

The Pentland Centre for Sustainability in Business

Annual Report **1 Jan 2025 – 31 Dec 2025**

The Pentland Centre for Sustainability in Business continues to be funded with a grant from the Rubin Foundation Charitable Trust – a Foundation run by the owners of Pentland Group PLC.



*Cover photo: Participants at the Festival of Sustainability in June 2025,
Photo: Jodie Bawden*

Contents

Introduction	4
Foreword from the Chair of the Advisory Board	5
2025 Highlights	6
Support	6
Connect	8
Inspire	12
Knowledge and Action Hubs highlights	14
Cross-cutting work: Transition and Transformation	20
Appendix 1: Donation and spending	21
Appendix 2: People	22
Appendix 3: Programme of events	27
Appendix 4: Members publications & grants	28

Introduction

2025 has been a 'mixed bag' with respect to sustainability in business.

On the downside, this year has seen a drawing back from sustainability by a number of companies and investors, driven by reduced political support for sustainability in influential jurisdictions. This means that the effect of the lack of support, and outright hostility to sustainability, by some countries have had an effect in their borders and beyond. This arises through changing political sentiments in general which means that those companies who were not persuaded by sustainability ambitions are able to let their focus wane. We have heard from research engagements that if you are exporting to countries who are hostile to sustainability you are more likely not to be publicly highlighting your work. Finally, we also know that trade agreements linked to the country in question have contained clauses that require a drawing back from formal regulation (the EU's corporate sustainability ambitions have suffered in this context). While some surveys suggest that around 50% of those companies who have ceased to articulate a position on sustainability are still 'doing' sustainability in practice, changes in how willing business is to 'talk their walk' does mean that there are less good examples for others to follow. The percentages of who is 'staying the course' and who are 'abandoning the race' vary depending on which study you follow but the effects are the same.

Regardless of this less positive context, the Centre will continue to codify and share exemplar firm practices and support 'sustainability curious' companies to develop their expertise. We are able to do this because of the generous support from the Rubin Foundation Charitable Trust. This core funding gives us the certainty and capacity to invest in projects that will move sustainability forward with selected external partners and to support our members to do more



Professor Jan Bebbington

than they might have otherwise been able to. In 2025 we also had our past strategic investments in business and biodiversity 'pay off' with a new stream of work starting in 2026 around corporate led/enabled nature restoration. Finally, we had a most delightful 10th birthday celebration which set us up perfectly for our next five years of work. More details on both these aspects can be found in the report.

Professor Jan Bebbington
Director, Pentland Centre for Sustainability in Business

Foreword **from the** **Chair of the Advisory Board**

Don Quixote's story teaches us judgement about wise and unwise courses of action. We Rubins do not believe we are related to Quixote, nor do we believe that we are overly idealistic or impractical in our beliefs about the value of sustainability in business. In fact, the continued growth of the Pentland Centre for Sustainability in Business shows that many people believe, like we do, that it is possible to be commercially successful today, whilst not pawning the future.

The Pentland Centre is not dealing with big political issues such as the future funding of pensions or the question of how to ensure sustainable finances for the UK. Rather, as Jan says in her report, we are facing reduced political support for sustainability at exactly the time when the opposite should be the rule. Indeed, in some cases this reduced support manifests itself in downright hostility. Yet we are (in her words) "continuing to stay the course" because we all know that this is the right path to take, even if there are many easier ones.

Two new streams of work developing over the last year bear noting in this regard. First, while we are all getting to grips with the promise and capabilities of Artificial Intelligence, concern is emerging about the ecological impacts of the data centres that will be built to support AI development and uptake. The Pentland Centre is starting to map where data centres are in the UK and how to address those impacts. The second stream of work is that developing in partnership with Sunway University in Malaysia. This is a country (and a region) where unsustainability is hitting hard already (in terms of climate change) and where corporations are continuing to invest in sustainability in business. The direction of learning is not one way: we can learn from this region and share experiences from the work undertaken in the United Kingdom.

