



Innovate  
UK

## Catalogue of UK Transport Innovators seeking partners for Horizon Europe projects

Search (using 'Ctrl + F' and keywords), for organisations that have the right capabilities to join your Horizon Europe consortium.

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**3<sup>rd</sup> Edition published 7<sup>th</sup> June 2024**

**4<sup>th</sup> Edition published December 2024**

To feature in a future edition of this catalogue, email a single A4 page in portrait style to [NCP-Mobility@IUK.UKRI.Org](mailto:NCP-Mobility@IUK.UKRI.Org) and remember to include contact details so that future partners can get in touch.



Innovate  
UK

## Who your organisation is and what your capabilities are:

**Absolute Risk Technology** is a UK-based international engineering consultancy specialising in the Energy and Transport (predominantly Rail, Aviation & Marine Transport) sectors with extensive global Light Rail & Metro experience.

We provide specialist professional services and products primarily in Project Management, Systems Engineering, Systems Integration & Assurance, Testing & Commissioning.

ART also provides rail systems operations and maintenance optimisation services via our product **e-Performance Analytics Logistics (ePAL) - Cloud-based SaaS Asset Performance & Investment Decision Support System**

[www.absoluterisktec.co.uk](http://www.absoluterisktec.co.uk)

**The Global Centre of Excellence in Sustainability** specialises in consultancy, research, technology development, and sustainability initiatives.

GCS is made up of a team of experts that are well-versed in sustainability, environmental engineering, and circular economy practices.

The organisation provides a range of services, including sustainability audits, circular economy strategy development, and social value assessments.

GCS also provides services via transformational products such as our **AI-powered Sustainability Assessment, Reporting & Learning Interface (SALI)**

[www.gce-sustainability.org](http://www.gce-sustainability.org)

### **Research & Innovation Partners (UK)**

University of Surrey, University of Northampton, Aston University, Robert Gordon University, Transport for West Mids.

### **Research & Innovation Partners (Europe)**

Finland (Turku University of Applied Sciences Ltd), Estonia (Tallinn University of Technology), Estonia (Talgen Cybersecurity), Mindchip, Greece (KEMEA), Belgium (ABB), Sweden (World Maritime University), Sweden (Sihtasutus), Germany (Marsig), Ireland (Economic Development Board Association)

## What specific Topic (if any) you are interested in or what sort of Horizon Europe project are you keen to do

- mobility research and innovation
- climate science and sustainability technology solutions
- energy systems and grids
- buildings and industrial facilities in energy transition
- communities and cities
- industrial competitiveness in transport
- clean, safe and accessible transport and mobility
- smart mobility

## Contact details so people can directly email you.

[eweli@absoluterisktec.co.uk](mailto:eweli@absoluterisktec.co.uk)

[eweli@gce-sustainability.co.uk](mailto:eweli@gce-sustainability.co.uk)

[fbibi@gce-sustainability.co.uk](mailto:fbibi@gce-sustainability.co.uk)

[info@absoluterisktec.co.uk](mailto:info@absoluterisktec.co.uk)

[info@gce-sustainability.co.uk](mailto:info@gce-sustainability.co.uk)



# Across Safety Development Ltd

Experts in aviation risk, safety & regulatory affairs

[www.acrosssafety.com](http://www.acrosssafety.com)

## About Us

Across Safety Development delivers the highest quality aviation safety, risk and regulatory advice, in a straightforward and relatable way. We've worked with some of the biggest names in traditional aviation as well as a host of innovators and start-ups in the drone sector.

Our specialist team brings both depth and breadth of expertise, across all aspects of the aviation industry. From delivering blood samples to displaying light shows, powerline inspections to High Altitude Pseudo Satellite (HAPS) testing, as a business that loves to work at the cutting edge of uncrewed aviation, we've been privileged to play our part by supporting our customers achieve some ground breaking industry firsts.

## What we do

We bridge the gap between innovation and regulation, helping our clients gain regulatory approval and operate in the most safe and effective way. We do this by:

- Providing expert advice during the planning phase to make sure realistic timescales and budget are embedded into your plan
- Identifying what the technical and organisational requirements will be and how best to meet them for each use case
- Preparing mandatory documents including Operations Manuals and Conops
- Preparing safety cases based on your National Aviation Authority's preferred format
- Advising on best practice for flight operations and safety management including carriage of dangerous goods
- Providing specialist post holders and training

## Types of projects we support

All projects that include a drone operation.

## Partners we are looking for

Those in the uncrewed aviation business.

## Useful links:

Launching a drone business? 4 key questions to consider:

<https://acrosssafety.com/news/launching-a-drone-business/>

Across Safety supports 5 industry firsts: <https://acrosssafety.com/news/across-safety-development-helps-achieve-5-industry-firsts/>

What our customers say about us: <https://acrosssafety.com/testimonials/>



# Simulation Visuals & Interactive 3D

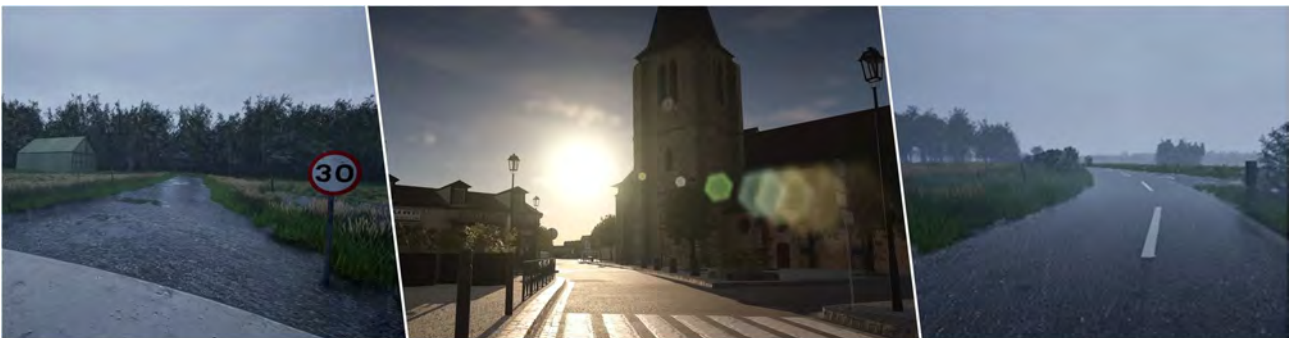


Agility3 are specialists in the development of simulation visuals and interactive 3D, developing high quality virtual environments and visualisation solutions. We use industry leading COTS technology and open standards to meet demanding client requirements and maximise reuse and maintainability. Our expertise ranges from the crafting of highly realistic 3D models and large area virtual environments to the development of complete integrated simulation visual platforms and virtual environment development tools. More information can be found on the Agility3 website: [www.agility3.co.uk](http://www.agility3.co.uk)

Since starting the company in 2012, Agility3 have developed a reputation for providing a high quality service and have built an impressive client portfolio including organisations such as NVIDIA, Horiba Mira, IPG, AVSimulation, Network Rail, Transport for London and Renault.

Located in Hertfordshire UK, Agility3 are a Micro-SME focussed on serving the needs of the global automotive sector with many years of experience supporting the development and testing of autonomous systems, perception systems, vehicle driver assist systems (ADAS) and cutting edge Connected Autonomous Mobility. With our UK-based team of dedicated software engineers and 3D artists, our capabilities include:

- **3D mapping and 3D virtual environment creation for driving simulation applications**
- **Accurate geo-specific environments or geo-typical or planned environments**
- **Creation of driving simulator logical maps including OpenDRIVE, and CarMaker or SCANeR formats**
- **3D engines including Unreal Engine, Unity and Unigine**
- **Time of day and weather effects**
- **Virtual reality and immersive experiences**
- **Procedural 3D Environment Generation**
- **Bespoke 3D visual applications and integration with existing simulators**



**Contact: David Turner – Director, Agility3 Limited**

Tel: +44(0)1438 488066 Mob: +44(0)7956 822419

Email: [david.turner@agility3.co.uk](mailto:david.turner@agility3.co.uk)

Book a chat: <https://calendly.com/david-turner-agility3>

Web: [www.agility3.co.uk](http://www.agility3.co.uk)





## Consortium partner profile: Anstee Indication Systems' Smart Bolt

### Who are we?

Anstee Indication Systems (*ais*) has patented an innovative self-checking fixing technology which detects cracks arising from fatigue and damage. Real-time crack and failure alerts provide important intelligence to guide O&M activity to where it is needed most. We design and manufacture our fixings in the UK to meet our customers' fixing specifications, including type, size and strength.

### Why is the Smart Bolt unique?

Our proven product range, including the Smart Bolt, facilitates remote structural integrity monitoring to mitigate the risk of unidentified failed fixings. This is important because even correctly torqued and tensioned bolts fail. What's more, correct bolt tensioning can be achieved on a bolt that has already failed.

All *ais* fixings are fitted with a robust internal sensor which detect damage without the need for physical inspection. An alert will occur in the event of a) sudden onset catastrophic failure and b) the development of a hairline crack undermining structural integrity.

### What are the benefits of the Smart Bolt?

By supporting remote condition monitoring and preventative/predictive maintenance, *ais*' product range is designed to:

- Increase profit by reducing excessive costs and downtime
- Increase revenue by maximising uptime
- Mitigate risk associated with physical inspections and asset damage/failure

*ais*' smart system can be factory fitted or easily retrofitted. As part of the system's installation, each bolt is given a unique identification number for ease of any future failure identification, whether that be through wired or wireless communication with OEM software integration.

### What projects are we looking for?

We are looking for any consortium opportunities where our self-checking fixings can add value. The Smart Bolt can be applied to any application/sector, including but not limited to transport, infrastructure, energy, plant and machinery, and construction.



Above: Smart Bolt

### Get in touch

[info@ansteaindicationssystem.co.uk](mailto:info@ansteaindicationssystem.co.uk)

01656 331517

[www.ansteaindicationssystem.co.uk](http://www.ansteaindicationssystem.co.uk)

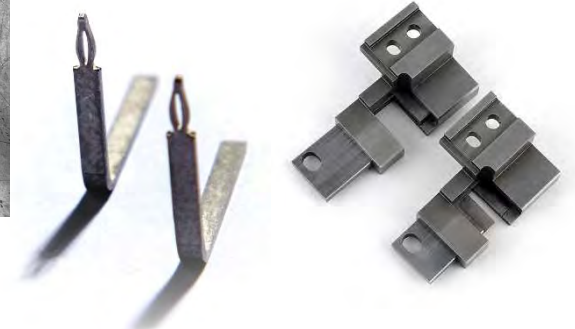
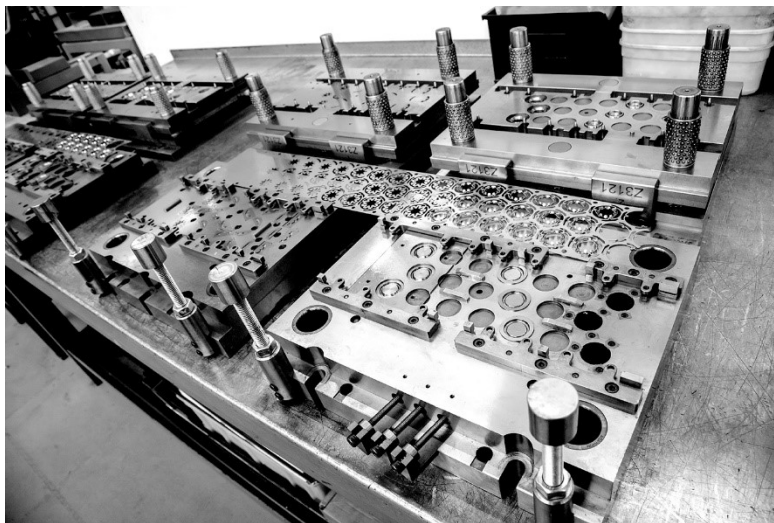
## C Brandauer & Co Ltd

Brandauer make billions of tiny, stamped components every year, the types of components that make the bigger machines work. They go into everything from the domestic kettle, the large hadron Collider, power steering control units and the next generation of EV electric machines.

We are looking to share our queens award winning capabilities in precision stamping and toolmaking with potential customers and research and development collaborators to improve and deliver low-cost, high-performance electronics applications across the globe.

Our existing stamping experience covers a wide range of electrification needs; including lamination stacks thinner than paper, solderless press fit connectors, wire bond ready power electronics lead frames and copper busbars, supplied from the UK to India, China and the USA.

**If you are keen to work with the best European toolmaker and high-speed stamping provider;** then please contact me via linked in, our website [www.brandauer.co.uk](http://www.brandauer.co.uk) or [sales@brandauer.co.uk](mailto:sales@brandauer.co.uk)



**WORLD-CLASS PRECISION ENGINEERED SOLUTIONS**



**Powertrain** – alternative cleaner more efficient fuels; Zero carbon, hydrogen, ammonia and methanol engines for road vehicles and marine vessels. State-of-the-art engine test and simulation facilities, emission control.

**Autonomous vehicles** - Today's Human Centred Design (HCD) on ergonomics, An “emotion system” to address person natural interaction and behaviours with onboard automotive technology, green driving behaviour, electronic systems, image processing, application of 5G and 6G, robotics and computer vision, Extended Reality (xR) and Immersive Technologies: AR, VR and MR, Artificial intelligence, deep learning, sensor fusion, robotic (Self-driving) cars, vehicle active safety & collision avoidance control, 3D urban multiplayer game environment in which artificial training of autonomous vehicles can be performed, anti-cyber-attack control for intelligent vehicles.



**Cycling** – immersive cycle safety training for children, health economics.

**Logistic** – air transport management, operations and supply management, sustainable port operations.

**Environment** – energy use impact on air quality, data mining on emissions, modelling on road data, emissions control for shipping.



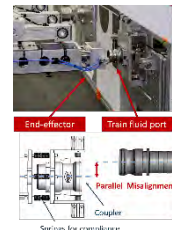
**System modelling and data** – Vehicle to Grid integration, sensors and real world driving data, battery life, dynamic similitude of solid continuum for aerospace structural testing, energy system flexibility and grid impact of transport.

**Transport law and crime** – unlawful driving behaviour, car crime.

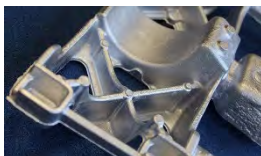
**Energy and Fuel efficiency** – aero dynamics of HGV, research work in thermal engineering ranging from studying vehicle waste heat recovery systems to heat management in automotive factories and intelligent transport data systems.

**Mobility** – disability and elderly and fitness to drive decisions, mobility aid users and public transport, mathematical modelling expertise relevant in the area of intelligent mobility for traffic network planning, control and optimisation.

**Robotics** - CyberFluids autonomous robotic system for economical fast fluid maintenance.



**Materials and Structural integrity** - Applied experimental and numerical analysis capability on materials characterise, failure characterisation, predicting fatigue failure in train rolling stick, lightweighting, developing novel high strength aluminium alloys using light metals casting and downstream processing, novel polymer processing for new composite materials, materials and structural engineering for resilience of critical transport infrastructure, application of nanophosphors materials for automotive displays.



**Electric vehicles** - developing lightweight electronic motors and powertrains, including electric motors, inverters and power electronics, design , modelling and control of electronic propulsion systems, study the dynamics and control of electric vehicles to improve their stability, handling, and safety, investigate the design, deployment, and optimization of electric vehicle charging infrastructure, consumer perceptions, preferences, and adoption barriers related to EVs, research in low carbon motorsport and on-campus built e-racing vehicles.

**Aerospace and aviation** - Research activities covering aerodynamics and aeroacoustics, flight physics and performance, helicopter rotor dynamics and structural mechanics together with Computational Fluid Dynamics and Finite Elements Analysis code development and application.

**For more information please contact:** [Hitesh.Patel@brunel.ac.uk](mailto:Hitesh.Patel@brunel.ac.uk) Senior Business Development Manager



## Cenex UK – Research and Consultancy

Cenex was established in 2005 as the UK’s first Centre of Excellence for Low Carbon and Fuel Cell technologies.

Today, Cenex focuses on low emission transport & associated energy infrastructure and operates as an **independent, not-for-profit research technology organisation** (RTO) and consultancy, specialising in project delivery, innovation support and market development.

We highly value our independence as it allows us to provide **impartial advice** and helps us build trust with our customers.

Being a not-for-profit, Cenex is not driven by doing the work which pays the most or builds our order book, but by what is right for our customers and for the industry. This is reflected in everything we do, from the work we do and the advice we give, even to the prices we charge.

Finally, as consultants our aim is to be trusted advisors with expert knowledge – the go-to source of help and support for public and private sector organisations. We want to be people you can trust to help where and when it is most needed as our customers progress along their journey to a zero-carbon future.

**Our experience and services** - Over the last decade we have collaborated in over 50 public funded low emission vehicle research, development and demonstration activities and are experienced in providing the following services to projects:

- Defining **mobility requirements and use cases**.
- **Simulating the performance** of potential mobility solution.
- Understanding the **vehicle and infrastructure requirements** of mobility solutions
- Identifying **optimal usage scenarios**.
- Managing the **study aspects** of vehicle demonstrations and **trials**.
- Studying the **human insight** aspects for customers and society.
- Understanding the **business case** for mobility solutions.
- Helping technology providers understand the potential **markets** for products.
- **Disseminating** and promoting project results.
- Developing industry **training materials** and tools to support technology adoption.
- Conduct **life cycle assessments** to model life cycle emissions and advise on the sustainable design of products and services.

