University of Salford
- / Be a UK-registered company
- / Has either an annual turnover not exceeding 50m euros GBP 43.7m), or an annual balance sheet total not exceeding 43m euros (GBP 37.6m), and; other SME eligibility criteria
- / Successfully pass an internal due diligence assessment



Business Innovation Services Engagement Team



Katherine Barr

Business Development Associate
k.m.barr@salford.ac.uk



Nicola Spooner

Business Development and
Marketing Manager
n.h.m.spooner@salford.ac.uk



Richard Magennis

Business Development
Manager
r.j.magennis@salford.ac.uk



Brandon Young

Business Development
Associate
b.t.young@salford.ac.uk



innovation@salford.ac.uk



Richard Magennis

Business Engagement
Manager

r.j.magennis@salford.ac.uk

/ GMCC Digital and Technology Forum –
Tues, 19 Nov - 9 -11am – New Adelphi Building
[Registration link via the GMCC website](#)



/ Salford Sustainability Showcase - Weds 4
December – 9.00am – 2.00pm – New Adelphi
Building
[Registration for Sustainability Showcase on
Eventbrite](#)



Follow us on LinkedIn for upcoming
initiatives, events and funding
opportunities

