

Exhibitor Pitches

www.ktn-uk.org



Jonathan Smith

Jonathan.Smith@STFC.ac.uk

Science and Technology Facilities Council

– World class experimental facilities

STFC looks after the national synchrotron, neutron spallation source, central laser facility, space lab & UK's involvement in CERN, SKA. Big Computers. Unique validation potential.

What we do (Hartree Centre)

- **Collaborative R&D Projects**
Challenge led applied computational R&D
- **Platform as a Service**
Pay-as-you-go access to our compute power
- **Develop Digital Assets**
- **Training and Skills**
- **Funding/programmes**

Potential Projects / Examples

Deep Decarbonisation

Our team have worked with materials manufacturers to explore the data their machines are collecting enabling them to find optimal operating conditions/ reduce waste.

Data fusion at scale

Our national data-centric computing assets, can ingest and transform large and high volume data for real-time insight.

Visual inspection with ML

We are experienced with developing automated visual inspection to detect anomalies in plant and materials.

Multiphysics / Multiscale HPC Modelling

We develop and exploit software to understand processes on the macro-scale mesoscale and atomistic scale. We integrate them with the latest AI techniques, and make them accessible.

Upskill your organisation

Need access to funded data/digital training or a work direct with specialists in AI and data science, data engineering, supercomputing and quantum computing through HNCDI.



Tun Abdul Razak Research Centre (TARRC)/Rubber Consultants (RC)

Anna Kepas-Suwara

aksuwara@tarrc.co.uk

What we do:

We offer world class **analytical and physical testing of rubber** and other elastomeric materials and products as well as **R&D services** to the rubber industry. We also offer extensive **rubber compounding and processing** capabilities.

Where you sit in the supply chain?

We provide **independent testing & consulting services** on elastomeric materials and rubber products to companies around the world. We can also carry out **Contract Research projects** financed from private or public funds.

What is our project idea or innovation challenge:

We can assist with all aspects of the **development, validation and realisation of your product**, including **process and method development**.

We can also offer a vacant laboratory/workshop at our premises for a start-up company.

Partner(s) required? (Y/N): Y

If yes what type?:

We invite anyone who would like to talk about challenges in their projects and how we can help and bring them to the implementation stage.



Industrial Biotechnology Innovation Centre (IBioIC)

Kim Cameron

kim.cameron@ibioic.com

What we do:

We connect people and resources to support innovation across the bioeconomy.

IBioIC provides technical expertise, networking opportunities, funding, scale up facilities and skills development.

Where you sit in the supply chain?

We are a networking and support organisation for companies seeking to innovate using biotechnology.

What is our project idea or innovation challenge:

N/A

Partner(s) required? (Y/N):N

If yes what type?: N/A



CPI

Your Name: Dr Sohail Hajatdoost

Email Address: sohail.hajatdoost@uk-cpi.com

What we do:

CPI is a leading technology innovation centre; a member of the High Value Manufacturing Catapult. Our National Formulation Centre and Industrial Biotechnology Centre cover a wide range of capabilities such as the development of innovative formulation technologies and formulated products and enabling biotechnology innovation by supporting the design, development, optimisation and demonstration of bespoke manufacturing processes. CPI has a long track record of collaborative projects.

Where you sit in the supply chain?

CPI is a provider of facilities and expertise to help companies to de-risk their process scale-up or development of sustainable materials.

What is our project idea or innovation challenge:

- Developing sustainable materials and formulated products.
- Utilise industrial biotech to produce sustainable chemicals – seeking to replace petrochemical products.
- CPI has the unique capability to use C1 gas feedstocks within gas fermentation.

Challenge

- Improve efficiency and economic viability in order to be competitive against fossil fuel chemicals.
- Bridge the gap between feedstock providers and industrial end users

Partner(s) required? (Y/N): Yes

If yes what type?

CPI is seeking to work with:

- Supply chain partners for alternative sustainable materials.
- Technology providers for new products or processes.
- End users- who can provide product specifications and testing



Advanced Forming Research Centre (AFRC)

Jun Liu

j.liu@strath.ac.uk

What we do:

Developing forging and forming technologies to improve the cost effectiveness of industries supply chains and the inherent capability of their products.

Where you sit in the supply chain?

A specialist centre within the National Manufacturing Institute Scotland (NMIS), we're also part of the HVM Catapult to **take low maturity technology developed within a research environment and deploy it in a manufacturing facility.**

What is our project idea or innovation challenge:

Advanced metal forming technologies, including superplastic forming, stamping, hydro-forming, spinning, etc. to bring a step-change in the productivity, sustainability, cost benefits, and energy consumption for the aerospace and automotive industries.

Partner(s) required?: Y

If yes what type?:

Industrial partners (Material suppliers, Manufacturers, end users, etc.)



The University of Sheffield Advanced Manufacturing Research Centre (AMRC)

Anthony Stevenson

a.stevenson@amrc.co.uk

The University of Sheffield Advanced Manufacturing Research Centre (AMRC) is a world-class centre for research into advanced manufacturing technologies used in the aerospace, automotive, medical and other high-value manufacturing sectors.

The AMRC is uniquely positioned to develop and support supply chain resilience, with expertise and research themes in relevant technologies. We can help our partners to strengthen their supply chains and maintain continuity amongst new demand patterns, supply constraints and logistical challenges.

Innovation challenge

To de-risk and lead on future challenges in advanced manufacturing across all AMRC capabilities.

Keywords: design for sustainability, light-weighting, digital, future propulsion, supply chain resilience.

Partner(s) required?

- ✓ SMEs
- ✓ Large industrial companies
 - ❖ Catapult centres
 - ❖ Universities
 - ❖ Research & Technology organisations
 - ❖ *If funding limit on university/RTO involvement is not breached*



Nuclear Advanced Manufacturing Research Centre

David Anson

david.anson@namrc.co.uk

What we do:

Advanced manufacturing
research

Where you sit in the supply chain?
High Value Manufacturing
Catapult Centre

What is our project idea or innovation challenge:

Use of supercritical carbon dioxide as a coolant in place of oil emulsion in large scale machining is:

- 2.4 x faster
- uses only 17% of the energy
- Produces higher integrity surface

Partner(s) required? (Y/N): Y

If yes what type?: Large scale machining operator



Compound Semiconductor Applications Catapult

Paul Jarvie – South West and Wales DER-IC Lead

paul.jarvie@csa.catapult.org.uk

What we do:

CSA Catapult was set up in 2018 as a research and technology organisation (RTO). Funded by Innovate UK, we help to grow the UK economy for industries using compound semiconductors. We are the Driving the Electric Revolution Centre for the South West and Wales. With a team of technical experts and state-of-the-art equipment, we work to accelerate the adoption of compound semiconductor technologies in applications for Power Electronics, Advanced Packaging, Radio Frequency, Microwave and Photonics.

Where do you sit in the Supply Chain?

As a neutral supply chain convenor, we bridge the gap between academia and industry. We introduce potential project partners, from universities, SMEs, through to large companies to collaborate on technical projects.

We want to talk to you about:

- Net Zero enabling technologies (Power Electronics, Machines and Drives), advanced packaging and next generation communications and sensing
- Your material science expertise in applications for chip manufacturing and advanced packaging for semiconductors
- Our state-of-the-art 3D, multi-material, combination printing equipment
- Potential project collaborations to develop next-generation technology for industry

Partners required? Y/N

Yes:

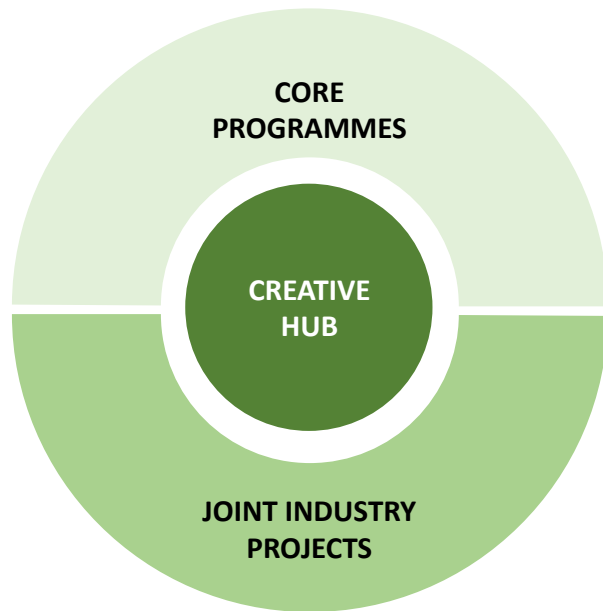
- Innovative SMEs
- Larger TRL 1 companies/OEMs
- End users
- Companies looking to embrace and develop disruptive technologies



A new approach to accelerating sustainable technology translation



Innovation Centre for Applied Sustainable Technologies



Joint Industry Projects (JIPs)

Industry-led proof of principle or feasibility studies.