Please see below the transport and energy calls we are interested to partner in:

HORIZON-CL5-2024-D6-01-06	Optimising multimodal network and traffic management, harnessing data from infrastructures, mobility of passengers and freight transport.
HORIZON-CL5-2024-D6-01-07	Scaling up logistics innovations supporting freight transport decarbonisation in an affordable way.
HORIZON-CL5-2024-D6-01-08	Improved transport infrastructure performance – Innovative digital tools and solutions to monitor and improve the management and operation of transport infrastructure.
HORIZON-CL5-2024-D6-01-09	Policies and governance shaping the future transport and mobility systems
HORIZON-CL5-2024-D3-02-05	PV-integrated electric mobility applications



Visit our Website



View our Projects & Case Studies

Contact info:  
info@cenex.co.uk

# Civikas.

## Partnerships into action.

### About us

Civikas is an urban growth consultancy.

We create strategic partnerships to win and deliver innovative projects for people and places.

We help civic leaders, businesses, and communities, translate big ideas into urban projects, products, and services, for the benefit of people and places.

### How we can help

We operate at the intersection of strategy, design, and implementation.

By working together, and asking some fundamental questions, we make change happen.

We can help you:

- ✓ Strategy to galvanise support and a commitment to action.
- ✓ Design to unlock creative and transformational thinking.
- ✓ Delivering impact that helps people and places to thrive.

### Areas of focus

- Large-scale regeneration projects.
- Innovation Districts, quarters, and corridors.
- Zero-emissions mobility.
- Regulatory Science focussed on urban challenges.
- Place-based funding and finance.

### Our clients include

- Crown Estates.
- Arup.
- AtkinsRéalis.
- Bicycle Association.
- Amion Consulting.
- Connected Places Catapult.
- South Yorkshire Mayoral Combined Authority.
- Global Institute on Innovation Districts.
- Broadoak Asset Management.
- Innovate UK.

**For further information**, or to talk through a project idea

Email: [PhilipDyer@civikas.co.uk](mailto:PhilipDyer@civikas.co.uk)

Web: [www.civikas.co.uk](http://www.civikas.co.uk)

Telephone: 00 44 07485060627

### **Clean Marine Shipping Ltd (CMS): Revolutionizing Maritime with Zero-Emission Solutions**

**The Urgency:** With the IMO's 2050 zero-emission mandate, the maritime industry needs clear, efficient solutions. CMS leads this charge, focusing on scalable, zero-emission Alkaline Fuel Cells (AFCs) and sustainable hydrogen production from biomaterials.

#### **Why Choose CMS?**

- **Innovation:** Exclusive access to leading AFC technology.
- **Leadership:** Directed by industry expert Isabela Tatu, we're pioneering sustainable maritime propulsion.
- **Collaboration:** Strong ties with academia and industry partners for comprehensive decarbonization.

#### **We're Seeking:**

- **Partnerships:** With shipping companies, shipbuilders, and bio-feed suppliers.
- **Investment:** To fund proof-of-concept projects, including eco-friendly propulsion for port and sea operations.
- **Expertise:** Engineers, software developers, and financial/legal professionals to enrich our team.

**Get Involved:** CMS is on a mission to demonstrate that maritime decarbonization is not just necessary but achievable and cost-effective. We invite you to join this journey toward cleaner oceans and a sustainable future.

**Contact Us:** To explore collaboration or investment opportunities, reach out to:

**Isabela Tatu**  
CEO & Co-Founder

**Mobile:** +44 7971 476 386  
**Email:** [info@cms-ltd.co](mailto:info@cms-ltd.co)  
**Website:** [www.cleanmarineshipping.co](http://www.cleanmarineshipping.co)

# Centre for Future Transports and Cities

## Intelligent Transportation and 5G Team

Coventry University, CV1 5FB, United Kingdom

<https://www.coventry.ac.uk/research/areas-of-research/centre-for-future-transport-and-cities/>

Meet our team

### Vehicle automation and path planning

Dr Olivier Haas, [o.haas@coventry.ac.uk](mailto:o.haas@coventry.ac.uk)

Dr Qian Lu, [q.lu@coventry.ac.uk](mailto:q.lu@coventry.ac.uk)

### Communications and networking, 5G/6G networks, future V2X systems.

Dr Faouzi Bouali [f.bouali@coventry.ac.uk](mailto:f.bouali@coventry.ac.uk)

Dr Seonki Yoo, [s.yoo@coventry.ac.uk](mailto:s.yoo@coventry.ac.uk)

### Our research direction

Automated Vehicles Control and path planning

CAV safety and security risk assessment

Remote and assisted driving

Traffic modelling, forecasting and simulation.

AI/ML for automated annotation for advanced driver assistance

Channel modelling and resource management for next-generation communications and networking

Architectural innovations (i.e., Open RAN and network slicing) for 5G/6G networks

IoT and wearables

Multi objective optimisation

### Partners we seek

Automated vehicles

OEM and their suppliers

Combustion engine manufacturers

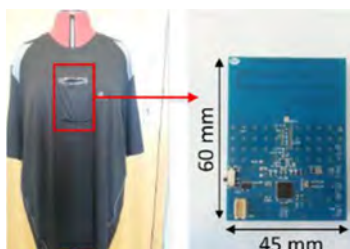
Communication service providers

6G and visible communication test bench

Trustworthy AI

Embedded and cloud computing

Software defined vehicle test bench



### Resources we can leverage



NISSAN E-NV200 Autonomous Ready EV



Access to CAV test track and corresponding digital twin



dSPACE and LabVIEW rapid prototyping hardware

360-degree immersive driving simulator

Driving simulator for remote driving evaluation

National Transport Design Center (NTDC)

National Center for Accessible Transport (NCAT)

Experimental 5G/6G testbeds

High Performance Computing



### Research Funding highlights

Vehicle software testing: **CERTUS**

Digital twin and Advanced driver assistance, **Assured CAV**

Connected vehicles and infrastructure, **UKCITE**

Radio Access Network: **BEACON-5G**

### Automotive applications delivered

IPG CarMaker Digital Twin for automated vehicle testing

Patented control methods

Evolutionary Computing and Optimisation

AI and machine learning

Communication models and network optimisation

### Key statistics from our staff

Total projects value:

EU: €47m

UK: £15m

Current PhD students: 14

Completed PhD: 35

### Our web pages

<https://pureportal.coventry.ac.uk/en/persons>

[/olivier-haas](#) [/qian-lu](#)

[/faouzi-bouali](#) [/seongki-yoo](#)

<https://control4powertrains.com/>



## CRANFIELD AEROSPACE AT A GLANCE

- CAeS is a world leader in complex aircraft modifications and new aircraft design
  - Delivered cutting-edge products for Airbus, Boeing, Rolls-Royce, Raytheon & others
  - Holds critical Design Organisation 21J (DOA), Production Organisation 21 G (POA) and Maintenance Organisation P145 (MOA) approvals
  - Track record of securing regulatory certifications from UK CAA, EASA, US FAA & others
- Three business activities
  - **Development and integration of zero emissions propulsion systems for commercial aircraft**
  - Aircraft Maintenance, Repair & Overhaul (MRO)
  - Design and manufacture of flight and motorsport simulators
- Access to unique aviation expertise, research and resources
  - CAeS is located at Cranfield Airport, a commercial and research facility
  - Cranfield University, an academic world leader in aerospace, is a shareholder

30 Years

Aviation  
Technology  
Experience

~ 80

Highly Skilled  
Employees

DOA POA  
MOA

Approved

## COLLABORATION OPPORTUNITIES

- **Our aim is to deliver the world's first passenger – Carrying Zero emissions aircraft**
  - We are looking to develop and deliver zero emissions propulsion and power to all size of aircraft
  - We understand and have the capabilities to integrate the power train technology into aircraft
  - We have developed scalable, modular powertrains for high rate manufacturing
  - We want to work with organisations interested in developing key technologies to optimise zero emissions powertrain application
  - We want to work with organisations that want to integrate zero emission technologies into their platforms



# Department for Transport

The Department for Transport (DfT) works with its agencies and partners to support the transport network. We plan and invest in transport infrastructure to keep the UK on the move. The Department's strategic aims are:

- **Growing and Levelling Up the Economy**
- **Reducing Environmental Impact**
- **Improving Transport for the User**

Science, innovation and the uptake of new technology are critical enablers to achieving these strategic aims. Sound science underpins policy and decision making; innovation creates new solutions to key challenges and technology offers opportunities to transform the transport system.

Only through a strong and thriving science ecosystem can we ensure the skills, evidence and collaborations required to underpin and inform the critical transport decisions to be made over the coming decades. Decisions from how we achieve a decarbonised transport system that is safe and resilient, how to use artificial intelligence to support better, cheaper journeys for all, through to the future-proofing of our major infrastructure projects: all require sound science and a pro-innovation approach.

The UK has a track record of defining, pursuing and achieving strategic advantage in prioritised areas of science and technology application to deliver prosperity and security for the UK and deliver benefits to global society.

To find out more about the UK Government's commitment to Science and Technology scan the below QR codes:



Science and  
Technology  
Framework



DepartmentFor  
Science  
Innovation  
and Technology



Department  
For Transport  
website



DfT Areas of  
Research Interest



Department for  
Transport and  
Connected  
Places Catapult  
Innovation  
Collaboration

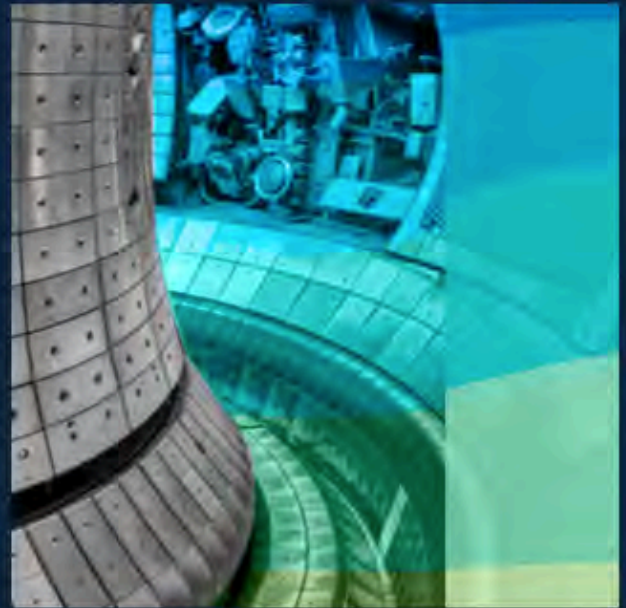


Innovate UK  
R&D Transport  
Hub

# digiLab

## The Machine Learning Partner for Industry

We help organisations across energy, engineering, and transport become AI-enabled in their digital transformation journey, by combining solution engineering, all-stages training, and the twinLab machine learning platform.



The twinLab platform contains powerful modules for end-to-end ML workflows



**Predict**

Predict unseen scenarios



**Recommend**

Optimise your sampling



**Calibrate**

Connect models and data



**Automate**

Query and understand your data

### Who we are:

- A 30+ strong team of ML Experts, Software Developers, Solution Engineers, and Support Teams
- A spinout from the University of Exeter, building on years of cutting-edge Academic research our team is experienced in working with Academics and Industry
- A commitment to helping engineering and infrastructure companies become data-driven

### What we're looking for in a partner:

- Engineers, data scientists, analysts and modellers who want to incorporate machine learning into their models
- Projects where quantifying uncertainty in models can add significant value



Contact us:  
[jo@digiLab.co.uk](mailto:jo@digiLab.co.uk)

## Who are we?

Duku is a Product Engineering & Design Consultancy established 2013 in Cheltenham, UK. We are an experienced team of Product Designers, Engineers, and Electronic Developers that specialise in innovative, accessible & sustainable EV charging solutions.

## What do we do?

We have developed a range of innovative public and domestic chargers that prioritise accessibility and convenience for both users and operators. Our products offer effortless, motorised tethered-cable chargepoints that meet EN and BSI regulations. Additionally, we are expanding our offerings to include Marine EV chargers, addressing unique challenges such as saltwater corrosion, harsh weather, and tidal changes. Our product range includes 7-22kW AC chargers with Rapid 50kW+ DC versions in development. We are committed to delivering sustainable technology through careful consideration of life cycle, design for repairability (DfR) and supply chain. We offer charging technology that is available via licensing or hardware supply, as well as R&D consultancy services to address bespoke EV infrastructure challenges, such as developing the world's first pop-up chargepoint for Urban Fox Ltd.



## Why are we different?

What sets us apart is our focus on innovation and inclusive design thinking. We hold a growing IP portfolio that is available to license to industry, as well as EN certified charger technology that prioritise accessibility, whilst also offering a premium, effortless experience unmatched by conventional options. Our automated solutions eliminate the hassle of untethered cables and the difficulties of using existing tethered chargers. We have a track record of delivering multi-million pound consortium R&D projects working with City Councils including Oxford, Plymouth and Dundee, alongside leading British Automotive OEMs, and Chargepoint Operators. We hold industry recognition winning awards from the IET and Innovate UK for our inclusive technology. Furthermore, our grant funded partnerships with the University of West England and University of Plymouth, demonstrate our commitment to academic



collaboration and cutting-edge research in our field. Funding from organisations including the UKRI, ERDF and DfT validate our work and support our vision.

## What are we looking for?

We are seeking partnerships with Academic & Research Institutions, Infrastructure Planning consultants, Automotive OEMs, Chargepoint Operators, Civil Project Planners, Marine Vessel Manufacturers, and Land Owners, who share our vision to make charging infrastructure truly accessible and sustainable. Through collaboration, partners can access our expertise in EV charging and product design to deliver groundbreaking EV infrastructure. Whether exploring new frontiers in EV infrastructure projects or seeking to understand the social benefits accessible products can bring, partnering with Duku offers access to cutting-edge technology and the opportunity to drive positive change in the Automotive and Marine industries.

Together, we can create inclusive EV charging infrastructure that meets the needs of diverse communities while delivering unparalleled user experience.



**Contact: Director: Andrew Aylesbury - [andrew@duku.co.uk](mailto:andrew@duku.co.uk)**

Duku is a trading style of Albright Product Design Ltd. Company No. 08597948  
Address: Duku, William Burford House, Lansdown Place Lane, Cheltenham, GL50 2LB, UK





**ERM is the world's largest pure play sustainability consultancy. We shape a sustainable future with the world's leading organizations.**

**8000+**  
Professionals

**40**  
Countries & territories

**Climate change consulting Leader**  
Verdantix Green  
Quadrant 2023

**150+**  
Offices

**50+**  
Years of experience

**#1**  
Sustainability service  
provider - HFS 2022

ERM's **Sustainable Energy Solutions** team (formed of acquisitions of Element Energy and E4Tech), provides **strategic consultancy** focused on the **low and zero carbon energy sector**, with **2 decades of experience**.

We provide support to consortia through key stages of **developing funding applications** as well as **Grant Agreement preparation**, and can support project implementation through our role as **Coordinator** or as **Dissemination** partner.

ERM can offer:

Extensive experience in **Horizon Europe processes** in a dedicated team supporting funded **project management** (project delivery, consortium management, reporting, funding management and compliance).



Sustainable energy **sector expertise** to support project delivery and effectively interface with beneficiaries, funding agency and external stakeholders.



ERM has initiated and/or led **27 European projects** through our **UK entity** and **10 projects** with our **French entity** across FP7, H2020 and Horizon Europe. E.g:

[H2Accelerate Trucks](#) (2022 call)

[ZEFER](#) (2017 call)

[JIVE / JIVE 2](#) (2016 / 2017 call)

[REFHYNE](#) (2017 / 2020 call)

[H2Haul](#) (2018 call)

[H2ME / H2ME 2](#) (2014 / 2015 call)

[Oyster](#) (2020 call)

[HOPE](#) (2022 call)

[PACE](#) (2015 call)

[HYPSTER](#) (2020 call)



**Andrew Flagg**  
Managing Consultant,  
Innovation & Funded Projects



[andrew.flagg@erm.com](mailto:andrew.flagg@erm.com)



+44 20 3206 5174



**Sustainability is our business**



**Flexible Power Systems (FPS)** is a Big Data, IoT, Artificial Intelligence (AI) and Machine Learning (ML) enabled technology company serving commercial fleets wishing to electrify and make CO2 savings. FPS uniquely integrates data from across the business, in real time, to provide a dynamic, unified view of fleet operations for a wide range of stakeholders. Our proprietary multi-tenant, cloud-based EV fleet and infrastructure platform has been developed with and for some of the UK's largest commercial vehicle fleets to address the complexity and risk of BEV adoption and improve the management and operation of transport infrastructure.

The FPS data integration & optimisation technology solution stack has at its core **fps Operate** - a cloud-based vehicle and charger management system that provides automated EV fleet and charger management for van, bus, truck, transport refrigeration units. It (i) integrates data from across the business to provide a unified view of fleet operations; (ii) optimises schedules to minimise costs, manage range and power constraints and avoid expensive grid upgrades; (iii) dynamically optimises charging and vehicle allocation, ensuring optimal utilisation of assets; (iv) monitors infrastructure health and schedules maintenance to improve uptime whilst providing resilience to infrastructure failures. **fps Operate** is complemented by **fps Plan**, a vehicle and energy data processing platform with algorithm based predictive planning that optimises EV capex decisions, and **fps Deploy** charging infrastructure installation plus on/ off vehicle hardware innovation services that de-risk the pre-deployment phase of the EV transition.

**Key Skills:**

<b>Cloud Software Platform Development</b>	<b>Data Analytics</b>
<b>IoT</b>	<b>Optimisation</b>
<b>AI for Optimisation &amp; Analysis</b>	<b>Power Electronic Systems Development for Vehicle Platforms and EV Chargers</b>
<b>Techno-economic and Emissions Analysis</b>	<b>EV Charge Point Design, Installation and Maintenance Services</b>

**Collaboration Opportunities:**

We would welcome conversations regarding the following upcoming calls:

- **HORIZON-CL5-2024-D6-01-06**
- **HORIZON-CL5-2024-D6-01-07**
- **HORIZON-CL5-2024-D6-01-08**

**Contact:**

Anne Gray - Corporate Development Executive

Email: [anne.gray@flexpowerltd.com](mailto:anne.gray@flexpowerltd.com) Web: [www.flexpowersystems.com](http://www.flexpowersystems.com)

# propelling advanced air mobility

# flyber

aerospace composites

Flyber Aerospace Composites is a British manufacturing hub for aerospace composites.

**Our vision** is to be the heart of composite solutions for aerospace and advance the mobility of society.

**Our mission:** propel the transition to advanced air mobility through safety, innovation and scalability in the manufacturing of composite products.



At FLYBER, we engineer bespoke solutions tailored to suit customer requirements (from sizes and aero-acoustics to aerodynamic performance, weight and stiffness) by leveraging innovative and automated manufacturing processes, ensuring unparalleled adaptability and precision while ensuring aerospace control and regulatory compliance - all at higher volumes and lower costs.

By combining our innovations in structural and aerodynamic design with our innovations in manufacturing and process flexibility, our customers get increased flights times, longer service intervals, reduced vehicle weight, improved noise profiles and a reduced environmental impact.

## Innovation and partner explorations:

- Automated manufacturing techniques and processes for manufacturing high-volume, low cost, complex composite structures for aerospace
- Digital tools and expertise (design, simulation and/or manufacturing) for optimising composite structures from design through to production
- End-users (UAM and UAV aerospace OEMs looking to partner with an innovative propeller Tier 1

Rowan Carstensen  
Co-founder  
07397127389  
rcarstensen@flyber.tech

[www.flyber.tech](http://www.flyber.tech)



Naval Architects  
Marine Engineers  
Sustainability Specialists  
since 2002

Contact us



## About Us

Established in 2002, Foreship is a renowned ship design and engineering company that operates globally with a team of over 90 skilled professionals across 8 offices. With expertise in naval architecture, marine engineering, and sustainability, Foreship offers exceptional services in concept design, consultancy, and project management.

Foreship also provides industry-leading solutions on alternative fuels, energy efficiency, and decarbonisation pathways. Foreship expanded its operations by establishing Foreship UK in Southampton in 2022. This strategic move positions the UK as a hub of excellence for maritime design and technology, further enhancing Foreship's ability to serve its clients effectively.

## The Partners We Seek

- Ship Owners
- Shipyards
- Technology Providers
- Research & Development Institutions
- Fuel & Energy Solution Providers
- Regulation and Classification Providers

## The Projects We Seek

- Maritime decarbonisation
- New technology solutions
- Novel ship design & concepts
- Feasibility studies
- Technology demonstrators
- Commercialisation opportunities

## Our Expertise

### Newbuilding



- Innovative vessel design concepts
- Energy efficiency & sustainability studies
- Project design & engineering in all disciplines

### Conversions



- Existing vessel conversion
- Retrofit solutions & life-cycle services
- Technical & project management
- Project design & engineering in all disciplines

### Sustainability



- Energy efficiency, energy storage & fuel cells analysis
- Future fuels impact assessments
- Decarbonisation planning, analysis & monitoring

### Consulting



- Passenger vessels
- Commercial marine
- Technology providers

# The Global Centre of Rail Excellence



## Overview:

- The Global Centre of Rail Excellence (GCRE) is a new, purpose-built facility being constructed in South Wales that will become Europe's leading innovation centre for rail and sustainable mobility. It will be a 'one stop shop' for world class rail and energy research, testing and showcasing of next generation rolling stock, infrastructure and cutting-edge new technologies – providing a range of services unique across the continent. GCRE will become the UK's first ever net zero in operation railway, supporting the innovations needed to decarbonise global railways and, crucially, helping lower the costs of major rail infrastructure projects across the UK, Europe and the Middle East.

## Main Features of the Global Centre of Rail Excellence:

- Operational 24 hours a day, seven days a week
- Two electrified testing loops, a 7km track for continuous rolling stock testing and another 7km track for infrastructure innovation
- Core Services: Rolling Stock Testing; Infrastructure Testing; Rail Systems Integration Testing; Product Showcasing
- A cutting-edge technology park with world class innovation space and space for permanent headquarters location
- A new £15m Centre of Excellence for Railway Testing, Validation and Customer Experience in partnership with the UK Rail Research and Innovation Network (UKRRIN) located on site
- Subject to private investment, open for commercial testing in 2027

## What GCRE unlocks:

- **Faster Innovation:** GCRE will fill a strategic gap in rail to undertake world class testing / R&D
- **Value for Money:** Through stronger integration testing, effective delivery of major projects
- **Rail R&D Global Leader:** Leadership magnet for innovation, research & standards development
- **Net Zero:** Supporting technology development for decarbonisation and modal shift

## Partnerships:

- Multiple partners have already signed up to use the GCRE facility once operational, including Hitachi Rail, Transport for Wales, Thales, Ricardo, Frauscher, Xrail

## Contacts:

GCRE Head of Innovation: [Kelvin.Davies@GCRE.Wales](mailto:Kelvin.Davies@GCRE.Wales)

Web Site : [www.gcre.wales](http://www.gcre.wales)

## HITACHI EUROPE - EUROPEAN R&D CENTRE

Hitachi is focussed on 'growth' in the Green, Digital and Connective domains with many global examples of leading technology and solutions available from Hitachi Rail, Hitachi Energy, Hitachi Digital Services, and other Hitachi Ltd companies.

Alongside these companies Hitachi has a Corporate R&D organisation, headquartered in Japan but with regional offices in America, India, Singapore, China and Europe. The main portion of the European R&D Centre is based in London with other smaller teams in Cambridge, Sophia Antipolis, Zurich, Pistoia, Munich and Copenhagen. The European R&D team has 15+ years of successful experience in multiple Horizon and national funded research consortiums and projects.

The European team has a range of capabilities available to apply to the mobility sector (and other sectors) and these may also be supplemented by the global R&D organisation. We are interested in further discussions with potential consortium parties looking to engage in Horizon Europe activities and national funding opportunities, as well as direct collaboration.

### European R&D Capabilities

Co-creation for Business Opportunities

Product and Service Design Thinking

User Experience & UI Design

Concept and Prototype Development

Proof of Value / Proof of Concept Testing

Business Canvas Analysis

Futures and Scenario Planning

Quantum Computing

CMOS Annealing

Digital Twins

Gen AI/Large Language Models

AI and Machine Learning

Data Driven Optimisation and Visualisation

Trusted Data & Cyber Security

Video Analytics & LiDAR

Localisation & Mapping

Data Fusion

Data Sharing and Data Privacy

Behavioural Science Surveys & Insights

Behavioural Change Techniques

Autonomous Control & Robotics

Battery Diagnosis

Thermal Management

Standardisation & Regulations

Find out more at:

<https://www.hitachi.eu/european-r-d-centre/>



Contact us at:

[MobilityResearch@hitachi-eu.com](mailto:MobilityResearch@hitachi-eu.com)

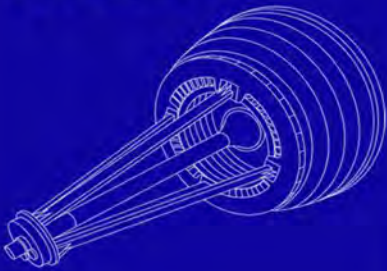


## About ITP Aero

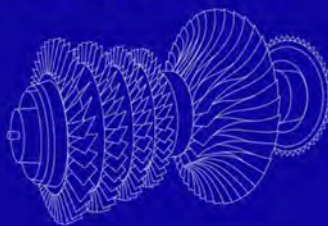
ITP Aero is at the forefront of the most revolutionary developments in air propulsion. The company's commitment to R&D has positioned it as a world leading aeronautic propulsion company and a trusted partner in the most environmentally friendly, clean and green aero engine programmes currently in service. ITP Aero is focused on its proprietary technology and industrial growth plan, expanding its facilities and global industrial footprint, both in the commercial and defence markets. ITP Aero has over 5,000 employees and facilities in Spain, the UK, Mexico, USA, Malta and India.

## Our Capabilities

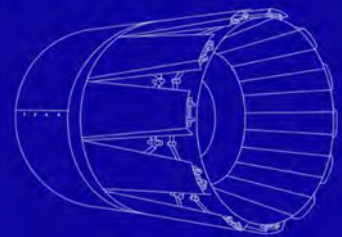
### Turbines



### Compressors



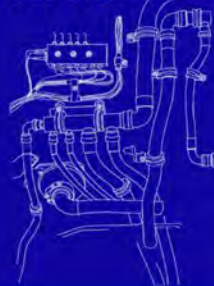
### Nozzles



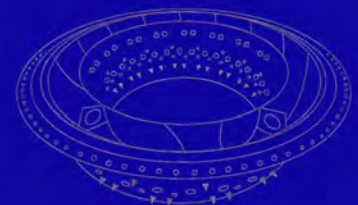
### Radial Structures



### Externals & Aerostructures



### Combustors



[ITPAeroUK@itpaero.com](mailto:ITPAeroUK@itpaero.com)



[itpaero.com](http://itpaero.com)



## InnovateUK at TRA – HE Catalog

### Organization Information

At Ladar Limited, we design, develop, and deploy laser and computer vision technological solutions for the maritime and offshore industry. With over 3 decades of experience, our team of maritime executives and technology experts has combined our expertise with a goal of maximizing efficiency, sustainability, security, and safety of commercial shipping and offshore activities using digitalization, automation solutions, and sensor system development.

### Expertise

#### Collision Avoidance and Decision Support System- Solution Provider

The Maritime industry loses millions of dollars to collisions, contact incidents, and security events every year with congestion only expected to increase and thus the number of incidents. We look to provide a cutting-edge solution, the LADAR® Sensor Suite, as a near-proximity detection technology that addresses potential loss of life at sea, navigational errors, environmental protection, ISPS/Port Security risks, and high cost of incidents. The LADAR® Sensor Suite also enables the surveillance of critical offshore energy infrastructure and the monitoring of offshore security zones.

#### SafeNav Project Consortium Member

SafeNav, a joint-funded initiative by UK Research and Innovation & the European Commission, offers a dynamic dashboard for workplace optimization and crew wellness, along with a COLREG-compliant Decision Support System. It incorporates multiple sensor fusion technologies, including the LADAR® Sensor Suite, and features an alert system for marine mammals, a Navigational Hazard Database, and a user-friendly Graphical User Interface to support semi- and/or fully autonomous vessel operations, aiming to reduce navigational accidents and enhancing safer navigation at sea.

**Project(s) we are interested in:** Maritime Security, Autonomous Shipping, Critical Infrastructure, Safety at Sea, Remote Operated Ships, Situational Awareness, and Collision Avoidance.

**Profile of partners we are looking for:** New Partners for Proposals and Projects in the maritime domain as mentioned above, and investors for the SafeNav and Ladar Technology.

**Contact Details:** [info@ladar.co.uk](mailto:info@ladar.co.uk)

<a href="http://www.ladar.co.uk">www.ladar.co.uk</a>	<a href="http://www.safenavsystem.com">www.safenavsystem.com</a>	Ladar Ltd. LinkedIn Page
		
		





[www.lr.org](http://www.lr.org)

**Lloyd's Register (LR)**, wholly owned by the Lloyd's Register Foundation (LRF), is a leading provider of classification (based on its own rules) and compliance (as a recognized organization) services to the marine and offshore industries, helping clients design, construct, operate, extend, and decommission their assets safely and in line with environmental expectations. Lloyd's Register also works closely with other regulatory bodies, either international (e.g., IMO, ISO, IACS), transnational (e.g., EU) or at national level (member states).

As a leading classification society and trusted maritime advisor, LR strives to provide 'Thought leadership' and accelerate 'Technology readiness' through collaborative research with different stakeholders including researchers, technology developers and eventual end users.

LR's research focus is mainly to support the maritime world in safe implementation of the novel, emerging and leading-edge technologies addressing the growing challenges of the energy transition meeting the Net Zero Targets operating in such a vast, complex industry undergoing accelerated digital transformation.

Some of the ongoing government funded collaborative research projects that LR currently participating in are:



**Contact Details:** **Dr D N Reddy**, BTech, MS, PhD, CEng, FRINA  
Head of Strategic Research  
Lloyd's Register EMEA (PIC: 998981176)  
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Email: [Reddy.Devalapalli@lr.org](mailto:Reddy.Devalapalli@lr.org) Telephone: +44 (0) 330 414 021

Working together for a safer world

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## London Boroughs and EU Projects – Introducing LEPT & LoTAG

The **London European Partnership for Transport (LEPT)** works with London boroughs to develop mutually beneficial links between London and the EU in the transport planning space. It is based at London Councils, the umbrella body for London local government. The **London Technical Advisor's Group Strategic Transport Forum (LoTAG STF)** is the partnership for heads of transport from across London's 33 local authorities, currently chaired by London Borough of Camden.

**LEPT and LoTAG work collectively, and in collaboration with Transport for London to support participation of London local government in EU projects, networks and initiatives.**

### Key policy areas of interest to LEPT and LoTAG

- **efficient and effective traffic & parking management** – particularly the use of digital tools and **kerbside strategies** to reduce congestion, deliver cleaner air and reduce carbon emissions
- **Increasing visibility of carbon in the system** as a key indicator for decision makers, improving use of digital tools like mobile phone network data to plan for, and monitor, transport interventions in respect to their emissions
- **encouraging increased walking and wheeling** + managing the role out of micromobility solutions to ensure greatest possible contribution to wider policy outcomes
- promoting **alternative fueled vehicles**, and delivering a just transition to electric mobility;
- **influencing travel behaviour initiatives** in schools, workplaces and amongst the general population; delivery of 'next generation' mobility credits and personalised travel planning
- developing compelling business cases for the **health benefits of transport planning**, including the wider impact of low emission zones and emissions based parking charges on air quality
- reducing road danger, and **progressing Vision Zero**; particularly exploring the use of new technology (e.g. AI powered cameras) to better predict collisions and support solutions
- **cleaner freight logistics**; including zero emission last mile solutions. Feasibility for urban drones.
- Market based solutions for increasing **private investment in sustainable transport** – local carbon offset markets, biodiversity net gain, crowdfunding and climate bonds
- **Innovation in public engagement of seldom heard groups**, citizen juries, citizen assemblies and application of new governance approaches to safeguard interest of future generations.

### LEPT & LoTAG – what we do

- Help support London boroughs to engage in EU funding opportunities
- Brings together boroughs, EU cities, agencies, NGOs, academic institutions and consultants to share best practice, identify common urban mobility challenges, and develop solutions.
- Participates, exhibits and presents at European conferences, seminars and working groups - raising profile of the London boroughs and London at EU level.

### Primary Contacts

LEPT: [andrew.luck@londoncouncils.gov.uk](mailto:andrew.luck@londoncouncils.gov.uk)

LoTAG: [Sam.margolis@camden.gov.uk](mailto:Sam.margolis@camden.gov.uk) (chair of LoTAG)

Loughborough University (LU) is one of the UK's top 10 universities with 18,000 students and 3,000 staff. Transport is a research priority area, and the University has a portfolio of current research valued more than £90 million.



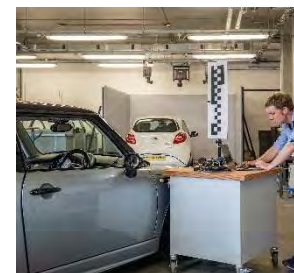
**Loughborough University**

Transport Safety  
Research Centre

The Transport Safety Research Centre (TSRC) within LU is one of the largest transport safety groups in the UK comprising 25 academic/research staff and doctoral researchers, most of whom are conducting applied research across a wide range of transport safety including, advanced vehicle and road-based safety systems, the impact of road user behaviour on safety and mobility, mobility and inclusivity issues relating to autonomous vehicles (AV) and fatigue and fitness to drive. Team members have expertise in evidence-based traffic safety policy, driver behaviour, driver fatigue, crash analysis, crash simulation, injury causation/prevention and injury biomechanics. We have experience in conducting real-world instrumented vehicle trials, naturalistic driving studies, designing virtual and physical safety test plans for AVs and simulator studies. We have a long history of multi-disciplinary international collaboration and have an extensive experience of project management and work package leadership. Our projects include:

<b>PANACEA</b> (H2020): Practical and Effective tools to monitor and Assess Commercial drivers' fitness to drive.	<b>i-DREAMS</b> (H2020): Safe tolerance zone calculation and interventions for driver-vehicle-environment interactions under challenging conditions
<b>SafetyCube</b> (H2020) (coordinator): Development of European Road Safety Decision Support System (DSS) ( <a href="https://www.roadssafety-dss.eu/#/">https://www.roadssafety-dss.eu/#/</a> )	<b>LEVITATE</b> (H2020) (coordinator): Societal Level Impacts of Connected and Automated Vehicles
<b>DaCoTa</b> (FP7) (coordinator): Development of traffic safety policy tools.	<b>ICAROS</b> (Research England I3) (coordinator): International Research Centre to study the effects of autonomous vehicles (AV) on VRUs
<b>SafetyNet</b> (FP6) (coordinator): Establishment of the European Road Safety Observatory (ERSO)	<b>SaferWheels</b> (EC study) (coordinator): Collection and analysis of data relating to crashes involving Powered Two-Wheelers and pedal cycles.
<b>UDRIVE</b> (FP7): European naturalistic driving and riding for infrastructure & vehicle safety and environment	<b>SaferAfrica</b> (H2020): Innovating dialogue and problems appraisal for a safer Africa – Europe-Africa dialog platform.