- Delivered by technology translators funded through the RE grant
- 3-12 months, rapid start up



Dr Zakir Hossain
zh603@bath.ac.uk

Let us introduce ourselves



Grant Funding for Innovation
Alan Kennedy
Innvotek

10+
years in operation

300+
years experience

1500+
ideas supported
£100m+
funding for clients



Agritech
Robotics/AI
Blockchain &
Digital Supply
Chains



Wind Power
Composites
NDT
Predictive
Maintenance

500+
Partners in our
Network

€100 million
+
**Funding for
clients**



Digital Medicine
AI Image Analysis
Diagnostics
Decision Support



Marine
Robotics & AI
NDT
Predictive
Maintenance



**Materials
Processing
Institute**

**Excellence in Materials
and Process Innovation**

**Engaging in collaborative
research & development
(CR&D)**

**Delivering high quality
research projects**

**Leading or partnering on
multiple UKRI funded
projects**



ADVANCED MATERIALS

Research in advanced materials to understand how they can be used more efficiently and effectively and develop new and innovative materials.



INDUSTRIAL DECARBONISATION

Working to reduce carbon emissions through enhanced use of energy to develop a low-carbon future globally.



DIGITAL TECHNOLOGIES

Utilising digital technologies to optimise industrial processes and develop advanced materials.



THE CIRCULAR ECONOMY

Research to minimise resource usage, waste, emissions and energy leakage through improved design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling.

The Northern Ireland Advanced **Composites** and Engineering Centre is the regional **Centre of Excellence** for innovative composites **manufacturing R&T**



E: info@niace.org

T: +44 2896 213 725

Supporting industry and SMEs by advancing and de-risking composite technologies

Research partner to industry in Collaborative R&D programmes



Bio-Composites Focus

- Supporting the development of a natural fibre supply chain capable of supplying into the composites Sector
- Focus on performance characterisation and end use adoption of bio-composites
- Prototyping and demonstrator proof of concept development

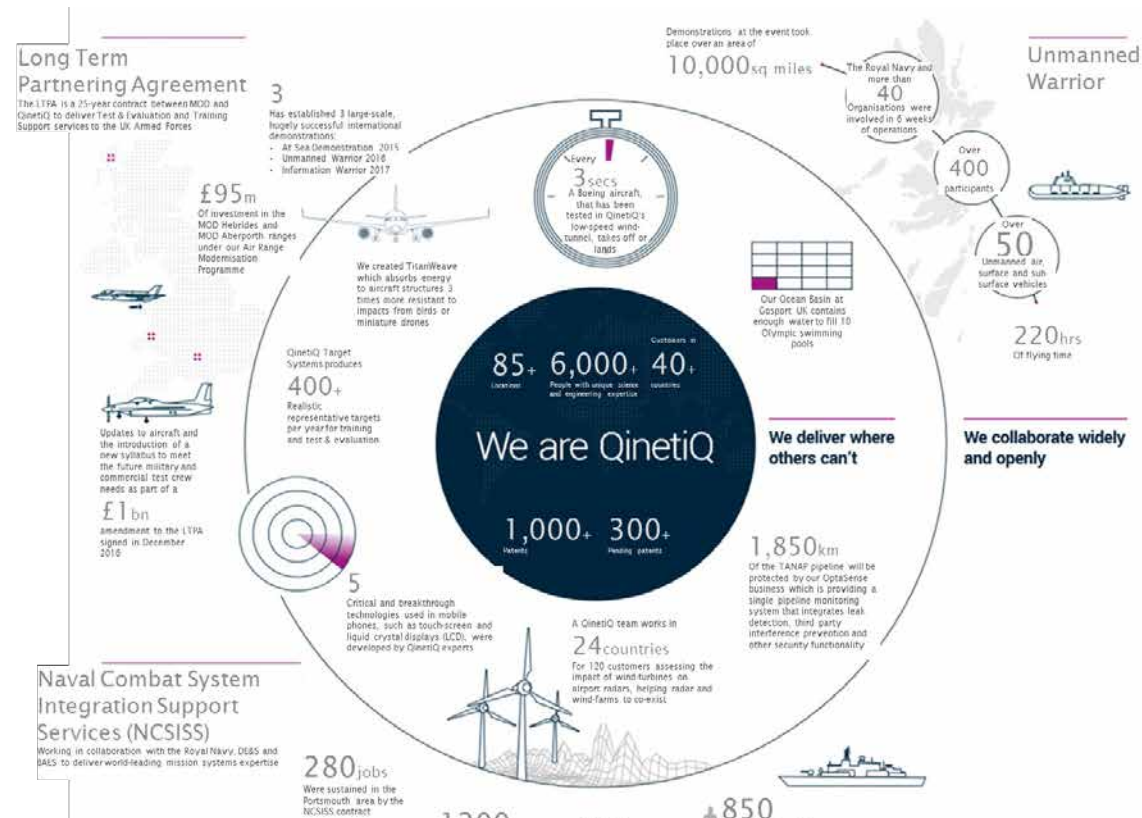
Circular Economy Focus

- Recapture and re-use of raw materials from composite waste streams
- Recycling of Thermoplastic Injection moulded materials
- Re-use of dry fibre waste streams into valuable product streams



Providing a Material Advantage

- Quantum
- Ceramics
- Metallics
- Polymers
- Metamaterials
- Composites
- Textiles
- Multifunctional
- Power sources
- Energy



- R&D
- Design
- Modelling
- Test and Evaluation
- Cleanrooms
- Manufacturing
- Through life assessment
- Certification
- Assurance
- Productisation

- 320 000 squared ft materials R&D
- 200 Labs, 42 Workshops
- 300 materials scientists/engineers on multiple sites



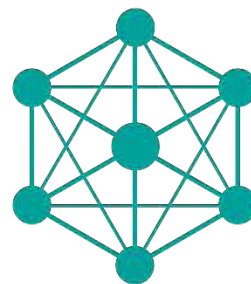
Henry Royce Institute for advanced materials

The Henry Royce Institute is the UK's national centre for advanced materials research and innovation.

Providing world-class equipment, infrastructure, training and outreach, Royce works with the materials community to develop solutions to some of the world's biggest challenges from an ageing population to the transition to a low-carbon economy

Our mission is to support and grow world-recognised excellence in UK materials research, accelerating commercial exploitation, and delivering positive economic and societal impact for the UK.

This is delivered through four key pillars of activity



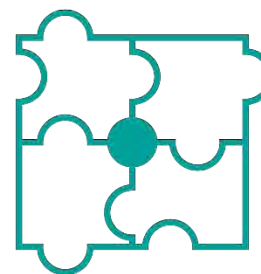
Enabling national materials research foresighting, collaboration and strategy



Providing access to the latest facilities and capability



Catalysing industrial collaboration and exploitation of materials research



Fostering materials science skills development, innovation, training and outreach

Our Services

TBAT

| Innovation



R&D Tax Credits

We bridge the technical expertise gap between you, the client, and your accountant to ensure you submit a robust and successful R&D Tax Credit claim to HMRC.



Capital Allowances

We support in receiving capital allowances on assets owned by the business and used by the business. Capital Allowances can cover things such as building premises, equipment and machinery.



Grant Funding

We identify appropriate funding sources, write applications and technical reports, as well as reviewing and resubmitting previous applications.



SEIS / EIS Support

We support businesses looking for investment, to grow and develop by two generous tax relief schemes which make businesses a more attractive and less risky investment opportunity.