The Human Factors Research Lab (HFRL) has been built to accelerate human factors research at Loughborough, particularly in transport safety. The HFRL at Loughborough includes a driving simulator, as well as a range of equipment to monitor road user behaviour (e.g., cameras, eye tracking) and physiological measures (e.g., heart rate, EEG), which can be used both inside the lab and out in the real world. The lab also provides a highly flexible space to carry out a variety of different research studies, such as vehicle instrumentation studies, VR studies, and to build and test equipment.



If you are interested in collaborating please contact:

**Andrew Morris**, Professor of Human Factors in transport Safety.

[A.P.Morris@lboro.ac.uk](mailto:A.P.Morris@lboro.ac.uk)

**Ashleigh Filtness**, Professor of Transport Human Factors and Sleep Science. [A.J.Filtness@lboro.ac.uk](mailto:A.J.Filtness@lboro.ac.uk)

**Ruth Welsh**, Senior Lecturer in Traffic Safety.

[R.H.Welsh@lboro.ac.uk](mailto:R.H.Welsh@lboro.ac.uk)

# Sustainable aviation research at Manchester Metropolitan University



Manchester Metropolitan University is amongst the largest campus-based universities in the UK with a strong track record in high-quality and impactful research. The most recent UK Research Excellence Framework (REF) assessment ranked 90% of Manchester Met's research impact as being world-leading or internationally excellent.

Manchester Met researchers have a strong track record in aviation emissions related to climate change and air quality, and alternative fuels. This includes **emissions modelling** and **measurement**. Manchester Met researchers have participated in numerous global, EU and UK projects and are active contributors to the working groups within the International Civil Aviation Organization (ICAO), Committee on Aviation Environmental Protection (CAEP). They are currently assessing the environmental impacts of **supersonic aircraft** in **SENECA**, and **multi-fuel turbofan engines** in **HOPE** (both of which are EU-funded).

Researchers also have expertise in the environmental impacts of airports. They are currently involved in the EU-funded **TULIPS green airports project** where they are investigating GHG emissions, alternative fuels, and air quality.

We are interested in projects similar to those outlined above where we can use our expertise and experience to make a meaningful and valuable contribution to projects and contribute to a more sustainable aviation sector.

## Contact details:

Dr Ling Lim (l.lim@mmu.ac.uk)

Christopher Paling (c.paling@mmu.ac.uk)

# Maple Consulting

## Company

Maple Consulting Ltd was founded in 2015 to offer expert advice and innovative thinking in the new mobility, low carbon and environment sectors. Since its inception, it has worked on over 30 projects for UK, European and Worldwide public and private sector clients.

## Experience

Maple Consulting's director, Martin Lamb, has over 25 years of experience in the transport and environment sectors, and around 15 years of experience working in the European research, development and innovation space.

## Services

Maple Consulting offers research and consultancy services in the transport and environment sectors, with specific expertise in:

- Decarbonisation
- Recycling and the Circular Economy
- Climate Resilience
- New mobility concepts, CAVs and Connected and Autonomous Plant.

With trusted associates, Maple offers a turnkey dissemination service, including project logo and branding, website development and hosting, audience identification and digital marketing strategies, along with technical dissemination.

Maple is also a founder member of ITEN (International Transport Expert Network), an association of independent experts and SMEs, who work together to provide a greater breadth of services and delivery capacity than any one member could provide alone.

## European Work Examples

Maple Consulting has been involved in the preparation and delivery of Horizon 2020 CSA and RIA projects (and for a previous company an FP7 project). Maple has led work packages on CEDR transnational research projects on the circular economy (CERCOM), climate resilience and adaptation (ICARUS) and CAV impacts on roads (STAPLE).

Maple Consulting has been involved in the development of FERHL's (Forum of European Highway Research Laboratories) Forever Open Road and cross-modal FORx4 initiatives from the outset, was the main author of FERHL's 6<sup>th</sup> and 7<sup>th</sup> Strategic European Road Research Programme and is in the process of authoring the 8<sup>th</sup> iteration.

## Contact

Martin Lamb, [martin.lamb@maple-consulting.uk](mailto:martin.lamb@maple-consulting.uk)

T: +44 29 2167 9095 / M : +44 7518 150 421

W : [www.maple-consulting.uk](http://www.maple-consulting.uk) / [www.iten.global](http://www.iten.global)



Microchip Technology is a leading provider of smart, connected, and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs, which reduce risk while lowering total system cost and time to market. The company's solutions serve approximately 125,000 customers across the industrial, automotive, consumer, aerospace and defence, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality.

Microchip Technology Caldicot Ltd, located in Wales, UK, provides customers with a distinct competitive edge by specialising in the miniaturisation of electronic circuits. They excel in enabling wireless connectivity and customizing complex medical implant pulse generators and power modules for trends in electrification. With a proven track record of successful designs, Microchip Caldicot develops next-generation, miniaturised electronic modules.

Advanced Printed Circuit Board Assembly (PCBA)	Embedded Substrate Technology	System-in-Package (SiP) Technology	Power Module Packaging	Quantum and Photonics
<ul style="list-style-type: none"><li>• High-frequency and high-reliability assemblies</li><li>• Flip-chip, wire bond, CSP, LGA, BGA, thru-hole and 01005 SMDs'</li><li>• Substrates: HDI substrates, flex-rigid, full flex and Ceramic</li></ul>	<ul style="list-style-type: none"><li>• Advanced system integration for PCBAs and SiPs<ul style="list-style-type: none"><li>• Components embedded on inner layers of substrate</li></ul></li><li>• Multi component layer (3+) PCBA smart substrates</li></ul>	<ul style="list-style-type: none"><li>• Bare die, active and passive component integration</li><li>• Transfer moulding, dam &amp; fill, large panel moulding<ul style="list-style-type: none"><li>• Integrated conformally coated EMI shielding</li></ul></li></ul>	<ul style="list-style-type: none"><li>• High-power-density modules: Si, SiC, GaN<ul style="list-style-type: none"><li>• High-voltage Packaging <math>\geq 3.3\text{KV}</math> packaging</li></ul></li><li>• Variety of package types including double-sided cooling and embedded power</li></ul>	<ul style="list-style-type: none"><li>• Electromechanical optical assemblies</li><li>• High-accuracy VCSEL assemblies including arrays</li><li>• High-sensitivity photodetectors</li></ul>

### Experience in European Projects:

Microchip has been working in collaborative R&D projects since the early 2000s and the days of the Framework 6 programme. Since then, we have participated in more than 10 Horizon 2020 and Horizon Europe projects as partners or coordinators, and are currently participating in two Horizon Europe projects and two Horizon 2020 projects.

### Collaboration we are interested in:

Our design and manufacturing site in the UK has extensive microelectronic packaging capabilities, specialising in niche medium-volume manufacturing for medical, wireless, telecommunications and security customers.

We are interested in continuing our packaging developments in the following technology areas:

- Net-zero applications, particularly those related to wide-bandgap power modules
- RF and microwave applications ranging from X band to Ku band
- Quantum technology, including magnetometry and gyroscopes
- Advanced module packaging for heterogeneous component integration
- Factory automation and carbon reduction

### Who we are interested in partnering with:

- System integrators and end users
- Device designers/fabricators who are looking for advanced packaging solutions
- Advanced packaging materials and process specialists
- Universities and RTOs exploring new application areas

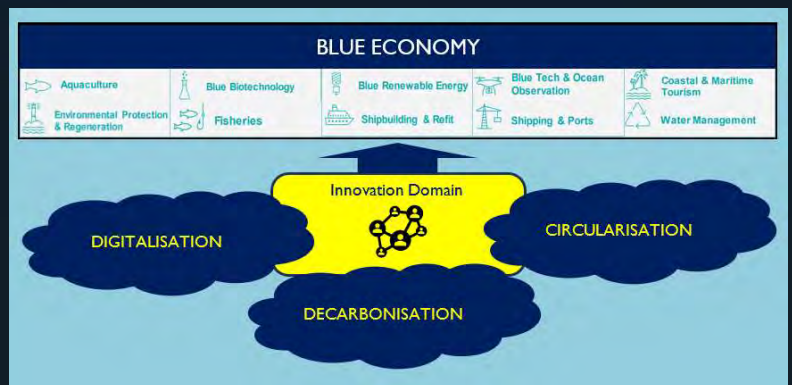
# MSE International leads Innovation for Blue Economy solutions

## OUR AREAS OF FOCUS

MSE inspires, mobilises and manages delivery of innovation projects that tackle the challenges facing the Blue Economy.

We have a unique capability to bring together multi-skilled consortia and to manage their collaboration towards successful solutions. Our extensive track-record gives us an understanding of the megatrends driving change across the sector:

- Decarbonisation
- Digitalisation & autonomy
- Circular economy



## HORIZON EUROPE POTENTIAL

Building on its portfolio of EU projects under H2020 and FP7, MSE is keen to rebuild activities under Horizon Europe.

Areas of strong interest include:

- ZEWT & other transport calls
- Marine/offshore energy
- Monitoring & surveillance
- Calls where maritime is a valuable use-case

MSE has experience in a variety of roles within previous collaborative projects, including:

- Commercialisation lead & route-to-market
- Communications lead & event management
- Coordinator or partner

Supporting these roles, MSE manages a business subscriber base of 3,200 subscribers, mainly SMEs

## CORE COMPETENCIES IN PROJECTS

### Innovative Technologies

- Vessel/port/grid energy systems
- Decision support & data analytics
- Drive trains & energy efficiency

### Value Chain Analysis

- Techno-economic analysis
- Innovation road-mapping
- Socio-economic impact assessment

### Target User Dialogue

- Finding early-adopter companies
- Exploring novel business models
- Value proposition to investors

MSE is a not-for-profit Research & Technology Organisation. Use the QR code to find out more. To discuss potential projects, contact our CEO, Jonathan Williams ([jw@mseuk.org](mailto:jw@mseuk.org), +44 23 8011 1595) or our Operations Director, Simon Powell ([sp@mseuk.org](mailto:sp@mseuk.org), +44 23 8011 1592)

MSE maintains a strategic alliance with leading blue tech analysis consultancy, NLA International.



## National Highways

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National Highways is a government company that is responsible for managing, maintaining and improving 4,500 miles of motorways and major A-roads in England. Our ambition is to make the road network safer, more dependable, durable and sustainable.

To do this, National Highways invests in research and innovation that reflects our commitment to maintaining and modernising the network for our customers and reducing our impact on the environment. Whilst there are many challenges, there are also many exciting opportunities to transform our industry. These include digitising construction, decarbonising transport and using data to provide individually tailored services to customers.

We have set out our research and innovation challenges in our Innovation and Research Strategy: <https://nationalhighways.co.uk/our-work/innovation-and-research/innovation-and-research-strategy/>

### Net zero carbon by 2050

- Direct operations to become carbon-neutral
- Future net zero maintenance and construction
- Net zero strategic road network by 2050

### Zero harm by 2040

- Reduce the number of people killed and seriously injured on our network by a fifth by 2025
- Halve the number of serious incidents for our roadworkers, including utility service strikes and incursions into roadworks, by 2025
- No human involvement in asset inspection and monitoring by 2040
- Zero harm when working or travelling on our network by 2040

### Cheaper, faster construction by 2030

- Digital design and construction by 2030
- Standardised, modular construction by default by 2030
- Automated construction by 2040
- 50% cheaper total cost per km of road construction and maintenance, 2015 – 2040

### Connected journeys by 2035

- End to end, in-journey information provided by 2025
- Connected assets, enabling smoother journeys by 2030
- A network fully capable of connecting with vehicles by 2035

We are willing to share our knowledge, data and access to our road network with creative thinkers who can help realise our ambitions.

If you have an Horizon Europe proposal that shares our ambition, please contact: [graham.seaton@nationalhighways.co.uk](mailto:graham.seaton@nationalhighways.co.uk)



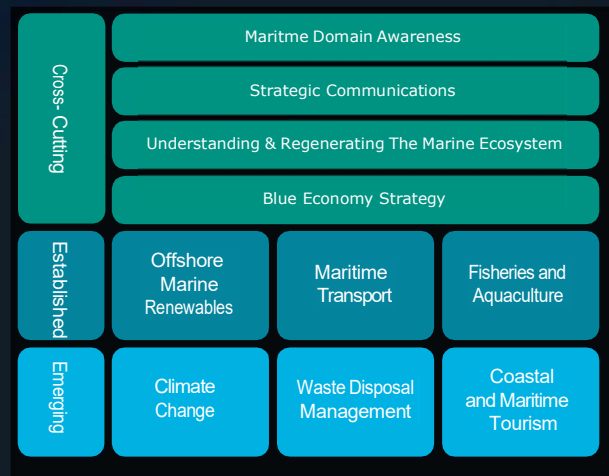
# NLA International is a **global leader** in Blue Economy solutions

## OUR AREAS OF FOCUS

We have a deep understanding of all the constituent parts of the Blue Economy, and are particularly passionate about bringing all of those aspects together within an holistic Blue Economy approach.

We are keen to work with the partners who will benefit most from the development of sustainable Blue Economies:

- National governments with unrealised Blue Economy potential
- The development banks that support them
- Pan-regional networks and strategic sectoral alliances.



## MARITIME DOMAIN AWARENESS

Understanding human activity at sea is a foundation of Blue Economy governance. NLAI's Maritime Domain Awareness solutions provide that understanding, creating maritime domain awareness that allows nations to manage their sea spaces and

coastal regions. It ensures compliance by providing actionable insights to decision makers that support sustainable economic development and regenerative use of ocean assets and the marine environment.

## HORIZON SCANNING



We use our knowledge and intelligence systems to deliver up-to-date reviews of Blue Economy and sectoral practice, and analyse key emerging innovations and socio-economic potential. This recently included conducting a review of the global smart shipping technology markets to inform the UK's Department for Transport approach to investment decisions in smart ports technology, autonomous vessels technology, on-vessel technology, and professional services.



[nlai.blue](https://nlai.blue)

We also implemented a global review of how emerging technologies (e.g., satellites, blockchain, autonomous vessels) are supporting advanced fisheries management for the Philippine Government.

NLAI maintains a strategic alliance with leading technology research organization, MSE International.

Contact: [hello@nlai.blue](mailto:hello@nlai.blue)





## 1. Organisational Profile Outline

Nottingham Trent University (NTU) is a large comprehensive university in the UK, and received prestigious Queen's Anniversary Prize for its world-class research.

The University's Advanced Design and Manufacturing Engineering Centre (ADMEC) **has gained international reputations by successfully conducting a number of collaborative projects** supported by national and international founding organisations including the European Commission (Horizon Europe REBRLION, H2020 CIRC4Life, FP7 myEcoCost, FP7 cyclLED, FP7 CBM Agitators, CIP Eco-innovation Ecolights, Asia link and Asia ICT, etc), British Academy, UK Research Councils, governmental departments, regional development agencies, industries, and other international funding organisations.

ADMEC is **capable to conduct research** in circular economy, sustainable energy, environmental and social LCA, digital passport, sustainable production and consumption, and eco-accounting, which are underpinned by Internet of things, block chain, Big data, mobile App and systems, condition monitoring, control, artificial intelligence, traceability, NFC/RFID, etc.

ADMEC has **experience of coordinating large collaborative projects** including the H2020 CIRC4Life project involving 17 international partner teams with project budget 7.3 million €, which successfully developed four circular economy business models with real industrial applications.

ADMEC has considerable **expertise in applications of research funding**, including those of recent Horizon Europe call topics in Transport Research areas, either as a coordinator or core member such as technical leader and WP/Task leader.

## 2. Partners Sought for the proposal to be submitted to HORIZON-CL5-2024-D6-01-08:

*'Improved transport infrastructure performance – Innovative digital tools and solutions to monitor and improve the management and operation of transport infrastructure.'*

We are developing a proposal for this call topic, and currently have got 4 partners from Portugal, Turkey and UK. We look for more partners, including:

- Transport infrastructure operating organisations
- Multi-modal transport providers
- Pilot demonstrators of the proposed solutions in operational environments
- Technology partners in transport means and operation.

We can contribute our following expertise to develop the proposal:

- Digital technologies, including ICT platform for data management and transmission, digital passports for transport/mobility system, mobile App, integrated information centre, traceability solutions, digital twin, condition monitoring, Internet of Things (IoT).
- Sustainability assessment of transport/mobility solutions with life cycle assessment (LCA) to reduce the transport emissions of greenhouse gases and other pollutants.
- The eco-accounting method developed in our H2020 CIRC4Life project can be used to monitor the eco-footprints of stakeholders (such as transportation companies, road users, city council, etc) resulting from mobility and transport solutions developed by this project.

3. We are also interested in **joining proposals, as either a core member or coordinator**, in the areas of People-centred & inclusive transport, Mobility of people & goods, Urban, regional & rural transport, Logistics, Efficient & resilient systems, Digitalisation and data sharing, Transport infrastructure, Public transport, Connected and automated transport, Mobility services, Road and transport networks, Electric vehicles, Air pollution control for cars, CCAM, and other related areas.

## Contact information

Professor Daizhong Su, Head of Advanced Design and Manufacturing Engineering Centre,  
Room 202, Maudslay Building, Nottingham Trent University,  
Shakespeare Street, Nottingham, NG1 4FQ, UK.

E-mail: [daizhong.su@ntu.ac.uk](mailto:daizhong.su@ntu.ac.uk) Tel. +44 115 8482306.

**School of Mechanical and Aerospace  
Engineering, Ashby Building,  
Queen's University Belfast, Belfast, BT9 5AH.  
Email Contact: [hos.mae@qub.ac.uk](mailto:hos.mae@qub.ac.uk)**

**Key words:** Sustainable Transport, Urban  
Mobility, Electric Vehicle, Hydrogen Technology,  
Sustainable Business, Battery Technology

The School of Mechanical and Aerospace Engineering at Queen's University Belfast has a long-established history in delivery of high-quality engineering education and research extending back to 1912. Our research has a strong focus on impacting communities, locally and globally, with research activity extending from basic science through proof of principle to translation to industry or wider society. Our researchers work across four key thematic areas: **Sustainable Energy Generation and Power in Transport, Engineering Design and Analysis for a Sustainable Future, and Intelligent Manufacturing and Materials for Circular Products and Health; Excellence in Engineering Education.** We have a strong track record in securing research funding through previous FP6, FP7 and Horizon 2020, with a diversity of industrial, civic and global academic partnerships to develop strong consortiums for delivery. We would be keen to seek collaborative partnerships for research development across our portfolio of research activity, but have specific interests in collaborations in the following areas relevant to our Sustainable Energy Generation and Power in Transport research activity:



**Sustainable Business Models:** Develop sustainable business models, to support the adoption of new technologies and ensure economic viability and supply chain readiness.

**Policy and Regulation:** Analyse effective policy interventions and regulatory frameworks that facilitate the transition to sustainable urban transit solutions.

**Market Dynamics and Consumer Acceptance:** Investigate the factors influencing market adoption and consumer acceptance of advanced energy storage solutions in buses.

**Environmental Sustainability:** Environmental benefits and sustainability implications, focusing on carbon footprint reduction and the challenges of large-scale technology adoption.

**Contribution to Urban Mobility:** Explore how novel energy storage technologies can improve urban bus fleet efficiency, service quality, and contribute to sustainable urban mobility.

**Scalability and Broader Impact:** Socio-economic and environmental impacts of innovative business models and technology adoption. Scalability to other regions and sectors.

**Battery Electrode Materials and High-Power Battery Technologies:** New pathways to fast battery design, characterisation and state estimation.

**Battery Cooling and Thermal Management:** New approaches to cost effective and energy efficient management of thermal management properties. Non-invasive thermal diagnosis.

**Digital Twinning Technologies for Future Urban Mobility:** Understanding opportunities and strategies for adoption of digital twinning technologies for future urban mobility planning.

**Hydrogen Economy:** Pathways for development of hydrogen economies to underpin future net zero transport solutions.

**Website:** [www.qub.ac.uk/SchoolofMechanicalandAerospaceEngineering](http://www.qub.ac.uk/SchoolofMechanicalandAerospaceEngineering)

**LinkedIn:** [qub-school-of-mechanical-and-aerospace-engineering](https://www.linkedin.com/company/qub-school-of-mechanical-and-aerospace-engineering)

## Ricardo: Creating a safe and sustainable future

Ricardo plc exists to create a safe and sustainable world, accelerating our clients' environmental and energy transitions. A global consultancy Ricardo delivers strategic, environmental and engineering solutions that are at the intersection of the transport, energy and global climate agendas.

Ricardo is uniquely positioned with more than 100 years of engineering experience in improving mobility efficiency and more than 60 years of leading-edge expertise in delivering environmental and energy solutions. Responding to complex global challenges of zero emission propulsion, energy decarbonisation and climate change, Ricardo delivers consulting services and solutions built on sustainable technological innovation.

Ricardo's innovative, sustainable solutions help solve the most complex and dynamic challenges for our clients in the key global markets of: maritime; aerospace and defence; automotive; rail and mass transit; industrial and manufacturing; energy, utilities and waste; government and public sector; financial services.



## Ricardo and innovation

Ricardo has a long and distinguished track record in delivering ground-breaking European Commission- and UK Government-funded innovation projects, including through Horizon 2020 and Horizon Europe which drive decarbonisation of hard-to-decarbonise transport sectors and advance zero emission propulsion.

Ricardo is open to leading or supporting technology innovation projects for single or multi-modal transport sectors requiring the following capabilities:

- Zero emission propulsion
- System integration
- Bringing low carbon hydrogen technology to market:
  - Hydrogen production
  - Industrialisation consultancy
  - Hydrogen fuel cell and hydrogen engine development
- For rail/mass transit: developing new generation of asset/infrastructure monitoring tools
- Sustainable transport systems



For more information: [info@ricardo.com](mailto:info@ricardo.com) | [www.ricardo.com/en](http://www.ricardo.com/en)

Safetytech Accelerator was established by Lloyd's Register in 2018 and subsequently incorporated as an autonomous business in 2021. We make the world safer, more resilient, and sustainable through the wider adoption of tech in safety-critical industries. Sectors: maritime shipping, mining, manufacturing, logistics, transports construction etc.

## Our Expertise

Our team of industry experts and technologists has a unique understanding of the safety domain and supports industry stakeholders throughout their innovation journey, including with:

- **Innovation Advisory:** We guide businesses in identifying and evaluating emerging technologies that hold promise for enhancing safety and operational efficiency.
- **Solution Scouting:** Our extensive network allows us to connect businesses with the most relevant and promising safety solutions available. We have **600+ tech companies** in our ecosystem covering key technology levers such as Data Analytics, Artificial Intelligence, Visual Analytics, Augmented and Virtual Reality, Sensors, Wearables, Drones and Robotics.
- **Tech Acceleration and Pilot Programs:** We design and facilitate pilot programs to test and validate the effectiveness of new safety technologies in real-world settings. To date, we have completed **50+ tech pilots** and feasibility studies; launched 45 innovation challenges.
- **Industry-Wide Test-bedding and Innovation Programs:** We have worked with +60 industry organisations to help them address safety challenges in open-innovation.

## Some examples of projects

- **MAMII (Methane Abatement in Maritime Innovation Initiative):** Members include over 20 leading maritime and energy companies.
- **Industrial Safetytech Regulatory Sandbox:** Facilitating breakthroughs in regulatory compliance and innovation in the construction sector.
- **CFLII (Cargo Fire and Loss Innovation Initiative):** Including leading shipping companies and maritime insurers accounting for over 50% of global container capacity.

## Why Partner with Safetytech Accelerator?

- **Unparalleled Industry Knowledge:** Our deep understanding of safety-critical industries ensures that your project remains grounded in real-world needs and challenges.
- **Extensive Network:** We leverage our network of industry leaders, technology innovators, and investors to connect you with the right partners and resources.
- **Proven Track Record:** We have a successful history of supporting safety innovation projects and bringing them to fruition.

We invite project coordinators working on relevant Horizon Europe calls to consider Safetytech Accelerator as a partner. We are confident that our expertise and tech ecosystem can make a significant contribution to your project's success.

## Join Us in Shaping the Future of Safety

### Contact:

Nadia Echchihab, Head of Innovation Programmes: [nadia.echchihab@lr.org](mailto:nadia.echchihab@lr.org)  
Milad Armin, Innovation Consultant: [milad.armin@lr.org](mailto:milad.armin@lr.org)

# SEE.SENSE®

At See.Sense, we are passionate about using technology to create safer, smarter, and more sustainable communities. By partnering with us, cities, local authorities and fleet operators gain access to actionable insights that can inform transportation planning and policy decisions, improve infrastructure and road safety, and support behaviour change for more sustainable travel.



Using the patented sensor and AI-fusion technology embedded in our bike lights and fleet trackers, we create a valuable connected sensor data source gathered from bikes and other forms of micromobility. Our insights include swerving and braking patterns, road surface conditions, popular routes, speed, dwell time, collisions, in-app cyclist surveys, and profile data. These GDPR-

compliant insights are presented through user-friendly dashboards to support data driven decision making. The use cases for our data insights are wide-ranging, and include safety analysis for Vision Zero initiatives, the design and maintenance of cycling infrastructure, behaviour change, and much more.

We are the official lighting supplier of British Cycling and Cycling Ireland, and our lights, and projects have received many accolades. These include the 2023 Prince Michael International Road Safety Award, one of the highest accolades in the field of transport safety. The award recognised See.Sense's Proof of Concept collaboration with Transport for London (TfL), in which See.Sense cycling sensor data was used to advance road safety.

See.Sense has successfully deployed smart cycling projects around the world, from Denver, USA to Melbourne, Australia, and has partnered with leading organisations including AECOM, ARUP and The Royal Society for the Prevention of Accidents (RoSPA).

We would be interested in being part of a consortium, and partnering on the following project types:

- Cycling data to support digital twin simulations
- Bike to infrastructure (supporting a green wave for cycling and micro-mobility)
- Cycling and micro-mobility data to support road safety
- Assessment of cycling infrastructure



For further information, visit our website using the QR code, or contact us at [sales@seesense.cc](mailto:sales@seesense.cc)

## About Sopra Steria

Sopra Steria, a major Tech player in Europe with 56,000 employees in nearly 30 countries, is recognised for its consulting, digital services and software development. It helps its clients drive their digital transformation and obtain tangible and sustainable benefits. The Group provides end-to-end solutions to make large companies and organisations more competitive by combining in-depth knowledge of a wide range of business sectors and innovative technologies with a fully collaborative approach. Sopra Steria places people at the heart of everything it does and is committed to putting digital to work for its clients in order to build a positive future for all. In 2023, the Group generated revenues of €5.8 billion.

### *The world is how we shape it*

## Transport Capabilities

The transport sector faces several challenges, including reducing greenhouse gas emissions, adapting to changing mobility needs, and addressing the increasing demands of e-commerce and urban logistics. In response, players in the industry must undergo significant changes, embracing environmentally friendly solutions, integrating new technologies, and enhancing customer experiences.

Sopra Steria aims to be a key partner in this transformation, focusing on four main areas: transforming the urban and multimodal experience, platforming operating systems, enhancing industrial operations, and enhancing customer experiences. Our local and operational teams of consultants, architects, programme directors, Cloud experts, Cybersecurity and Artificial Intelligence use their experience and knowledge to focus on your priorities.

In the Aerospace sector, Sopra Steria's acquisition of CIMPA, 2MoRO and Graffica enhances its capabilities in product lifecycle management, aerospace maintenance, and Air Traffic Control. The company's expertise in industrial efficiency, manufacturing, supply chain, and air traffic control positions it as a valuable partner for aerospace companies seeking to optimise processes and improve profitability.

Overall, Sopra Steria's commitment to digital transformation and its focus on key verticals such as Transport and Aerospace make it a strategic partner for companies looking to navigate the challenges and opportunities of a rapidly evolving industry.

## Experience

At Sopra Steria, we have extensive transport sector expertise. For several years, we have assisted key sector players such as easyJet, Network Rail, National Highways, TfL, SNCF, Air France, and Airbus.



## What we are looking for

Innovative organisations of any size who we can partner with to respond to calls for innovation. Organisations must have had previous experience responding to a previous call for innovation.

## Contact Information

If you would like to partner with Sopra Steria to work on EU Horizon or Innovate UK opportunities, then contact:

**Mark Oldfield**, Head of Transport

[Mark.Oldfield@soprasteria.com](mailto:Mark.Oldfield@soprasteria.com)

**Raj Sangha**, Business Development Manager

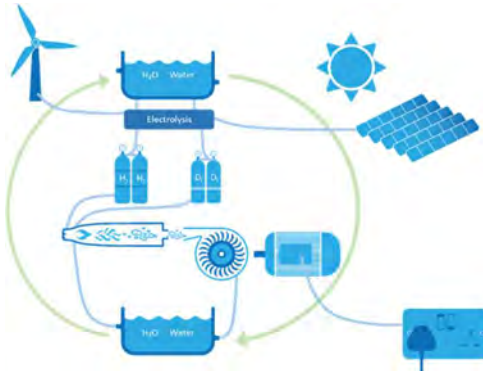
[Raj.Sangha@soprasteria.com](mailto:Raj.Sangha@soprasteria.com)



## Steamology zero emission power solutions

Steamology delivers scalable and modular solutions for industrial steam heat and power, embracing the hydrogen economy, eliminating emissions, replacing fossil fuels and fossil fuel engines.

Steamology was founded to commercially exploit the technology legacy of a successful landspeed world record attempt, to explore the potential of clean green renewable hydrogen steam.



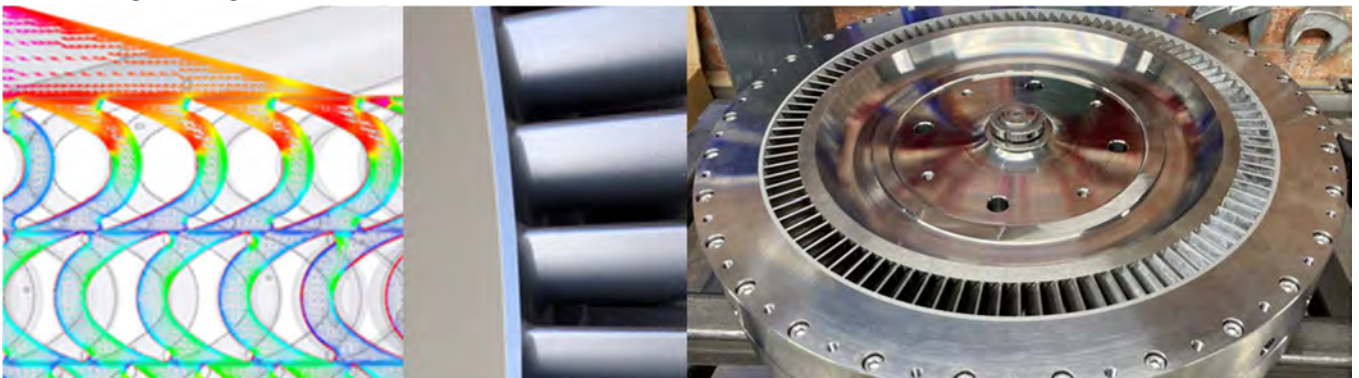
Zero Emission 'Water to Water' energy cycle, ready for heavy duty marine and rail applications

- Energy Dense
- Long Life
- Cost Effective

Steamology patent granted technology is operating at full size and full scale.

Next steps for Steamology are MW scale, Marine, Rail and Industrial heating pilot decarbonisation projects, full duty cycle, real world deployment. Currently engaged with UK Marine and Rail industry. Steamology zero-emission 'drop-in' diesel engine replacement power units are scalable and modular to MW scale.

High torque response turbines are particularly suited to Workboat, CTV, Pilot and Tugboat marine & Passenger, Freight and 'Yellow Plant' Rail, mechanical or electrical drivelines.



The Boiler House,  
Unit 19, Dean Hill Park,  
West Dean, Salisbury, SP5 1EZ, UK  
[matt.candy@steamology.co.uk](mailto:matt.candy@steamology.co.uk)  
+44 (0) 77 88 92 00 15

[www.steamology.co.uk](http://www.steamology.co.uk)





# stryker



**HORIZON-MISS-2024-CIT-01-01 Rethinking urban spaces towards climate neutrality.**

## **Administrative information**

Stryker Design Ltd

10 Hazel Rd , Oxford, OX2 9LF, UK.

David Gale

david.g@stryker-design.co.uk

+44(0) 78 60 61 26 07

<https://stryker-design.co.uk>

PIC; 884310686

## **Proposed approach and experience**

‘Cargo bike width and congestion-busting, small van capability and safety’.

‘Automotive-Lite; Inclusive minimobility – liberating the road ahead’.

We help enable, unlock and accelerate (currently declining) ZEV segment uptake by addressing, through a single vehicle platform solution, all of the known barriers and issues. We have invented hardware and software automotive suspension systems, enabling a new generation of ultra-efficient, modular, upgradable, inclusive, sustainable, circular, passenger, delivery vehicle types; half the width, quarter the mass, all the comforts of conventional vans, taxis/PHVs, plus parking/congestion-busting and affordability advantages.

Winner of Innovate UK £250k collaborative ‘Road to Zero’ collaborative feasibility study. Winner of Rushlight Powered Transport Award. Finalist Business Green Transport award versus Toyota and Volvo.

## **Organisation capabilities**

Technology developer SME owns unique, proprietary granted patents, trade secrets, deep market knowledge in nascent frugal, enclosed Narrow Leaning Vehicle and logistics sector. Adaptable, failsafe, scalable, automotive suspension tech that is high centre of gravity tolerant, vehicle power-source agnostic, therefore safe and future-proofed. Existing virtual dynamics ADAMS, CAD package, other detailed performance data-sets and market research.

Team includes; ISO9001, ISO14001, privately-owned SME providing vehicle design and development solutions for TATA, Jaguar, Land Rover, Aston Martin Lagonda, Williams Grand Prix Engineering Ltd, SAIC, Changan, Raytheon, Nissan, Cummins, Gibbs, Red Bull Formula 1, motorsports clients and Tier 1 suppliers. Chassis design competency demonstrated by a) niche-vehicle Whippet all-terrain logistics vehicle, b) Fernhay urban logistic vehicle, c) Ariel Nomad1 – all in production with first orders secured. Developed, validated front suspension for Nissan NV200 enabling front wheel drive vehicles to corner according to London taxi regulations.