Video Games Tax Relief

Similar to R&D Tax Relief, Video Games Tax relief can be claimed by businesses who are liable to pay corporation tax. We can check your eligibility and support in making a claim.



Patent Box

If you're creating IP within your business that's patented and liable to pay corporation tax, you may be eligible to claim relief on the amount of corporation tax paid by the business.

www.tbat.co.uk

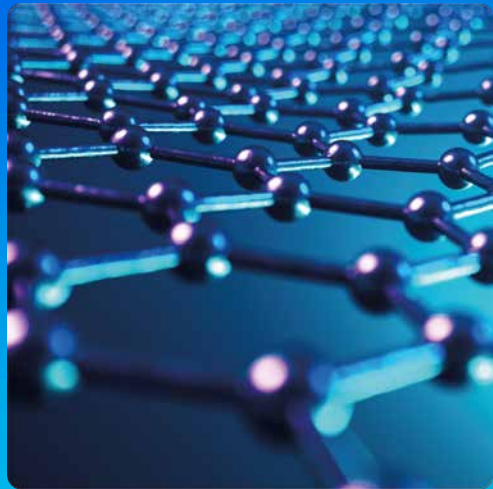
 info@tbat.co.uk

 01332 819740

| **Lucideon Limited:** Providing material solutions through consultancy

**A product development and analytical partner with 100+ years
of materials science and engineering excellence**

Helping to overcome materials and process challenges



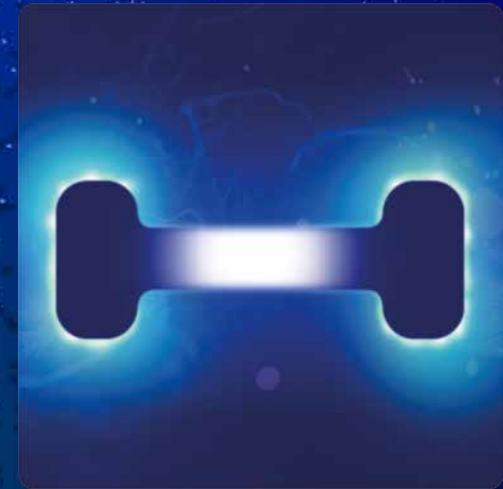
Materials Development
and New Technology



Formulation and
Process Consultancy



Characterisation
and Failure Analysis



Platform
Technologies

LUCIDEON

Contact Stuart MacLachlan
stuart.maclachlan@uk.lucideon.com

CATAPULT

High Value Manufacturing

Dave Curtis

Professor of Subtractive
Manufacturing
University of Sheffield AMRC

Dave Easton

Senior Knowledge Exchange Fellow
NMIS

mtc

Manufacturing
Technology Centre

Matt Thomas
Chief Engineer
MTC



NATIONAL COMPOSITES CENTRE

James Graham
Chief Engineer – Surface
Transport
NCC

Alex Hale
Advanced Technology
Project Lead
NCC

Vicky Summers
Principal Research
Engineer – Sustainability
NCC

Innovate UK EDGE

Tailored support that grows and scales ambitious innovation-focused businesses

350+ innovation and growth specialists embedded in all UK regional ecosystems. We intervene at early, growth and scaling stages, with our core advisory service and enhanced Scaleup Programme, supporting clients in a targeted way with:

Honing
commercial
strategy &
structure

Innovation management, inc. IP & infrastructure access

Finance & funding strategy, inc. investment readiness

Expanding into international markets, inc. via EEN

REforMM Pitch Session

www.ktn-uk.org



InnovateUK
KTN

Organisation Name

Your Name: Dr. Yan Wang

Email Address: y.wang5@brighton.ac.uk

What we do:

Intelligent and sustainable manufacturing with a focus on remanufacturing which returns of End-of-life products to like new conditions

Where you sit in the supply chain?

Return End-of-life products back to the supply chain to close the loop

What is our project idea or innovation challenge:

- Channels to collect and sell remanufactured products
- Remanufacturing and Electrification
- Quality assurance and certification for remanufacturing processes/products
- Track and trace of EoL products

Partner(s) required? (Y/N):

If yes what type?:

Yes, business who are interested in remanufacturing



Matterhorn: Your first step in AI-driven materials R&D

Jakob Zeitler, Research Scientist

mail@jakob-zeitler.de

Matterhorn Studio streamlines the **integration of ML in materials laboratory** and makes sure that your scientist can maximally include their hard-earned theory and intuition into the ML process.

Our efficient machine learning saves time, money and most importantly **de-risks your research outcomes**.

Try our 5 minute tutorial today on matterhorn.studio

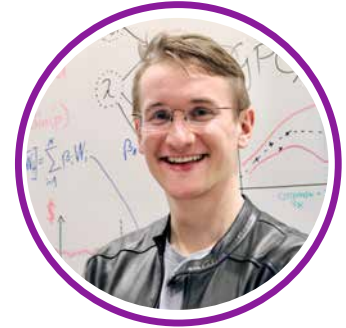
Where you sit in the supply chain?
Materials and process optimisation

What is our project idea or innovation challenge:
Theory and intuition can get you only so far in your materials R&D. Machine Learning provides a **third dimension to your experimental planning**: it helps you discover the next best experiment that you can learn from the most information. We want to develop dedicated models for different material types and are **looking for partners with exciting materials problems**.

Partner(s) required? (Y/N): Yes

What type?: any materials, but **biobased preferred**

We enjoy working with passionate engineers that are keen to learn how they can make machine learning work in their laboratory. We are looking to work with materials companies that need to develop materials on spec and on time, at the best cost, and see potential in how machine learning can help with that.





Name: John-Paul Grogan
Product Director

Email Address: jp@frugalpac.com

What we do:

We design and commercialise novel and disruptive packaging formats which have environmental advantages over incumbent packaging types.

Where we sit in the supply chain?

We buy directly and advise our customers to purchase approved:

- Paperboards,
- Print inks / coatings
- Adhesives
- Flexibles plastic films
- Barrier Technologies
- Injection moulded plastic parts



Our Innovation Challenge:
We are always looking for:

- Innovations in plastic recycling, sorting & identification.
- Food safe bio-plastics.
- Improved barrier materials.
- Technology which improves strength of recycled paper fibres.

Partner(s) required? (Y/N): No (but never say never)



Composite Braiding Ltd

Steve Barbour

steve.barbour@compositebraiding.com

What we do:

High volume, lower cost, more sustainable structural composites

Energy reduction in production typically of over 95%

(Innovate UK Loan project; Composites UK Sustainability Net Zero Award Nov 22)

Where you sit in the supply chain?

Manufacturer (UK SME, East Midlands)

What is our project idea or innovation challenge:

We have:

- Light weight (up to 70%)
- Low to very high volume (10's to 100k's)
- More sustainable: typical >95% energy reduction; inherently recyclable; re-usable; <1% production waste; award -winning
- Affordable (comparable to metals)

How can we help you?

Partner(s) required? Y:

If yes what type?:

Anyone needing light weighting solutions that are more sustainable and affordable



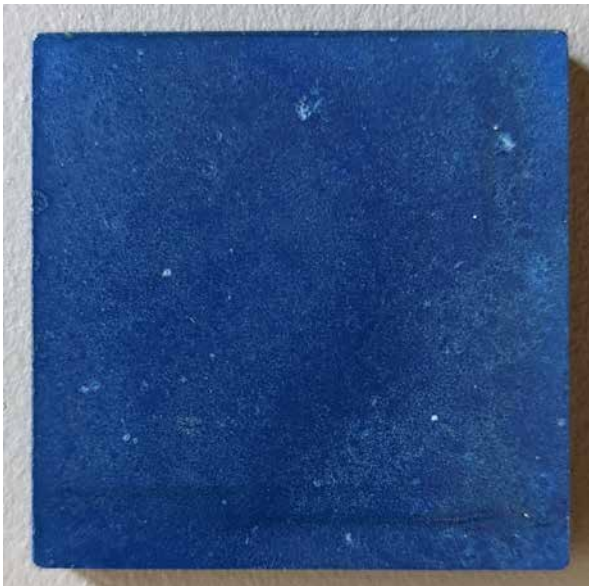
DeakinBio

Aled Roberts

aled@deakinbio.com

What we do:

We make bio-based alternatives to ceramic materials.



Where you sit in the supply chain?
R&D, Manufacturing

What is our project idea or innovation challenge:

We want to use waste biomass from algal biofuels/biomanufacturing to incorporate into our tiles as a binder.

If successful, it will improve the viability of our own business model and also support 3rd generation biofuels production/biomanufacturing by adding value to a low-value co-product.

Partner(s) required? (Y/N): Maybe

If yes what type?:

Algae production specialist (for biofuels or biomanufacturing)



University of Hertfordshire, Hatfield, England, UK

University of
Hertfordshire **UH**

Dr Sikiru O. ISMAIL

s.ismail3@Herts.ac.uk

What we do:

We are Higher Education provider, a University. We also support industries through innovative research and profitable enterprises.

Where you sit in the supply chain?

We support Knowledge Transfer Partnership (KTP), KEEP+ Schemes and joint Research Grants/Funding Applications.

What is our project idea or innovation challenge:

Our project idea lies within application of advanced manufacturing processes and optimisation of properties of sustainable bio-based materials for specific purposes. Hence, relevant industrial supports are required to be successful in grants applications.

Partner(s) required? (Y/N): Y

If yes what type?:

We are looking for industries to solve their problems through KTP/KEEP+ and other relevant schemes. We also need industrial collaborators in joint projects and to support research grants/funding proposals and applications.

Thank you very much.



http://go.herts.ac.uk/sikiru_ismail

**UK
RI**
Innovate UK
KTN

Aeropowder Ltd.

Your Name: Ryan Robinson

Email Address: ryan@aeropowder.com

What we do:

Aeropowder is a circular materials innovation company driven to produce sustainable textiles from the thousands of tonnes of surplus feather that are produced each year.

Where you sit in the supply chain?

Aeropowder is a manufacturer of feather based textiles.

What is our project idea or innovation challenge:

The processing and mechanical modification of lightweight fibres is currently performed with traditional equipment more suited to heavier, more rigid structures. We want to develop sustainable, modern fibre processing methods that maximise the physical potential of the base material. As experts in waste regeneration, we are looking to partner with a suitable engineering organisation to develop the worlds first hammermill designed with lightweight fibres in mind.

Partner(s) required? (Y/N): Y

If yes what type?:

We want to partner with experts in the hammer mill & granulator industries.



HIGHTECHWELD CO. LTD.

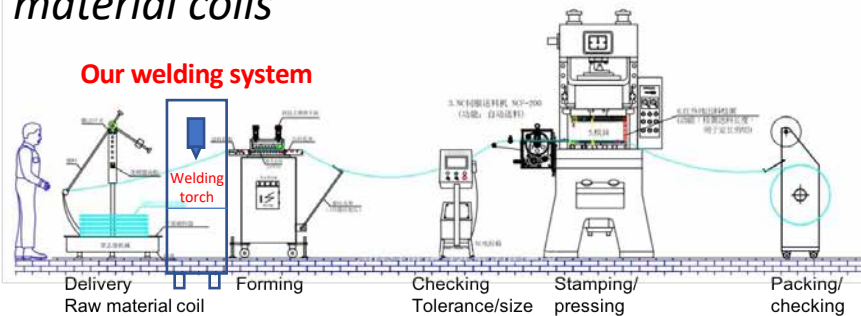
Dr. Williams Nguyen, CEO

info@hightech.co.uk

What we do:

We are a high-tech start-up company that focusing on developing welding systems for manufacturing factory using/making thin and ultra-thin metal coils (0.03 mm to 2 mm).

Where you sit in the supply chain? We support any manufacturers using raw material coils



An example of our solution in a stamping line for manufacturing lead frame of semiconductor!

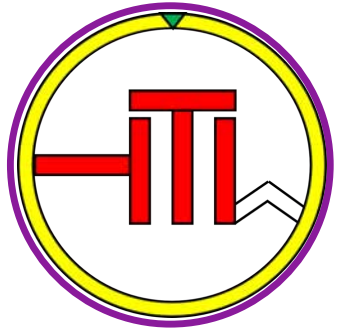
What is our project idea or innovation challenge:

Our idea is a breakthrough and innovate welding solution for butt-joint of ultra-thin raw material coils (up to 0.03mm) in stamping production lines to cutdown up to 90% stopping time and more than 90% the raw material waste.

Partner(s) required? (Y/N): Y

If yes what type?:

- *Any organisation to form consortium for public funding and to develop welding system.*
- *Any companies using stamping/punching/slitter lines for manufacturing products to be customers*
- *Experienced business director to be part of Board of Directors*
- *We have secured £200k from angel investors, looking for new investors*



Octoply Ltd

Nithin Rai

nithin@octoply.co.uk

What we do:

On the Thames, we provide marine and hospitality management services.

Mostly to www.tdock.co.uk and www.batterseabarge.com.

In the E. Midlands we provide healthcare management services, mostly to innovahouse.org.uk.

Where you sit in the supply chain?

Service provider, end user with an interest in technology development and manufacturing.

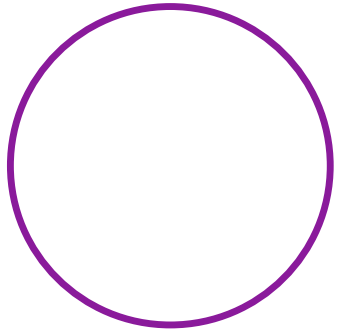
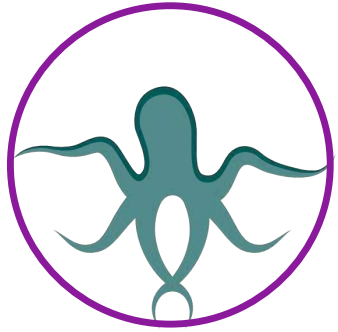
What is our project idea or innovation challenge:

We have an interest in developing the concept of a biological FPSO (Floating Production Storage and Offloading), using biomanufacturing as the primary means of production. This includes the production of liquid fuels from waste and other sustainable sources. Our focus has been on ammonia, biogas and CO2 recovery and management, principally desktop studies modelling biological and chemical engineering processes.

Partner(s) required? (Y/N): Y

If yes what type?:

Broadly those interested in ice, ice composites and low temperature work. Specifically manufacturers of cryocoolers and gas compressors. Generally, anyone that would benefit from the services we provide.



Materiom

Liz Corbin

Liz@materiom.org

What we do: Materiom is an innovation platform specialising in regenerative biomaterials R&D. We support producers and brands to design, produce, and use biomaterials that have a net-positive impact on the planet.

Our database and AI software streamline materials R&D by synthesising, testing, and optimising new biomaterials with minimal human intervention.

Where we sit in the supply chain: We support materials R&D as well as feedstock sourcing.

What is our project idea or innovation challenge: We aim to leverage our database and software to increase the innovative use and reuse of renewable bio-based feedstocks within the production of sustainable and circular products.

In particular, valorising underutilised organic byproducts and waste streams to develop high-performance bio-based packaging materials for the consumer packaged goods industry.

Partner(s) required? (Y/N): Yes

If yes what type?: We aim to partner with material manufacturers and/or consumer brands who would benefit from accelerating their biomaterial R&D processes through the use of our database and AI software.



Glass Technology Services (GTS)

Name: Chris Holcroft

Email: c.holcroft@glass-ts.com

What we do:

GTS is a centre for glass research and development, an independent glass laboratory and consultancy service, accredited to ISO 9001, and ISO 17025 quality standards.

With 300+ years of experience.

Purpose built laboratory facilities and test melting capabilities and associated analytical support

Where you sit in the supply chain?

We provide technical support at all levels of the glass supply chain

What is our project idea or innovation challenge:

Alternative and Secondary Raw Materials for the glass and other industries.

Enabling resource and energy efficiency gains. Recovery, beneficiation recycling and reuse of waste materials.

Partner(s) required? (Y/N): Yes

If yes what type?:

Industry partners with waste materials searching for alternative higher value routes to disposal.

Consortia looking for expertise in glass manufacture and supply chain.