## **Partners**

Seeking consortia partners in urban logistics, taxi operators, RTOs, co-ordinator, city pilots and living labs, OEMs, Tier 1s, AI, data, ADAS, MaaS, research academics, BaaS, suspension, tyre, ECU manufacturers, organisations and/or others that can contribute to the wider goal of reducing all in-use and through-life emissions, especially in urban areas.

**Teesside University** (TU) is a public university founded in 1930 as Constantine College. Currently, the university has approximately 2400 staff members and 19000 students. Its main campus is in Middlesbrough, Northeast England. The University has a long history of working with various organisations, including small businesses, multinational companies, local and national governments, NGOs and charities, based in the UK, Europe and internationally. TU has an international reputation for digital technologies, animation, and gamification and long-term strategic partnerships with global creative digital businesses such as Adobe, Apple, Industrial Light and Magic, and Creative Assembly. Funded through the European Regional Development Fund (ERDF), TU has launched the Industrial Digitalisation Technology Centre (IDTC) to support SMEs in the Tees Valley to explore the opportunities Industry 4.0 technologies bring, such as the Internet of Things (IoT), big data analytics, modelling, simulation and sensor technology - creating an essential competitive edge that generates real value for businesses. Furthermore, supporting the ongoing drive for clean energy and sustainability, our £13.1m Net Zero Industry Innovation Centre (NZIIC) is the latest development at the expanding Net-Zero Innovation Hub, spearheaded by Teesside University and based on the Tees Advanced Manufacturing Park (TeesAMP) in Middlesbrough. The Net Zero Innovation Hub brings together expert insight, resources and partnerships to grow net zero capabilities and opportunities, placing the region at the forefront of the clean energy agenda and helping to create hundreds more clean energy jobs. Growing Teesside's Hydrogen Economy and Catalysing a Just Transition to Net Zero (Research England £11m); SEMANCO: Semantic Tools for Carbon Reduction in Urban Planning (H2020 £3.8m); and TUCan Studio, an in-house digital production studio which provides employment opportunities and employability skills for students and recent graduates, by delivering XR solutions, and R&D for regional businesses. The University also leads Digital City, which offers business accelerator and scale-up programmes.

TU team has an extensive research track record in adopting cutting-edge technologies to serve the NetZero and sustainability agenda, including energy policies, data-driven digital twins, demand response optimisation, smart energies, DLT and blockchain technologies, circular construction, and social innovation. In recent years, TU has played host to major funding awards from the likes of the EU (Rodriguez and Rahimian: RECONSTRUCT: A Territorial Construction System for a Circular Low-Carbon Built Environment; Dawood and Short: The DR-BOB Demand Response Energy Management Solution); EPSRC (Dawood: Interactive training platform to precipitate construction safety, using a virtual environment modelling); Innovate UK KTP (TU and Norscot Joinery) Development of BIM-Tango Integrated Virtual Showroom System for Offsite Manufactured Construction; Innovate UK KTP (TU and Faraday Center) Development of Virtual Training Environments using Serious Games Principles and Digital Twinning for High-Risk Industry Training; Innovate UK KTP (TU and Nicander) Data Science & Digital Twins for Transport Management; EU H2021, XR4All; Innovate UK (Rahimian: Data Science & Digital Twins for Transport Management; Akinade: PROGRESS: Physical assurance fOr diGital tRadE SyStems); Yondr Data Centre (Rahimian and Dawood: Development of Integrated Platform for Facilities Management Using Blockchain and Digital Twins); and Datalab Scottish Enterprise (Pour Rahimian: Optimising Decision-Making and Analysis of the Energy Performance of Building Portfolios with Artificial Intelligence). It has also forged new collaborative partnerships with leading industrial players, including Yondr Datacentres Group, Arup, Balfour Beatty, Atkins, Constain Construction Limited, Ryder Architecture, BIM Academy, NBS, Siemens, Space Group, Causeway, Thirteen Group, Nicander and Direct Line Supplies.

### **Contact Details:**

Prof. David J. Hughes  
Associate Dean, Research & Innovation  
School of Computing, Engineering & Digital Technologies  
Email: [D.J.Hughes@tees.ac.uk](mailto:D.J.Hughes@tees.ac.uk)

Website: [School of Computing, Engineering & Digital Technologies | Teesside University](#)

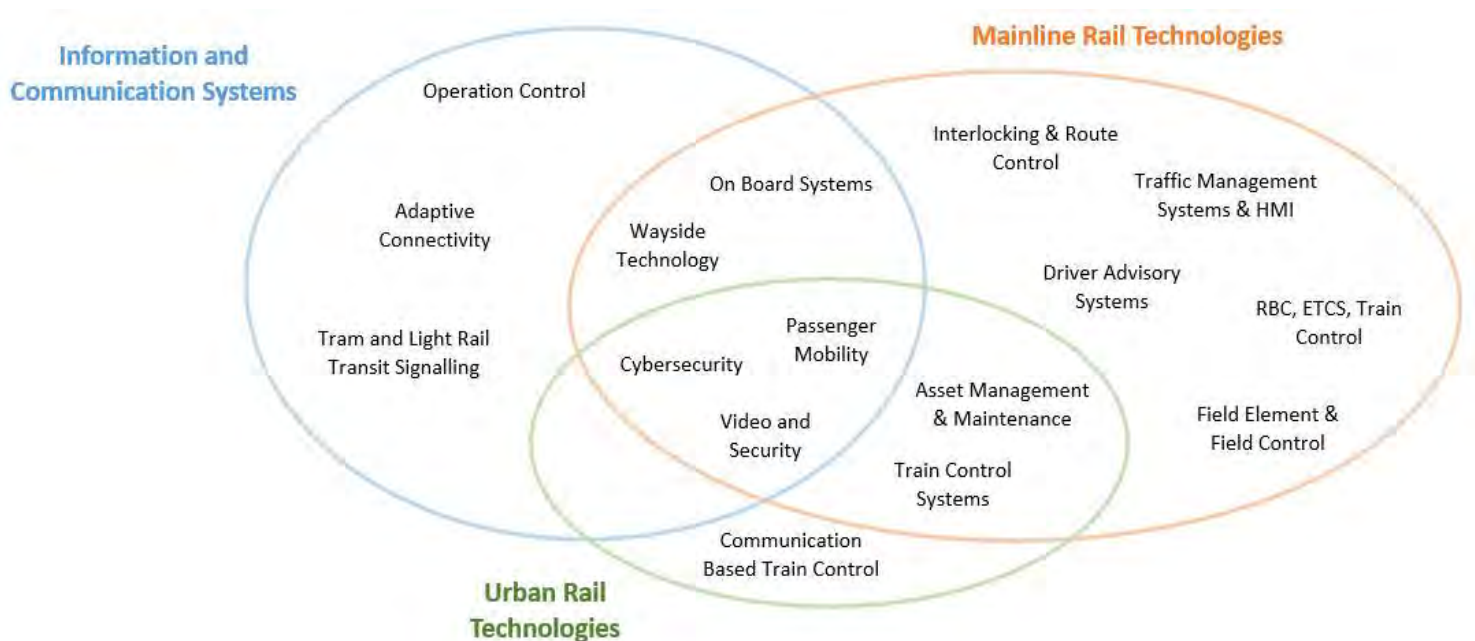
## Thales Ground Transportation Systems UK – Partnership Opportunities

### About Us

Thales GTS UK is a part of a global organisation comprising 9,000 employees across six continents. Our UK division has offices in London, Manchester and Birmingham.

Thales GTS is a partner of Europe's Rail, a Horizon Europe funded programme of Railway focused R&D. We are frequent recipients of Innovate UK funding, a partner of the UK Rail Research Innovation Network (UKRRIN), as well as organisations such as the Connected Places Catapult.

### Areas of Expertise



### Experience and Relationships

So how can Thales GTS help you? We can offer:

- Access to our technology and experts
- Project delivery support – with over 20 years' experience of EC projects
- Stakeholder Management
- Service Support
- Access to Small and Medium Sized Partner businesses

### What to know more?

Our Innovation Manager is present at the TRA.

You can contact him via email, either using the QR code below or by emailing:

[Scott.Heath@urbanandmainlines.com](mailto:Scott.Heath@urbanandmainlines.com)





# The Floop



**PIC number:** 950743270


**Contact:** Dr Sam Chapman

**Type:** Industry Partner

**Senior Vice President of Innovation | Co-Founder**

 [www.thefloow.com](http://www.thefloow.com)

@ [sam@thefloow.com](mailto:sam@thefloow.com)

 +44(0)7595821729

**UK PARTNER**



## Expertise

The Floop is an innovation leader in mobility data capture (telematics) & mobility data analysis. The Floop underpin global brand name insurers, automotives, fleet management, authorities & infrastructure bodies with technology platforms, data and solutions. We are recognised experts in:

Transport & Mobility

Big Data

Road Safety

Telematics

Road User Behaviours

Mobility

Automotive CCAM ADAS

Smart Cities

Infrastructure

I.O.T

## Experience

- High impact R&D and project delivery across the world (FP7 H2020, Horizon, National programs, Industrial Research)
- Globally unique mobility data resources supporting investigations, projects and policy (PHOEBE, SETA, UK's DfT).



## Interests

- Building new understanding of how people, places and vehicles behave using large scale data.
- Running traffic, network and mobility impact use cases with strong partner connections.
- Mobility data usage to measure, predict & plan future mobility & environments in which we live.
- Collaborative research projects (Horizon, EIT, UKRI and other national funding councils).



**Making mobility, smarter, greener, fairer and safer**



**The Floop**

Thinks Insight & Strategy is an international research consultancy. We're a team of 80 social, market, behavioural and policy researchers, specialising in innovative approaches to understanding human behaviour and attitudes. Our methodological expertise ranges from traditional qualitative and quantitative research methods to deliberative engagement (e.g. Citizens Juries) to behavioural research and interventions. We often engage specialist audiences – from highly senior stakeholders to people in vulnerable circumstances.

## Our transport portfolio

We have delivered dozens of social research projects in the transport space, working with everyone from government to transport innovators. Our research often informs innovation in (public) policy by exploring issues like:

- Public attitudes towards the decarbonisation of transport
  - Sustainable business travel and commuting behaviour
  - Impact of future transport modes on disabled travellers
  - Adoption of e-cargo bikes among businesses
  - Exploring how to design and deploy mobility as a service
  - Drivers' needs for public EV charging infrastructure
  - Co-creating sustainable future visions for connected and autonomous services using place based models of participation
- Exploring public attitudes to future flight (drones, regional air mobility, EVTOLs etc)



### Case study: The Great Self-driving Exploration, CCAV/DfT

In 2022, we ran one of the largest UK self-driving vehicle trials as part of an innovative public attitudes study. Working with Aurrigo to incorporate live trials into the research programme, we were able to understand the impact not only of information provision about CCAM, but also of first-hand, local experiences on views of if and how CCAM solutions could be deployed within local transport systems. We also teamed up with UCL's MaaS Lab for the first use of electroencephalography (EEG) headset technology on SDVs in the field, to examine the observed vs. reported emotional states of participants in SDVs.

### Case study: Move2CCAM, Horizon Europe

We are the lead social researchers in this Horizon consortium, working across 8 European nations to engage citizens and CCAM stakeholders in co-creating an integrated assessment model. We've designed and delivered surveys, workshops and innovative online communities to explore the expectations of citizens and stakeholders for how CCAM will influence everything from human health to network efficiency at a regional scale. We're working closely with the modelling team to turn the co-creation outputs into meaningful data for the transport model. Once it's up and running we'll be working to ensure it is disseminated across Europe and the CCAM ecosystem.

## What we're looking for

We're looking for opportunities to use our expertise in unearthing and making sense of citizen, business and government reactions to novel transport technologies and systems. We're keen to meet others with an interest in policy and governance of any and all future transport systems, and particularly in participatory approaches like co-creation, citizens assemblies, place based approaches and systems thinking.



Get in touch with Lucy Farrow ( [lfarrow@thinksinsight.com](mailto:lfarrow@thinksinsight.com) ) or Teresa Kuhn ( [tkuhn@thinksinsight.com](mailto:tkuhn@thinksinsight.com) ) and we look forward to meeting you at the conference!



## Transport for London

Transport for London (TfL) is the local government integrated transport body responsible for the majority of the transport network in London. Part of the Greater London Authority (GLA), TfL has TfL is responsible for operating multiple urban rail networks, including the London Underground and Docklands Light Railway, as well as London's buses, taxis, principal road routes, cycling provision, trams, and river services. TfL is also responsible for London Overground and Elizabeth line services. The underlying services are provided by a mixture of wholly owned subsidiary companies (principally London Underground), by private sector franchisees (the remaining rail services, trams and most buses) and by licensees (some buses, taxis and river services).

### TfL's vision is to be a strong green heartbeat for London.

This vision will be delivered by:

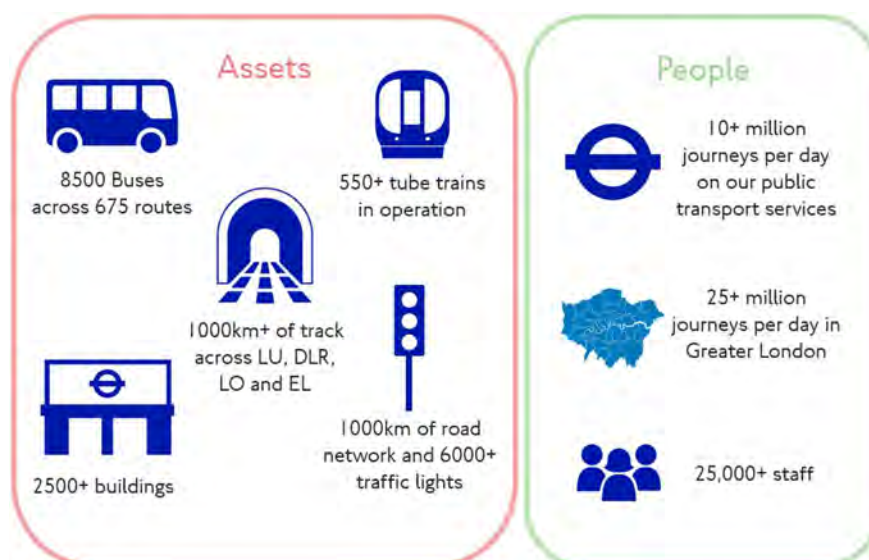
- Advancing the safety and wellbeing of colleagues and customers
- Gaining our financial footing, so we can be steady and secure
- Achieving net-zero carbon and considering the environment in everything we do
- Running efficiently and unclogging unnecessary bureaucracy and hierarchy
- Doing so in a reinvigorated TfL in which every colleague's journey matters and where everyone has the opportunity to excel.

All around us, things are changing faster than ever. Technology is evolving at breakneck speed. When and how customers use our network is shifting. The climate emergency is accelerating.

Because of everything we do – our public transport services, our roads, our walking and cycling routes, our estate and assets, and our role in regulation and enforcement – we can do more to improve people's lives and help our city navigate the future than almost any transport body in the world.

London's success depends on us continuously improving and innovating to make moving around our city more safe, inclusive and sustainable. If we don't, London and the UK move backwards.

TfL's services at a glance...



If you are interested in engaging with TfL for a Horizon Europe proposal related to operational technology for roads, please contact:

Irfan Shaffi

[irfanshaffi@tfl.gov.uk](mailto:irfanshaffi@tfl.gov.uk)

+447841727287

Intro - TravelAi is a UK born transport data and software engineering company with domain expertise in transport specific Ai, and deep understanding of smartphone operating systems. Our X-Ray software works without user input to automatically in the background identify up to 8 modes of transport; car, bus, bicycle, train, tube, tram, plane and by foot. We've also open-source privacy enhancement tools.