Circular Concept Lab

Anne Prah

anne@anneprahldesign.com

What we do:

Circular Concept Lab is a collaborative innovation platform to accelerate the conception, development and scaling of circular solutions (materials, products, manufacturing processes and business models) for the sports, outdoor and fashion industry and beyond.

Where you sit in the supply chain?

Utilising our extensive industry network, **Circular Concept Lab** supports start-ups, innovators, manufacturers and other organisations on impactful material and manufacturing R & D and industry testing and implementation.

What is our project idea or innovation challenge:

Circular Concept Lab has an growing portfolio of data-driven project ideas and concepts across bio-based and resource-efficient material and manufacturing. Key areas include:

- Reduced environmental impact finishing, colouration & dyeing processes
- Bio-based material feedstock and chemical replacements
- Manufacturing, in-use and end-of-life solution development for circular materials and products
- Design for resource-efficiency (waste reduction/ decarbonisation) and extended use/ reuse

Partner(s) required?: YES

- We aim to partner with material innovators, manufacturers and other organisations to provide design-driven, circular innovation expertise
- CCL can support projects as a partner or subcontractor on existing and/ or collaborative new innovations.



Uplift360

Jamie Meighan & Sam Staincliffe

info@uplift360.tech

What we do:

Uplift360 is a greentech startup working in advanced material circular economy (redesign, reuse, regenerate and recycle), uniquely focused on the defence and security sector. Defence are the largest users of advanced materials, but most in this sector have no end of life plan, with the majority ending up in landfill or incinerated. We create the chemical technology to regenerate these highly complex materials whilst also developing new materials, circular by design and non-fossil fuel derived.

Where you sit in the supply chain?

- ✓ Raw Materials
- ✓ Manufacturing
- ✓ End of Life Processing

Project Idea :

Uplift360 have developed a chemical technology that regenerates end of life para-aramids (e.g. Kevlar). Although early stage, we can put end of life para-aramid through our low energy, chemical process and at the end we can extract new fibres. These fibres are being designed to re-enter the defence and aerospace supply chain. This is a highly novel system that the defence sector are supporting. We would like to further develop the technology and explore collaborations for wider material and product testing.

Partner(s) required?: YES

If yes what type?:

Recycling Organisations
Fibre Manufacturers
Research Institutions
Testing Facilities
Aerospace & Defence OEMs & Primes



Sterling Bio Machines

STERLING
BIO MACHINES

Akshaya Ahuja

Akshaya@sterlingbiomachines.com

What we do:

Novel Bioreactor systems that are more scalable and productive than existing bioreactors for cell-culture and microbial processes

Where you sit in the supply chain?
Bioreactor design and manufacture

What is our project idea or innovation challenge:
Build and test prototypes (physical and digital) of our novel bioreactor concept to demonstrate step change performance improvement over existing systems

Partner(s) required? (Yes):
If yes what type?:

- Commercial design partner - test your bioprocess in our system
- Research partners to develop technical solutions for key enabling components and technologies



Kelpi

Dr Ed Jones, Lead Engineer

ed@kelpi.net

What we do:

Kelpi is a material innovation company. We replace single-use plastics with premium performance biomaterials that harness the novel properties and environmental benefits of seaweed.

Where you sit in the supply chain?

We sit upstream of packaging producers and converters. We work with global brands on co-development projects to develop tomorrow's sustainable packaging.

What is our project idea or innovation challenge:

We have successfully developed novel materials with long-term water-barrier.

We are scaling the chemical synthesis process, and now face the challenge of rapid formulation trials to achieve enhanced performance.

Our challenge now is the industrialization of converting our novel materials to packaging products with techniques such as: coating, casting, and extrusion.

Partner(s) required? (Yes!)

Partners with polymer compounding and formulation experience.

Pilot scale extrusion and co-extrusion of biopolymers.

Continuous coatings applications (e.g. reel-to-reel).

Potential for co-dev with product designers.



Synbiosys

Dr José Videira

jose@synbiosys.co

Software maps material & manufacturing variability & complexity.
Ensures consistent, repeatable end products.

Accelerate by 10-100x:

- Material development, validation & integration.
- Manufacturing optimisation & digitisation.

Increase:

- Yield and throughput.
- Supply chain resilience.

We sit across whole material value chain.

Example innovation challenges:

- Evaluation & integration of new, sustainable materials into production lines.
- Validation & qualification of new manufacturing processes e.g. 3D printing.
- Digitising industrial metal processing facilities to increase throughput and yield.

Partners required:

- Startups.
- OEMs.
- Tier 2/3 manufacturers.

Desired industries:

- Industrial metal processing.
- Packaging.
- 3D printing.
- Battery manufacturing.



Enable Manufacturing Ltd

James Reeves

james.reeves@enable.parts

What we do:

Additive Casting®

We manufacture complex metal parts using a hybrid technology of additive and casting together to get the best of both worlds. Complex parts, without tooling restrictions, at a much lower cost than other metal additive processes.

Where you sit in the supply chain?

Tier 2:

We supply metal parts, finished machined, typically supply into Tier 1 companies.

What is our project idea or innovation challenge:

Reducing resources used in manufacturing complex metal parts.

Our process can reduce the amount of metal in a part, through design optimisation, whilst also significantly reducing the waste normally associated with additive manufacturing. We also use up to 90% less energy than other additive processes

Partner(s) required? (Y/N): Y

If yes what type?:

An OEM/Product company

We are looking for companies who want to find a better way of making metal parts. Improving the performance of the part whilst also reducing the material use. By collaborating on the design and manufacturing process we can have a huge impact on the use of resources.



Organisation Name

Tom Williamson

TW@Atomising.co.uk

What we do:

ASL produces gas and water atomised powder in house in Sheffield, using advanced technology developed ourselves. We also sell metal powder production equipment worldwide.

Where you sit in the supply chain?

We supply metal powders (Fe, Ni and Cu based primarily) into the additive manufacturing, metal injection moulding and filter markets.

What is our project idea or innovation challenge:

We have plans for a next generation gas atomiser, to produce powder more efficiently with reduced carbon emissions. The design will give powder that is more spherical and cleaner, perfect for the additive manufacturing and thermal coatings industries.

Partner(s) required? : Yes

If yes what type?:

We are looking for partners to help develop this technology through testing powder, investing in a potential plant, and supporting design of downstream processing.



Net Hero Solutions



Gizem Akgun

info@nethero.app

What we do: We exist to enable cities to be living systems where human and natural capital coexist in harmony. Our prop-tech planning software brings forward the consequences of cost and embodied carbon into the earliest possible building design stage.

Where you sit in the supply chain?

We use AI and industry wide material benchmarking to integrate with the normal workflow and software(s) of all early stage stakeholders. We sit between the developers and designers, and also the buyers and sellers of green building supplies.

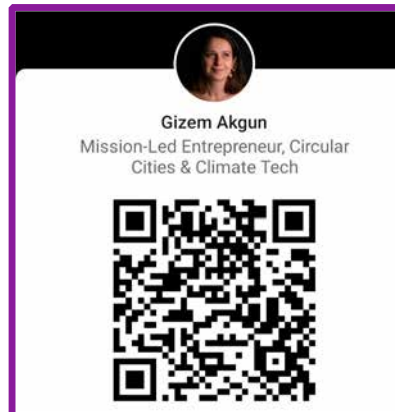
What is our project idea or innovation challenge: Developers and asset owners need to set the level of sustainability targets that would best mitigate their shareholders' risk. Our software then simplifies sustainability decision making by visualizing the effects of each goal throughout the initial design and planning process, preventing late changes to cost and program.



Partner(s) required? (Y/N): Y

We are looking to forge long term relationships with the following stakeholders in the built environment:

- **Design Partner:** An agile, forward thinking Developer and/or Sustainability Consultant to build and test our MVP with us.
- **Advisor:** An experienced proptech networker who can connect us with VC's, incubator programs and potential customers.
- **Industry expert:** Material data expert & Life Cycle Analysis Assessor to ensure regulatory quality.



AERAMINE LTD

Alex Lapis

a@aeramine.com

What we do:

Aeramine is a UK scientific, medical & nuclear SME that is developing ultra-high purity copper (5N grade, 99.999% pure), which is remarkably ductile and has superior thermal and electrical conductivity at cryogenic temperatures. It is perfect for specialist applications in aerospace, medical devices and nuclear.

Where you sit in the supply chain?

Aeramine is a raw material supplier.

What is our project idea or innovation challenge:

Aeramine has a proprietary process for copper rod zone refinement, that makes large, ultra-high purity copper production commercially viable. The copper ingots are compatible with most industrial forging or wire-drawing post-processing.

Partner(s) required? (Y/N): Yes

If yes what type?:

A novel process or product that would benefit from the ultra-high purity copper.

Post-processor of ultra-high purity copper, such as wire drawing.



Coventry University

Yuze Huang

yuze.huang@coventry.ac.uk

What we do:

We are focusing on developing high-speed and wire/powder additive manufacturing process and laser welding by using physics-informed modelling, data-driven monitoring and control:

- (I) Process development for high-speed wire/powder additive manufacturing.
- (II) Physics-informed modeling for defects reduction in laser metal additive manufacturing and welding.
- (III) Data driven online monitoring (optical, acoustic, photodiode) for high-quality additive manufacturing and welding.

Project idea:

High-speed wire/powder laser metal additive manufacturing for near-net-shape parts

Challenges:

- Inconsistent quality due to the fast laser-metal interaction.
- Few study on the advanced particle-reinforced wires AM
- Random defects (e.g., pores, cracks) without controlling

Partner(s) required? (Y/N): Yes

If yes what type?:

- Lead organisation (UK materials and manufacturing organisations)
- Research and technology organisation (RTO)
- Business of any size in metal powder/wire manufacturing.
- Academic institution.



University Of Cambridge

Pippa Horton

Pmh49@cam.ac.uk

What we do:

Our research group is called the Use Less Group, we identify emission reduction opportunities through using less material. Our work in resource efficiency focuses on the bulk materials and the products & processes which use them.

Where you sit in the supply chain?

Our research covers the whole supply chain from material production, component manufacturing and end use. We develop resource efficiency ideas from proof of concept, to industrial demonstration and commercial application in practice.

What is our project idea or innovation challenge:

We have created a detailed map (called PROBS) of the UK manufacturing system. We can view how material produced, imported, exported, transformed into components and assembled into final goods. This gives us valuable insights into opportunities for material efficiency across the supply chain. We would like to collaborate with other researchers who would find this information useful, as well as industrial partners who would like to use our insights to implement resource efficiency opportunities within their organisations.

Partner(s) required? (Y/N):

If yes what type?:

Since our focus is broad, we are interested in collaborating with partners from all sectors, both research institutions, RTO's and industry.

THE
USE | LESS
GROUP



Glyndwr Innovations Ltd.

Professor Caroline Gray OBE

c.gray@glyndwr.ac.uk

What we do: Design, Manufacture and Test optical systems and payloads for space and near space platforms and applications.

Specialists in design and optical metrology of complex systems with unique manufacturing capability of complex optical surfaces up to 2m in size. With research areas in composite material manufacture and design.

Where you sit in the supply chain?
Glyndwr Innovations is a commercial spin out from Wrexham University delivering high specification optical components, systems and subsystems up to 2m in size.

What is our project idea or innovation challenge:

To further develop our delivery and capabilities through partnership with materials and systems manufacturers or developers

Partner(s) required? (Y/N):

If yes what type?:

Yes
academic or commercial

Happy to talk to potential academic or commercial partners wanting to add or develop payloads to their capabilities



HAL Robotics

Sebastian Andraos

s.andraos@hal-robotics.com

What we do:

Flexible, adaptable robot
reprogramming software.

Where you sit in the supply chain?

Technology provider and
turnkey robotic solution
provider.

What is our project idea or innovation challenge:

Adaptable robotic solutions for high-mix,
low volume manufacturing.

Partner(s) required? (Y/N): Yes

If yes what type?: End-users who require flexible and
adaptable robotics.



Luffy AI Limited

Obi Zaher

obadah.zaher@luffy.ai

What we do:

Adaptive AI Control Systems

- We help customers improve productivity, safety and sustainability through intelligent control systems.
- Our AI controllers are trained on a digital twin of your manufacturing process, and through adaption at the edge, will self-optimize once deployed.
- AI techniques can uniquely target key value drivers, allowing manufacturers to maximise the potential of their equipment.
- Trial results on an OEM composites process achieved a 10% energy reduction and 33% drop in compressed air use. Adaptive AI improved their overall energy and resource usage.

Where you sit in the supply chain?

- Software supplier

What is our project idea or innovation challenge:

- Use digital twins & adaptive AI control systems to optimise your manufacturing process. Targeted improvements:
 - Reduce energy usage
 - Resilience to variable feedstocks (increased use of recycled materials)
 - Increased yield and profitability
- Example processes include: composites, metals, cement glass, plastics.

Partner(s) required? (Y/N): Yes

If yes what type?:

- Manufacturers, OEMs and catapults.

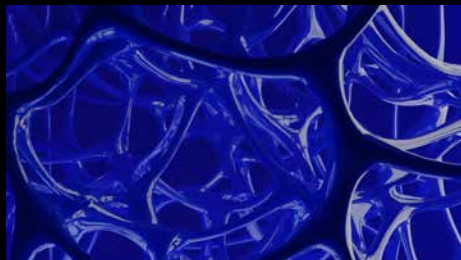


Sarah Karmel

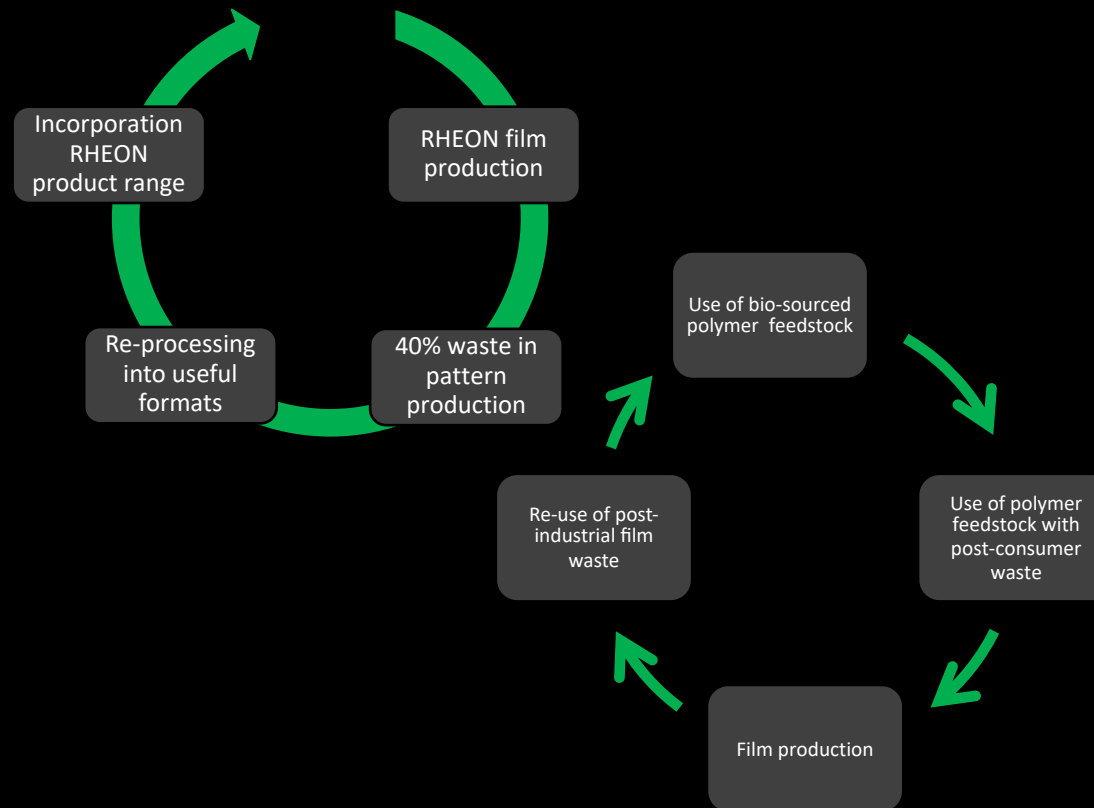
Sarah.karmel@rheonlabs.com

What is RHEON

- RHEON™ is an ultra-high energy-absorbing polymer.
- It is soft and flexible in its natural state but absorbs high levels of energy by stiffening when subjected to force.
- The technology has made breakthroughs in impact protection (e.g. helmets) & in active muscle control (e.g. sport bras).