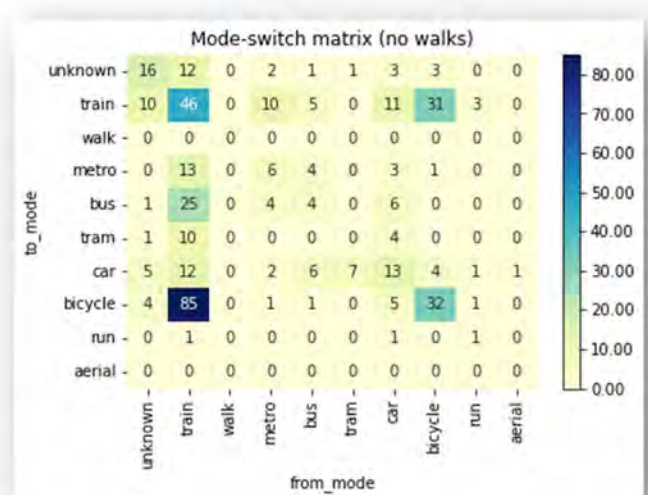
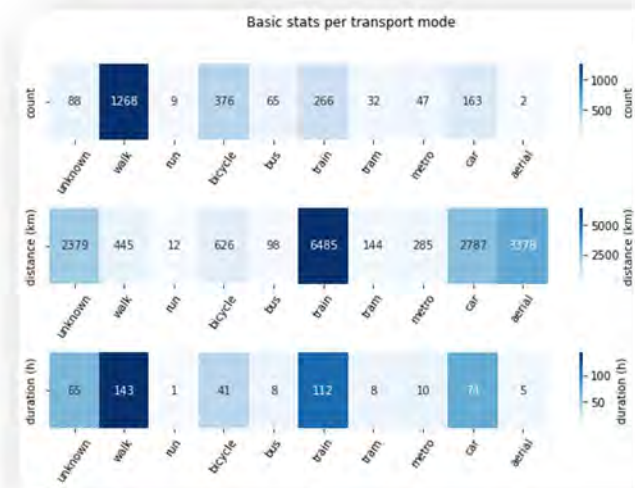
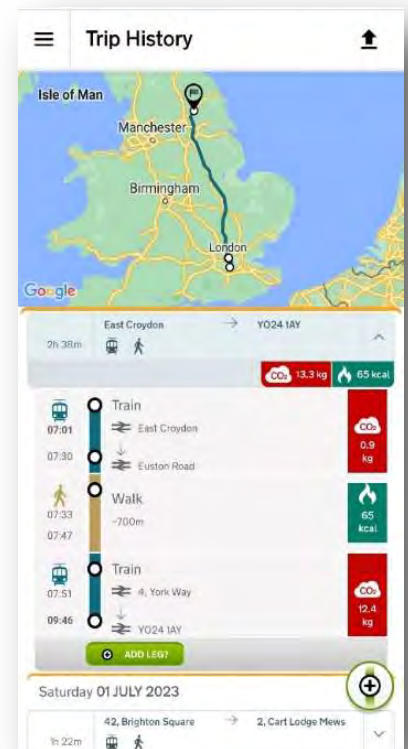
X-Ray SDK samples a smartphone sensor at calibrated intervals to capture device location (GPS) and orientation (accelerometer), with battery drain always in mind. Then Edge computing techniques trained on millions of kilometres of proprietary data assign confidence levels informed by a dozen parameters. On a typical day 500mb of data a day are processed on device and distilled to less than a 1mb of daily traffic to our server for a final round of processing before being uploaded back to the device. This IP has collected +50 patent citations including from Google, Apple, BMW, Ford, Toyota and Nokia. GoogleMap's geospatial evangelist visited TravelAi almost 18mths before "YourTimeline" was released and MIT CityLab recognised it as the first standalone multimodal auto-detection smartphone application.

**The MyWays automatic digital travel diary app**

The fully automated nature of our tech means that as long as our MyWays or a client's X-Ray powered app is installed on a participant's smartphone, rich travel behaviour data will be collected. We explicitly license our tech for use only by transport stakeholders to help understand their 'customers' and forbid data reselling or location based advertising. In the MyWays app we have multiple in-app features to engage and hold user's interest:

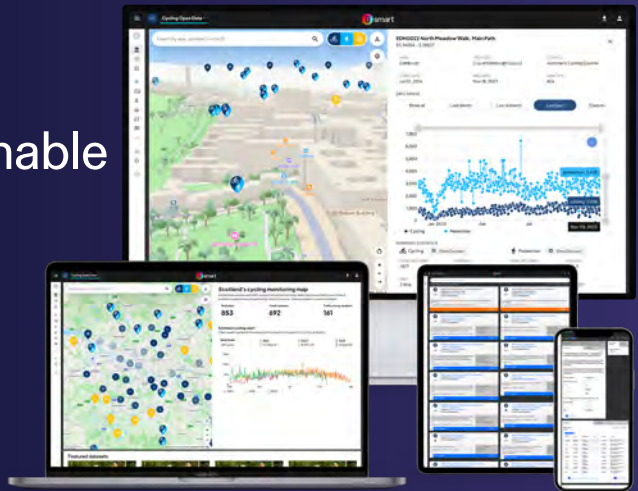
- Showing them individual leg-by-leg travel
- Options to Edit, Delete and Validate their travels in-app
- Compute and show the carbon footprint and calories for each leg
- Empower them with personalised data
- Enable them to disable the mode detection feature at will
- Can launch short multiple choice in-app qualitative surveys
- These surveys can even be personalised to reflect different mobility behaviours in end users

Below, the left graphic illustrates a more classical mode frequency count, by distance and duration of mode taken. The data can also be segmented to identify differences in weekday and weekend travels. The right graphic is a mode-combo matrix showing the modes of transport that followed one another. For instance, the blue box with the number 85 shows there were 85 instances of travel by train followed then by bicycle. This helped the transport operator identify a greater need to support train using cyclists.





# Making a sustainable world with AI



## Unlocking Sustainable Transport with uMove

An innovative new AI and transport data insights platform that **maps**, **tracks** and **predicts** travel patterns for optimised multimodal transport.

### 01. Automated data validation

uMove automatically ingests, validates, converts and standardises all travel data. Enabling organisations to baseline activity and analyse trends in transport, cycle, pedestrian and air quality data - all from multiple sources and view them all on one single-source platform.

### 02. Bespoke data reporting

Transform transport data into usable insights by generating bespoke reports. Use uMove's automated data visualisations to support funding applications, optimise sustainable transport planning and promote behavioural change.

### 03. Data sharing and collaboration.

Easily share data access between teams, businesses, stakeholders and partners for ultimate transparency and collaboration. With open APIs enabling data to be consumed internally and externally, upload any data from any source for analysis anytime, anywhere.

### 04. Continuous AI monitoring.

Apply advanced AI to transport data to predict future travel patterns to monitor environmental, health and community impact. Visualise changes as they happen and use data insights to evaluate and optimise ongoing infrastructure planning and investment.

### Our uMove customers

Using data and AI to build active, sustainable communities  
Cycling Scotland, Paths for All  
Somerset Council  
Central Bedfordshire



SCAN ME

### HORIZON-CL5-2024-D6-01:

Safe, Resilient Transport and Smart Mobility services for passengers and goods

Visit [urbantide.com](https://urbantide.com)

Email [Iona.Chandler@urbantide.com](mailto:Iona.Chandler@urbantide.com)





# Delivering manufacturing excellence

Unipart Manufacturing is at the heart of British manufacturing, bringing innovative products to production reality.

As industry transitions to net-zero, we are solving the complex manufacturing challenges of tomorrow by applying our expertise in automation, joining technology, safety critical processes, supply chain management and design-for-manufacturing to the production of **electrified powertrain components** from **battery assemblies** to **electronics systems**.

With an innovative team at the forefront of industry challenges and developments, we are experts in manufacturing excellence. With a track record in successful joint ventures, such as [Hyperbat Ltd](#) which has scaled production of high-performance battery packs in the UK, we are working with partners to support our work in doing the same for a wide range of EV propulsion systems.

## What we do

Unipart's core capabilities are built on decades of industry experience and continuous improvement. As a **Manufacturing Partner**, we help you:

- Take time, cost and emissions out of production scale-up activities
- Reinvent domestic and global supply chains
- Assemble complex components and safety-critical systems
- Deploy advanced manufacturing and digital traceability solutions for high-value production
- Industrialise new technologies, provide access to UK markets, and push the boundaries of innovation

**UNIPART**



# Moving the world towards zero emissions

Our state-of-the-art £70m research & innovation centre at the Bristol & Bath Science Park delivers a wide range of expertise to facilitate multi-disciplinary collaboration across all propulsion types and transport sectors, accelerating the pace of innovation in future mobility.

Our areas of expertise include:

- Advanced combustion, future fuels and energy conversion
- Propulsion systems efficiency and thermal management
- Fuel cells and H2 technologies
- E-machines, drives and power electronics
- Energy storages, batteries and energy management
- Integrated control, calibration and optimisation
- Digital systems, simulation and modelling
- Test systems, HiL, Pil and ViL



We are excited about talking to potential partners to understand their challenges and how we can work together to solve them.

Email [iaaps@iaaps.co.uk](mailto:iaaps@iaaps.co.uk) for more information.

Place-based transport decarbonisation in rural and peri-urban areas:

University of Hertfordshire Smart Mobility Unit Expression of interest in participating in Horizon calls on Climate and Mobility



Transport is the largest sector for emissions in the UK and in many other European countries and although there has been significant focus on ways of reducing these emissions in cities, there has been comparatively little work done on areas outside cities. The University of Hertfordshire's Smart Mobility Unit (<https://www.herts.ac.uk/study/schools-of-study/life-and-medical-sciences/business-support-and-consultancy/smart-mobility-unit>) has been developing work in this area within the UK, and with colleagues has also been looking at options for joining up spatial and transport planning. The University is aware of groups and universities interested in this area in EU countries and will be interested in making links with these so as to submit a response to various forthcoming Horizon calls on climate and mobility. The SMU can bring to any response some knowledge of the varying approaches being taken to reduce car use and emissions in rural areas.

#### The University's track record

The University of Hertfordshire's Smart Mobility Unit has grown out of a long track record of teaching and research on transport and place-making:

- Teaching on transport and planning at an undergraduate and post graduate level, including a MSc Sustainable Planning with Transport and a newer MSc Transport Planning.
- Research on improved public transport in Hertfordshire and other counties, including a UK Government Local Sustainable Transport Fund project on integrated public transport.
- A travel plan to reduce car travel by staff and students; in particular the University has established its own bus company, Uno, and a park and ride;

The SMU has conducted a series of **research projects**:

- A series of roundtables on rural transport in 2020 and 2022, which contributed to the UK Government's rural mobility policy statement the "Future of Transport: Rural Strategy." These roundtables brought together a wide range of actors and stakeholders in rural transport, and created communities of interest in these areas (<https://www.herts.ac.uk/study/schools-of-study/life-and-medical-sciences/business-support-and-consultancy/smart-mobility-unit/Roundtable-research>)
- A "Rural Transport Learning Network", set up with the sub-national transport body Transport East, which has run further roundtables in 2023 -24 . Transport East has also co-sponsored a webinar and a symposium on rural mobility which the SMU has run with the Royal Geographical Society (<https://www.transporteast.gov.uk/rural-mobility-centre-of-excellence/>)
- The SMU director chaired a call for evidence on rural transport challenges for Transport East; the resulting report and recommendations, "Rural Connections", was widely praised ([https://www.transporteast.gov.uk/wp-content/uploads/JFG6592\\_TransportEastReport\\_Summary\\_AW-WEB-2.pdf](https://www.transporteast.gov.uk/wp-content/uploads/JFG6592_TransportEastReport_Summary_AW-WEB-2.pdf))
- Reports in 2020 and 2022 for the Transport Planning Society on "The State of the Nations" in transport planning (<https://tps.org.uk/tps-policy/state-of-the-nations-update-2022> and <https://tps.org.uk/tps-policy/state-of-the-nations-2020>)

Other papers and research reports have been produced and SMU members have been active in other policy work on rural mobility and transport.

Contacts:

Dr Scott Copsey, Director, Smart Mobility Unit, University of Hertfordshire [s.l.copsey@herts.ac.uk](mailto:s.l.copsey@herts.ac.uk)

Professor Stephen Joseph, Academic Manager, SMU: [s.joseph6@herts.ac.uk](mailto:s.joseph6@herts.ac.uk)

Susan Walsh, Project Manager and Programme Director, SMU: [s.j.walsh@herts.ac.uk](mailto:s.j.walsh@herts.ac.uk)

## Kent Business School: Driving Sustainable Innovation

Kent Business School (KBS) is at the forefront of impactful research, influencing global management strategies and practices. Our commitment to sustainability and responsible leadership drives progress and creates better business worldwide. As we address pressing challenges, we invite collaboration and partnerships to shape a sustainable tomorrow. We welcome the opportunity to join your Horizon Europe project.



### Why KBS?

- 1.) **World-Leading Research:** KBS boasts an impressive track record, with 80% of our research deemed 'world leading' or 'internationally excellent'. Our academics contribute to groundbreaking projects that make a difference.  
<https://blogs.kent.ac.uk/kbs-news-events/2022/05/ref-2021-80-of-kbs-research-world-leading-or-internationally-excellent/>
- 2.) **KBS Professors are ranked in the Top 2% of Scientists in the World**  
<https://blogs.kent.ac.uk/kbs-news-events/2020/12/top2scientist/>
- 3.) **Innovative Partnerships:** We collaborate with local, national, and international businesses, as well as academic institutions and organisations like the NHS, Eurostar, Priority Freight and the Port of Dover.
- 4.) **KBS is home to the Centre for Logistics and Sustainability Analytics** – this leading research centre aims to address a wide range of transport, logistics and supply chain problems with sustainability consideration. The centre has a world-class research portfolio in management science and operational research.  
<https://research.kent.ac.uk/celsa/>

### Some examples of our impactful collaborations:

- 1.) Port of Dover: Through an Innovate UK-funded project, KBS applied its expertise to optimise one of the UK's vital freight entry points. Our traffic simulation tool led to a reduction in traffic congestion.  
<https://www.kent.ac.uk/research-innovation-services/success-stories/603/port-of-dover-id-really-encourage-any-organisation-to-reach-out-to-the-university-of-kent>
- 2.) Eurostar: Using advanced simulation modelling to reduce queuing and minimise delays and network disruption impacts <https://research.kent.ac.uk/daos/?article=20877>
- 3.) Department of Analytics, Operations and Systems recent research activities include: Core principles for integrated ecosystem management, net-zero toolkit and training for SMEs, Maritime hydrogen highway: Land, sea and port integration of a smart hydrogen highway. For more see here: <https://research.kent.ac.uk/daos/research-and-activities/>

**How Can We Collaborate?** If you represent an organisation seeking partners for Horizon Europe projects, consider KBS. We are open to collaboration and eager to contribute our expertise. Let's create impactful solutions together.

**What else does the University of Kent offer?** By partnering with us, your project also unlocks support from our experienced team of Research and Innovation Support professionals. This ranges from pre-award expertise, access to commercialisation and intellectual property specialists, to post-award professionals and project managers. This wrap-around support is key to the successful delivery of our research and innovation projects.

**Contact Us:** For enquiries or to explore collaboration opportunities, reach out to Jack Schneider, Research & Innovation Senior Business Development Officer [j.schneider-2298@kent.ac.uk](mailto:j.schneider-2298@kent.ac.uk) | [businessrelationships@kent.ac.uk](mailto:businessrelationships@kent.ac.uk)



## TRANSPORT RESEARCH AT THE UNIVERSITY OF LIVERPOOL

The University of Liverpool has been involved in transport-related research in transport geography, urban and spatial planning, maritime transport, and intelligent transport systems.

Among other transport research facilities, the University of Liverpool houses a [Data Science Lab](#) within the Department of Geography and Planning **focused on transport research via travel and commuting data**, and its own dedicated **high-performance computing and data analytic facility**. At the University of Liverpool, we have a strong focus on interdisciplinary collaboration and exchanges between different schools.

Our team of academics who work on transport-related research welcome opportunities to collaborate on their areas of specialism.

### **Dr. Alex Nurse, Senior Lecturer in Urban Planning, School of Environmental Sciences**

([A.Nurse@liverpool.ac.uk](mailto:A.Nurse@liverpool.ac.uk))

Alex's research interests lie in urban cycling (e.g. transport policy, infrastructure design, and the ways in which cyclists utilise infrastructure). He is also an expert in sub-national (i.e. city/city-regional) governance. Recent research has focused on how Covid has changed travel behaviours, and the ways in which commuter cyclists inhabit urban material infrastructure. His research has been funded by the ESRC, EPSRC and UKPRP.

#### **Horizon Europe Topics Interested:**

[HORIZON-CL5-2024-D6-01-09](#): Policies and governance shaping the future transport and mobility systems.

[HORIZON-CL5-2024-D6-01-11](#): Effects of disruptive changes in transport: towards resilient, safe and energy efficient mobility

### **Dr. Anna Charly, Lecturer in Transport, School of Engineering** ([Anna.Charly@liverpool.ac.uk](mailto:Anna.Charly@liverpool.ac.uk))

Anna's research experience lies in safe and sustainable transportation, emphasising transport emission modelling, electric vehicle feasibility studies, proactive road safety evaluation, naturalistic driving studies, intelligent transport systems and human factors. She has experience in electric vehicle studies and identifying optimal locations for charging points while considering sociodemographic factors. She has worked on projects funded by the Science Foundation Ireland and Microsoft and received research grants from the Academy of Medical Sciences, UK.

#### **Horizon Europe Topics Interested:**

[HORIZON-CL5-2024-D6-01-02](#): Scenario-based safety assurance of CCAM and related HMI in a dynamically evolving transport system.

[HORIZON-CL5-2024-D6-01-12](#): A new framework to improve traffic safety culture in the EU.

### **Dr. Chia-Lin Chen, Senior Lecturer in Urban and Regional Planning, School of Environmental Sciences** ([Chia-Lin.Chen@liverpool.ac.uk](mailto:Chia-Lin.Chen@liverpool.ac.uk))

Chia-Lin's research interests lie in exploring the relationship between transport and development on multiple spatial scales and critical issues such as sustainability, vibrancy, inclusiveness, and policy implications for planning and design. She has published widely in transport geography, with an international reputation on the topic of public transport especially rail-related intervention in the urban and regional transformation. She contributed to research commissioned by the Asian Development Bank and the International Transport Forum, OECD as well as recent projects funded by ESRC UK and NSFC China.

#### **Horizon Europe Topics Interested:**

[HORIZON-MISS-2024-CIT-01-03](#): Mobility Management Plans and Behavioural Change



**University of Nottingham**

UK | CHINA | MALAYSIA

**IAT** Institute for Aerospace Technology

The **University of Nottingham** is a sector lead in research expertise and direct business collaboration across engineering, energy, aerospace and space disciplines.