What is our project idea or innovation challenge:



Partners required:

- Renewable polymers
- Long term testing
- Recycling



2M Group Ltd – Building a better world for tomorrow

James Nelson

jnelson@2m-holdings.com

What we do:

- Global chemical supply and distribution into a broad range of material and life science industries.
- Speciality Chemical manufacturing, storage and distribution
- Formulation development of personal care and HI&I products and applications.
- Contract manufacturing service in the personal care and HI&I industries

Where you sit in the supply chain?

- Chemical manufacturer for major CPG brands and Industry
- Chemical supply and distribution for major industry principles.
- Chemical storage, blending and mixing
- Personal care and HI&I manufacturing for CPG brands

What is our project idea or innovation challenge:

We are working with our partners to replace many of the products in our current portfolio over the next 10 years with sustainable alternatives and to scale up our manufacturing business. This will help many of our customers in the life and material science areas transition their product development and R&D efforts into more sustainable products. We see the potential to help innovators scale new technologies that are in development and offer a partnership approach that can include manufacturing, supply, distribution and joint R&D leveraging our existing expertise across many industries as well as our extensive customer and supply network.

Partner(s) required? YES

- Looking for partnerships with Innovators / Start ups / who would like support scaling up manufacture and distribution or finding routes to market for personal care or packaging applications.
- Interested in research that explores the use of natural protein and polysaccharide complexes or that uses micro-organisms (or their component parts) to break down waste materials, or synthesise renewable raw materials into commodity or speciality chemicals.



KS Composites

Alastair Trimmer

alastair.trimmer@kscomposites.com

What we do:

KS Composites is a leading independent manufacturer of Carbon Fibre and GRP structures and components.

Where you sit in the supply chain?

We are a Tier 1 Manufacturer completing Engineering, tooling and components in-house.

What is our project idea or innovation challenge:

We have space, capacity and a desire to work on a new challenge to develop a process, integrate new or sustainable materials into a component that is needed for everyday use.

Partner(s) required? (Y/N): YES
If yes what type?:

We are open to work with new partners or re-establish previous relationships.



University College London

PROF NGUYEN TK THANH, FRSC FInstP FIMMFRSB

ntk.thanh@ucl.ac.uk, <http://www.ntk-thanh.co.uk>

What we do:

- Synthesis of nanomaerials**
- Physico-chemical characterization of Nanomaterials**
- Preclinical Studies of Nanomaterials**

Where you sit in the supply chain?

- Academic institution**

What is our project idea or innovation challenge:

Novel nanomaterials for diagnostic and treatment of cancers

Partner(s) required?: Y

If yes what type?:

-**Academic institutions**

- [Advanced Manufacturing Research Centre \(AMRC\)](#)
- [Manufacturing Technology Centre \(MTC\)](#)
- [Lucideon](#)
- [Centre for Process Innovation \(CPI\)](#)
- [Innovate UK Edge](#)
- [TBAT](#)
- [Materials Processing Institute \(MPI\)](#)
- [Northern Ireland Advanced Composites and Engineering Centre \(NIACE\)](#)
- [Reading Scientific Services Ltd \(RSSL\)](#)



Senergy Innovations Ltd

Sean Duffy

sean@senergyinnovations.co.uk

What we do:

- Thermal conductivity thermoplastics
- Moulding and extrusion
- Research and Development

Where you sit in the supply chain?

- Research, product development and manufacturing.

What is our project idea or innovation challenge:

- Affordable hot water
- Improved properties of thermoplastics
- Heat sinks and heat exchangers
- Replacement of traditional materials

Partner(s) required? (Y/N): Yes

If yes what type?:

- Automotive
- Heat exchangers
- Partners who are interested in thermally conductive polymers



PCL Ceramics Ltd

David Pooley

dpooley@pclceramics.com

What we do:

PCL Ceramics design, engineer, and install, innovative high pressure casting ceramic solutions for the sanitaryware, tableware and advanced ceramic industries.

Where you sit in the supply chain?

PCL Ceramics are both primary and secondary stage manufacturers.

Primary – Chemical Processing/Engineering

Secondary – Machine Fabrication & Installation

What is our project idea or innovation challenge:

PCL are looking at two ideas:

1. To create a mould from polymeric material which is workable and shaped by a CNC type process, rather than fabricated using multiple mesh type materials which are then encased in the porous polymeric material.
2. Produce a mould material which can be used for high pressure casting ceramic bricks and pipes

Partner(s) required? (Y/N): Yes

If yes what type?:

1. University/Academic Support
2. Producer of ceramic bricks/Pipes or Refractory type products
3. Catapult/RTO i.e. CPI



CAE Tech Limited

<https://cae.tech>

Peter Harman

peter.harman@cae.tech

What we do:

Software for manufacturers of **build-to-order** and **mass-customisable** products, from online **configurators** to automation and optimisation of the manufacturing.

Where you sit in the supply chain?

We support the manufacturer with their interfaces with customers (B2C or B2B) and suppliers (B2B)

What is our project idea or innovation challenge:

Consumers are unable to make **informed** choices to minimise the **impact** of their purchases. We want to enable **configurator** software with continuous feedback on the **material usage and efficiency** of choices made.

Partner(s) required? (Y/N):

If yes what type?:

Manufacturers of build-to-order or customisable products, such as offsite-construction, interiors (furniture, lighting, joinery), healthcare & mobility, transport (bicycles, boats, goods vehicles)



Alloyed

Rory Rose

rory.rose@alloyed.com

What we do:

We deliver next generation performance for metal components through the development and production of superior and customised alloys for traditional and additive manufacturing using our world leading platform for computational alloy design

Where you sit in the supply chain?

Technical consultants and additive component manufacturer

What is our project idea or innovation challenge:

Alloyed wants use it's computational platform to design the next generation of performance cast green aluminium alloys with high recycled content for the automotive sector.

Partner(s) required? (Y):
If yes what type?:

Automotive OEMs and recycled metal merchants



ANTONYM LTD

Rev N Murugesan

rev@antonym.tech

What we do:

Antonym is a Leeds-based advanced manufacturing company that is hyper-localising manufacturing to tackle COVID-19 induced supply chain shortages and Climate Change.

Where you sit in the supply chain?

Antonym is a contract manufacturer for high-value industries like aerospace, defence, & healthcare.

What is our project idea or innovation challenge:

Scope: Resilient supply chains & world-class production.

A “factory-in-a-box” cloud-connected micro-factory solution for high-value industries, helping them re-shore critical metal parts manufacturing. Leveraging Cloud computing, Metal AM, and Robotics to ensure supply chain resiliency against unforeseeable disruptions, as well as advancing British manufacturing capabilities at home and abroad.

Partner(s) required? (Y/N): YES

If yes what type?:

High-value manufacturing partners within Metal Additive Manufacturing & Automation to co-build a pilot micro-factory that will be powered by a proprietary cloud-based FactoryOS software that Antonym has developed. The cloud factory integrated solution will aim to be as a faster, cost-effective, and greener alternative to off-shore parts manufacturing.



James Cropper

Rich Burnett

richard.burnett@cropper.com

What we do:

Manufacturer of

Advanced non-wovens

Speciality Paper

Moulded Pulp products

Where you sit in the supply chain?

What is our project idea or innovation challenge:

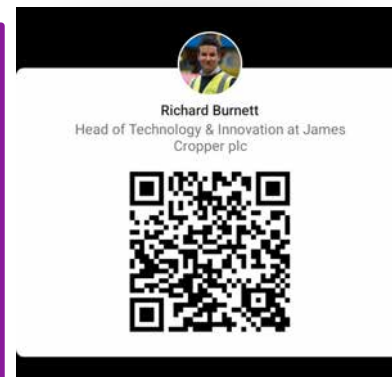
Recycling of textile blends (specifically polyester & cotton)

Partner(s) required? (Y):

If yes what type?:

Supply Chain partners – collection / sorting / preparation of textiles.

Academia



Minviro

Sahin Alacacayir

sahin@minviro.com

What we do?

Minviro is a UK-based consultancy and technology company - offering a deeper level to sustainability through high quality life cycle assessment (LCA).

Where you sit in the supply chain?

Minviro has worked with over 150 companies internationally from mining operators to battery manufacturers to quantify and help reduce environmental impacts related to critical commodity and product supply chains.

What is our project idea or innovation challenge:

We want to transfer our deep understanding of sustainability in the raw material sector into hydrogen, solar power and other clean energy technologies to develop tools to guide companies quantifying their environmental and overall sustainability impacts.

Partner(s) required? (Y/N):
If yes what type?:

We want to create collaborations with research institutes and industry players in energy and manufacturing sectors that can help bridging life cycle and sustainability thinking with manufacturers.



Metalysis

David Hawkins

david.hawkins@metalysis.com

Metalysis reduces metal oxides to metal powders, alloy powders and high entropy alloy powders using an electrolysis reduction process. Electrolysis heats rather than melts, using less energy (50% less for the reduction of titanium alloys), reducing metal oxides to remove their oxygen leaving the metal which can be easily post-processed into powder.

We can therefore alloy metals which are traditionally too expensive or technically challenging to alloy – eg scandium alloys or the new generation of complex alloys - high entropy alloys - which consist of 5 metals or more.

Metalysis is a midstream player - capable of processing critical metals and rare earth metals - from across 49 elements of the periodic table, and is capable of processing blended oxides: refined ores, mined ores and secondary raw materials, and can repurpose additive manufacturing powders

Metalysis produces an aluminium scandium master alloy at 36% scandium loading - for use in electronics - whilst the scandium level can be reduced to suit the requirements of the aerospace and automotive sectors for heat exchangers, jet engines and fuselage components. Scandium's lightweighting properties, combined with its high strengthening qualities means that small amounts of Sc bring transformatory capabilities to a new material.

Our lightweight refractory high entropy alloys – eg $\text{Al}_{20}\text{Mo}_{10}\text{Nb}_{20}\text{Ta}_{10}\text{Ti}_{20}\text{Zr}_{20}$ are aimed at the heat exchanger market and Metalysis is capable of alloying tantalum with aluminium and titanium – metals with vastly different melting points. High entropy alloys have the potential to revolutionise material science. These lightweighting HEAs when applied to the aerospace and automotive sectors can reduce emissions, lower energy consumption and bottom-line costs.

Metalysis is looking for further commercial partners to apply its aluminium scandium master alloy, as well as commercial partners to develop bespoke high entropy alloys – across the 49 elements of the periodic table.

www.metalysis.com



Tensei Ltd

Annabelle Cox

Annabelle@tensei.co.uk

We develop new bio based materials from crop residues and food and drink biowaste. We call this waste or rather new material feedstock, The Second Harvest. Tensei are a licensed based company pioneering the Second Harvest.

We are upstream as the R&D company.

The innovation challenge is the adoption of Second Harvest as a mainstream raw material. It requires behavioural change within the supply chain to create inflexion. To help this we need to develop:

- A local and consistent supply of processed raw material from The Second Harvest.
- Proof that these next gen materials offer best in class solutions within minimal operational disruption.
- A market willing to purchase these new bio based materials.

Partner(s) required? (Y/N): Yes

- Investors
- Academic partners and labs
- Material Manufacturer eg paper mill/ masterbatch producer/adhesive and chemical
- Raw material processor eg pulp producer/ milling and drying companies
- Companies interested in developing materials with Tensei for their own customers or markets
- Similar R&D companies we can collaborate with.



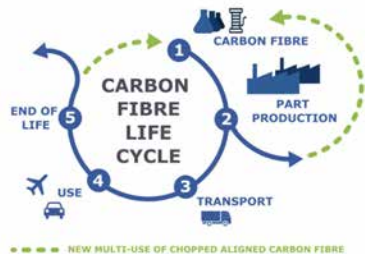
Lineat Composites Ltd

Gary Owen

Gary.owen@lineat.co.uk

What we do: We take waste and EoL carbon fibre and instead of that being produced into low grade material or landfill. Lineat re-aligns through its patented technology and produces a technical material that retains nearly 90% of the original composite properties. Making More from Carbon Fibre

Where you sit in the supply chain?



What is our project idea or innovation challenge:

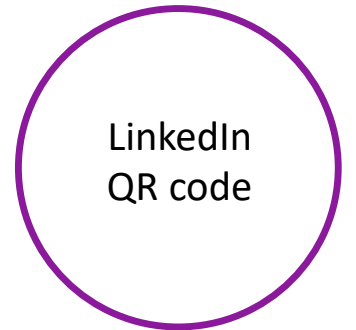
SCALE UP

PILOTLINE – INDUSTRIAL

ACCURATE FEEDSTOCK SUPPLY

Partner(s) required? (Y/N): yES

If yes what type?: Manufacturing Innovators



LinkedIn
QR code



Algreen Ltd

Zhixuan Wang

zwang@algreen.tech

What we do:

Algreen provides the most sustainable solutions to petrol-based polyurethanes. Polyurethanes represent 8% of world plastics. They are widely used in cosmetic, packaging and fashion industries for making cosmetic microplastics, packaging films/coating/adhesives, sequins, shoes/bra foam, shoes/underwear adhesives and waterproof coating. Conventional polyurethanes come from carbon intensive petrol refineries and end their life in landfill, releasing microplastics or are incinerated generating significant Greenhouse Gases.

Algreen invents fully biobased and biodegradable polyurethanes designed to eliminate petrol-based polyurethanes. The global polyurethane market will be 29.2 million tons (2029). By replacing 1% of petrol-based polyurethane, Algreen eliminates 88bn kgCO₂eq annually.

Where you sit in the supply chain?

Technology provider

What is our project idea or innovation challenge:

Algreen provides the most durable coating materials for outdoor wear applications. And globally, an estimated 92 million tonnes of textiles waste is created annually. Algreen waterproof coating can provide enhanced performance on outdoor wear product durability and correspondingly reduce fashion waste generation and increase resource efficiency.

Partner(s) required? (Y/N): YES

If yes what type?:

Any potential connections would like to support us 😊



University of Hertfordshire, Hatfield. England. UK.

Dr Oluseyi Adeyemi

Email Address: o.adeyemi5@herts.ac.uk

What we do:
Research and Development,
Commercial Projects, and
Knowledge Transfer Partnerships.

Where you sit in the supply chain?

Production and Operations Management
Lean Six Sigma Quality Management

What is our project idea or innovation challenge:
Adopting decision support systems for
operations management.

Influence of Industry 4.0 technologies on
decision making processes.

Partner(s) required? (Y/N): Y
If yes what type?:
Large enterprises
Medium enterprises
Small enterprises



Compound Semiconductor Applications (CSA) Catapult

Paul Jarvie – South West and Wales DER-IC Lead

paul.jarvie@csa.catapult.org.uk

What we do:

CSA Catapult was set up in 2018 as a research and technology organisation (RTO). Funded by Innovate UK, we help to grow the UK economy for industries using compound semiconductors. We are the Driving the Electric Revolution Centre for the South West and Wales. With a team of technical experts and state-of-the-art equipment, we work to accelerate the adoption of compound semiconductors technologies in applications for Power Electronics, Advanced Packaging, Radio Frequency, Microwave and Photonics.

Where do you sit in the Supply Chain?

As a neutral supply chain convenor, we bridge the gap between academia and industry. We introduce potential project partners, from universities, SMEs, through to large companies to collaborate on technical projects.

We want to talk to you about:

- Net Zero enabling technologies (Power Electronics, Machines and Drives), advanced packaging and next generation communications and sensing
- Your material science expertise in applications for chip manufacturing and advanced packaging for semiconductors
- Our state-of-the-art 3D, multi-material, combination printing equipment
- Potential project collaborations to develop next-generation technology for industry

Partners required? Y/N

Yes:

- Innovative SMEs
- Larger Tier 1 companies/OEMs
- End users
- Companies looking to embrace and develop disruptive technologies