**Connect with Us:** We are looking for partners from small and medium sized companies, large companies and Universities based in European states on joint projects across our aerospace and space expertise areas, including:

- |                                     |                                 |                             |
|-------------------------------------|---------------------------------|-----------------------------|
| <b>Additive manufacturing</b>       | <b>Air traffic management</b>   | <b>Navigation</b>           |
| <b>Digital</b>                      | <b>Ground operations</b>        | <b>Composites</b>           |
| <b>Coatings</b>                     | <b>Hydrogen/SAF</b>             | <b>Hybrid/all electric</b>  |
| <b>Process control/optimisation</b> | <b>Cubesats</b>                 | <b>Materials lifecycle</b>  |
| <b>Earth Observation (EO)</b>       | <b>Flight dynamics</b>          | <b>Flight physics</b>       |
| <b>Astro-pharmacy</b>               | <b>Thermal management</b>       | <b>GNSS</b>                 |
| <b>Aircraft platforms</b>           | <b>Electrical power systems</b> | <b>Lightning protection</b> |

Connect with us - [tanja.siggs@nottingham.ac.uk](mailto:tanja.siggs@nottingham.ac.uk) or scan the QR codes.

**The Institute for Aerospace Technology (IAT)** is a major centre for aerospace and space research. We have excellent industry links and a strong track-record in securing and delivering European research and development funding, including, Horizon Europe, Clean Aviation and Marie Skłodowska-Curie Actions (MSCA) in our expertise areas above.

**OMNIFACTORY**  
MANUFACTURING REDEFINED

Omnifactory® is a demonstrator and testbed for smart manufacturing systems. We develop and test the latest digital technologies, enabling our industrial partners to transform their manufacturing practices for the future. Contact [Omnifactory@nottingham.ac.uk](mailto:Omnifactory@nottingham.ac.uk)

**The Mechanical and Aerospace Systems (MAS) Research Group** is a dynamic and interdisciplinary group that creates fundamental experiments to validate analysis methods for energy and transport systems. The team specialises in rotordynamics, thermofluids, solid mechanics, materials characterisation, vibration, control, energy storage, flight physics and more. Capabilities include a wide variety of both computational and experimental techniques. Fundamental test facilities and large-scale high speed rotative rigs which emulate components and systems give vital information and insight into modelling and design tool development. Contact MAS: [MAS@nottingham.ac.uk](mailto:MAS@nottingham.ac.uk)

**The Power Electronics and Machines Centre (PEMC) Research Group** is a global leader in transport electrification. PEMC tackles critical challenges in sustainable energy, aerospace electrification, automotive drivetrains and industrial drive systems. Our £38 million research portfolio, backed by strong industry partnerships, makes us a powerhouse for innovation in power electronics, power systems architecture and electrical machines, including control and manufacturing and testing. Contact [Hitendra.Hirani@nottingham.ac.uk](mailto:Hitendra.Hirani@nottingham.ac.uk)

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**MAS**



**PEMC**



## **Transport and Infrastructure Research Group University of Wolverhampton, United Kingdom**

**Research Team:** Professor Panagiotis Georgakis, Dr Suresh Renukappa and Professor Subashini Suresh

Since 2016 the University of Wolverhampton has managed 20 public funded projects with a total project value of £61m and a total grant value of £31m delivering across three Local Enterprise Partnership (LEP) areas. University of Wolverhampton has/is participated in multiple H2020/Horizon Europe research projects (OPTIMUM, MaaS4EU, HARMONY, FRONTIER, SOTERIA, GREEN-LOG) aiming to develop passenger and freight mobility solutions for sustainable and clean transport. Our expertise includes development of data analytics algorithms for traffic forecasting, mining of social media data to identify situations of interest on transport networks and dynamic journey planning for Mobility as a Service applications, machine learning and artificial intelligence applications in transport projects, low carbon transport strategies, and socio-technical aspect in the context of transport sector.

### **CURRENT EU RESEARCH PROJECTS**

- Cooperative and Interconnected Green delivery solutions towards an era of optimized zero emission lastmile Logistics, (GREEN-LOG) EC HORIZON EUROPE Grant Agreement No 101069892, 2023-2026 (Grant €606,750).
- Systematic and orchestrated deployment of safety solutions in complex urban environments for ageing and vulnerable societies, (SOTERIA), EC HORIZON EUROPE Grant Agreement No 101077433, 2022-2025 (Grant £365,621).
- Next generation traffic management for empowering CAVs integration, cross-stakeholders collaboration and proactive multi-modal network optimization, (FRONTIER), EC HORIZON 2020 Grant Agreement No 955317, 2021-2024, (Grant €404,250).

### **SUCCESSFULLY COMPLETED RESEARCH PROJECTS**

- Holistic Approach for Providing Spatial and Transport Planning Tools and Evidence to Metropolitan and Regional Authorities to Lead a Sustainable Transition to a New Mobility Era, EC HORIZON 2020 Grant Agreement No 815269, 2019-2022, (Grant €361,250).
- End-to-End Approach for Mobility-as-a-Service tools, business models, enabling framework and evidence for European seamless mobility, European Commission, Horizons 2020, 01/06/2017 - 30/05/2020 (Grant of €307,687).
- Multi-source Big Data Fusion Driven Proactivity for Intelligent Mobility, Principal Investigator, Scientific and Technical Manager for the project, European Commission, Horizons 2020, 01/06/2015 - 30/08/2018 (Grant of €510,375).
- A big data architecture for traffic forecasting using multi-source information, Transport Technology Research Innovation Grant (T-TRIG), Department for transport (Grant of £25,127), 01/02/2017 – 30/06/2017.
- Development of a Risk Management Software System for SMEs in the Construction Sector, Marie Curie Action, Industry and Academia Partnerships and Pathways, - EU Seventh Framework Programme FP7 Grant agreement ID: 324387. (Grant of €921317.23), 01/04/2013 – 31/03/2017

The research group would like to be involved in projects that cover the below research areas:

- Research Area 1- Future mobility; Artificial Intelligence and Machine learning.
- Research Area 2 - Smart cities; smart villages; Industry 4.0; Urban innovation, Business Model Innovation; Net Zero Carbon; sustainable value creation; Cyber-Physical infrastructure.
- Research Area 3 - Intersectionality and sustainable cities; Knowledge management; Digital-Health-Energy nexus; renewable energy.

Research areas focus on the UN Sustainable Development Goals (SDGs) include Affordable and clean energy (SDG 7); Industry, innovation and infrastructure (SDG 9); Sustainable cities and communities (SDG 11) and Gender equality (SDG 5).

Contact details: Professor Panagiotis Georgakis ([P.Georgakis@wlv.ac.uk](mailto:P.Georgakis@wlv.ac.uk)); Dr Suresh Renukappa ([Suresh.Renukappa@wlv.ac.uk](mailto:Suresh.Renukappa@wlv.ac.uk)) and Professor Subashini Suresh ([S.subashini@wlv.ac.uk](mailto:S.subashini@wlv.ac.uk)).

## The University of the West of England (UWE)

UWE is the largest provider of Higher Education in the South West of England with around 30,000 students and 2,000 staff directly involved in teaching and research. UWE has an active research community, making significant contributions to advances in industry, commerce, health, and technology, both nationally and internationally.

As well as making a major contribution to the social and economic development of Bristol and the region, the University focuses on challenge-based research that has a positive impact on solving real world challenges.

### Transport Focused Research at UWE



The Centre for Transport and Society focusses on understanding and influencing interactions between mobility, lifestyles, and society, whilst promoting inclusive and sustainable mobility strategies within national and international research: [uwe.ac.uk/research/centres-and-groups/cts](https://uwe.ac.uk/research/centres-and-groups/cts)



Within the Bristol Robotics Laboratory, the Connected Autonomous Vehicles team research and collaborates on CCAM research relating to Multi Sensor Fusion and Modelling, system safety assurance, and verification and validation: [www.bristolroboticslab.com/connected-autonomous-vehicles](http://www.bristolroboticslab.com/connected-autonomous-vehicles)



Additional UWE Research Centres can also contribute important expertise related to Transport topics including air quality and carbon management; infrastructure planning; sustainable environment design and experiences; health and wellbeing; and public and policy involvement and engagement. Further information can be found at [uwe.ac.uk/research](https://uwe.ac.uk/research)

### Relevant projects UWE can contribute to

UWE’s researchers are available to be WP leads on upcoming RIA and IA proposals within the “Safe, Resilient Transport and Smart Mobility services for passengers and goods” destination\*.

Relevant expertise to projects includes:

- Evaluating road safety cultures and impacts of new transport modes (e.g., e-scooters) and safety interventions for young people considering educational efforts and infrastructure changes
- Identifying and designing appropriate policies and governance via stakeholder engagement and co-design workshops
- Understanding residents’ tactics to overcome transport system disruptions and transforming them into long- term strategies. Conducting system simulations, service reliability analyses, travel modelling, social/equity analysis, and energy/GHG evaluations
- Employing systems thinking, foresight methods, surveys, and cluster analysis to explore public perception of and encourage sustainable shopping/delivery behaviour.
- Corroborative V&V, integrating formal verification methods with simulation testing.
- Evaluating existing street infrastructure and alternative designs using experimental approaches (e.g., XR) with different transport mode users
- Research activities related to digital platforms and shared freight-passenger transport systems
- Informing design, testing, governance, and socio-economic acceptability evaluation of transport solutions. Designing business/governance models, identifying trust factors, and defining KPIs for evaluation and monitoring.
- Studying people’s capabilities to adapt to disruptions and designing resilient, multi-modal transport systems with backup options
- Researching scenario-based hazard identification and risk analysis

We are also open to introductory discussions related to future Work Programmes, Mission Calls, and opportunities in Pillars 1 and 3.

### Contact Details for further information:

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\* Calls of interest include HORIZON-CL5-2024-D6-01-02; HORIZON-CL5-2024-D6-01-03; HORIZON-CL5-2024-D6-01-04; HORIZON-CL5-2024-D6-01-06; HORIZON-CL5-2024-D6-01-08; HORIZON-CL5-2024-D6-01-09; HORIZON-CL5-2024-D6-01-11; HORIZON-CL5-2024-D6-01-12.



<p><b>WMG Connected and Autonomous Transport Overview:</b></p> <p>WMG has been involved in transport since our inception. As well as focusing research on the required technology breakthroughs to meet changing future transportation needs.</p> <p>We are at the forefront of autonomous vehicle research and helped develop the foundational standard for the safety of self-driving vehicles.</p> <p>Our mission is to develop technologies and solutions that will enable environment-friendly, human-friendly (safe, compatible with individual and societal wellbeing), and cost-effective deployment of Connected/Cooperative Intelligent Systems that we expect to make the world a better living place for its inhabitants.</p> <p>For autonomous system to be safe they also need to be secure and this is supported by our Secure Cyber Systems Research Group (SCSRG) addressing contemporary challenges in security, privacy, trust, and resilience engineering for modern cyber systems.</p>	<p><b>Connected and Autonomous Transport:</b></p> <p>Globally renowned expertise in safety assurance of connected &amp; automated transport using our scenario-based approach.</p> <p>A leading contributor to standardisation at ISO, ASAM and SAE. Working closely with regulators and industry at the UNECE GRVA FRAV/VMAD discussions.</p> <p>Developing and expanding the ODD framework from Automotive across multiple sectors (aviation and maritime).</p> <p>Trustworthiness and assurance for AI based systems to comply with the European Union's AI act.</p> <p>Home of <b>3xD simulator</b>. Unique drive-in simulator facility: true-to-life evaluation incorporating user, system and cyber-physical. Emulation of external wireless signals such as GPS, ITS, 3G/4G and 802.11p, and complete Vehicle motion.</p> <p>Founders of PAVE UK (Partners for Automated Vehicle Education United Kingdom) to deliver public education and engagement programmes on automated vehicles.</p> <p>Influencing government policy with fact-based research.</p>
<p><b>Potential Areas to collaborate:</b></p> <p>Autonomous driving systems safety assurance and deployment.</p> <p>Simulation-based testing of CCAM systems.</p> <p>Societal awareness and education about CCAM systems (leading PAVE UK).</p> <p>Standardisation activities for CCAM systems</p> <p>Cooperative autonomy including perception, prediction, motion planning and control of connected and automated vehicles.</p> <p>Design, development and testing of novel solutions for Connected and Cooperative Autonomous Systems using the Open Innovation Vehicle Platform</p> <p>AI based systems validation and assurance.</p> <p>Cyber security of autonomous systems.</p> <p>Human factors associated with self driving systems.</p> <p>Education and training associated with self-training systems.</p>	<p><b>Sample Existing Horizon Projects – Proven Track record</b></p> <p><b>SUNRISE:</b> Creating a harmonised Safety Assurance Framework for the Connected &amp; Automated Systems. Developed a scalable ODD-Based safety framework. Scenario generation for vehicle level as well as sensor-level testing.</p> <p><b>i4Driving:</b> Creating a human-reference driver model for use as safety benchmark in safety assurance of Connected &amp; Automated Systems.</p> <p><b>EVENTS:</b> Creating scenario-based SOTIF analysis for ensuring robust sensing and evaluation in harsh environments. Leading the standardisation activities.</p> <p><b>L3Pilot:</b> Piloting Automated Driving on European Roads.</p> <p><b>Hi-Drive:</b> Widespread and continuous Operational Design Domains (ODDs) on European roads, focussing on key challenges that are hindering the progress in vehicle automation.</p> <p><b>ROADVIEW:</b> Robust Automated Driving in Extreme Weather - to develop robust and cost-efficient in-vehicle perception and decision-making systems for connected and automated vehicles with enhanced performance under harsh weather conditions and different traffic scenarios.</p>

<p><b>WMG Zero-Carbon Transport Overview:</b></p> <p>WMG has been involved in transport since our inception. As well as focusing research on the required technology breakthroughs to meet changing future transportation needs, we have developed toolsets to assess the techno-economic impact of technology, model energy usage and emissions, understand lifecycle costs, infrastructure needs and optimise control to support strategic transport decision making from component through vehicle, fleet and hub to systems of systems.</p> <p>We are the electrification lead centre for the HVMC with a proven track record in all aspects of electrification.</p> <p>We operate in road, aerospace, marine and rail and cover passenger, freight, logistics, electrification, hybridisation, autonomous vehicles, safety, human factors, connectivity, security, simulation, verification and validation, optimal control, fleets, transport hubs, systems of transport systems.</p> <p>We support key sector organisations and legislators in creating technology road maps, making sure we're up to date and informed on what tomorrow's key technologies are going to be and driving evidence based policy.</p> <p>We also cover low carbon materials and manufacturing. Full lifecycle CO<sub>2</sub>, cradle to grave.</p> <p>92% of our research is ranked as world leading or internationally excellent. Top 10 UK university, top 100 global.</p>	<p><b>Electrification:</b></p> <p>WMG is a renowned centre for all aspects of battery research and we also covers motors and power, electronics, charging systems (wired and inductive), safety , recycling, lifecycle analysis, energy management and control, development and validation.</p> <p>Home of £60 million <b>Energy Innovation Centre (EIC)</b> which is a state of the art centre for HV batteries, from raw materials to pack, full testing and characterisation of cell, module and pack (up to 1 MW), abuse and safety testing, vibration, thermal and altitude and manufacturing scale up. The only facility of it's kind with all these facilities in one location.</p> <p><b>EV Battery recycling Facility.</b> Supporting pilot scale recycling.</p> <p><b>Winding Centre of Excellence (WCE)</b> provides full suite of winding production quality equipment for electric motors.</p> <p>We cover all transport sectors such as automotive, marine, aerospace and off-highway whilst supporting full system evaluation and design.</p> <p>Our modelling and simulation capability covers detailed component modelling through to full system and system of systems. Most recently we have used our MIMO (Multi-Input Multi-Output approach) for full time-based energy modelling of the Port of Dover for ferry electrification and operating equipment.</p>
<p><b>Potential Areas to Collaborate:</b></p> <p>Battery safety including abuse, thermal management, thermal runaway, testing protocols and standards.</p> <p>Battery recycling research and methods. Advanced Battery manufacturing.</p> <p>Electric Vehicle charging methods (wired and wireless), vehicle to grid power management, fleet charging. Applications for automotive, marine and aerospace.</p> <p>Advanced Power electronics.</p> <p>Vehicle, fleet and hub energy optimisation and control. CO<sub>2</sub>, lifecycle and cost analysis to support technology choices.</p> <p>Impact analysis of future transport choices, especially relating to energy demands and CO<sub>2</sub> effects. What-if analysis and counterfactual studies.</p>	<p><b>Sample Existing Horizon Projects – Proven Track record</b></p> <p><b>STREAMS:</b> Sustainable Technologies for Reducing Europe's bAttery raw MaterialS dependence</p> <p><b>SIMBA:</b> Sodium-Ion and sodium Metal Batteries for efficient and sustainable next-generation energy storage</p> <p><b>ECO2LIB:</b> ECOlogically and ECONomically viable Production and Recycling of Lithium-Ion Batteries</p> <p>Technology Of Silicon Graphene Li-ion Batteries for Large Scale Production</p> <p><b>EMB3Rs:</b> User-driven Energy-Matching &amp; Business prospection tool for industrial Excess heat/cold Reduction, Recovery and Redistribution</p> <p><b>SINTBAT:</b> Silicon based materials and new processing technologies for improved lithium-ion batteries</p> <p><b>Arrowhead:</b> Production and Energy System Automation Intelligent-Built environment and urban infrastructure for sustainable and friendly cities</p>