A recent proof of the value of the ideas that the Pentland Centre exposes has been the Honorary Doctorate that Tampere University in Finland has



R. Stephen Rubin

awarded Professor Bebbington for the work she is leading with specific reference to how accounting scholarship and practice can be influenced by sustainability. We are getting the word out despite the difficulty and need to congratulate Jan for this latest example of international progress and all the work of Pentland Centre members.

R. Stephen Rubin
Chair of Advisory Board,
Pentland Centre for Sustainability in Business

2025 Highlights

You can see full details of all our seminars and other events in Appendix 3. Here we share some of the highlights of that work. We have structured the highlights around our internal 'shorthand' for what the Centre does: support, connect and inspire.

Support

We provide support to researchers to develop and communicate their work to the widest possible audience. Below are two examples of where we have supported research during 2025.

Mapping UK data centres: Capacity building for future research

We have identified the impact of Artificial Intelligence (AI) as an area that requires better understanding, and supported Professor Adrian Friday and Elliot Groombridge to undertake initial work into the energy and water demands of data centres. AI is everywhere, from the little summaries at the top of each Internet search, to the customer services' chatbots. AI is being utilised in medicine discovery, and improving disease screening, while also powering the social media bots and image generators that are fracturing public discourse, and leading to new cyber threats and abuses. Beyond all this lie invisible energy and other environmental impacts induced by AI uptake.

When we think of 'the cloud,' and indeed most digital technology, we imagine something intangible, that doesn't really seem all that harmful. In reality, the cloud that runs our AI is a network of vast, physical data centres: warehouses filled with racks of computers, humming fans, and industrial scale cooling. These centres keep our emails flowing, videos streaming, and AI models running. The largest facilities to support the cloud consume hundreds of megawatts of power, equivalent to the energy needs of entire cities. Globally, data centres used an estimated 460 terawatt-hours of electricity in 2022: more than Italy's annual national consumption.

AI is driving an expansion of data centres through its demand for computational power. Hardware gets faster and more powerful which in turn enables larger models trained on ever more data. Training a large language model like ChatGPT-4 requires 25,000 high-end graphics cards running for 100 days, consuming around 54 gigawatt-hours of energy and costing \$100 million for each training run. And that's just training; billions of daily queries add up too, so much so that the inference cost (the cost incurred each time an AI model is used) is more than the cost of training them.

Enabling large AI models at scale for everyday use, creates a huge demand for reliable energy and cooling. It is faster to build a data centre than the grid capacity needed to power

it. Electricity generation capacity set aside for developing new data centres is already taking energy away from other societal needs. Computers also rely on vast supply chains of materials from all around the globe including extraction of ores and rare earth elements. The material side of all those football pitch scale facilities jam-packed with racks and racks of computers are also enormous, growing, and often not remarked upon. Hard worked computers don't last: 4 years is a good lifespan for a highly utilised enterprise class graphics processing unit. When it's done, it's e-Waste, and only 22% of e-Waste is recycled to high environmental standards.

This raises uncomfortable questions: should AI be so freely available or should we restrict its use in some way? Should we prioritise AI-driven advertising over 'more essential' services, and who gets to choose which AI-enabled services have value? How environmentally and socially responsible are the providers of AI technologies being, and should they be able to monopolise energy systems and take as much water as they need just because they can afford to?

Paraphrasing economist E.F. Schumacher, "small is beautiful". Infrequent use of AI services reduces the impact, demand, and rate of growth of AI systems. Avoiding unnecessary AI queries and resisting trends like AI-generated avatars will help you not to fuel the growth in AI's impacts. Turning AI summaries off in all of your apps, except when they deliver real value, and eliminating AI functionality in web searches is another response.

For businesses and policymakers, the challenge is bigger as it requires not getting caught up in AI-hype and thinking about real value and cost: embed sustainability into your choices of digital infrastructure and questioning whether you actually need that AI-based solution, just because 'it is the thing your competitors are doing'. AI may promise a smarter future, but without responsible choices, its energy hunger could undermine the very sustainability goals we strive for.

Research Explainer sessions

These sessions provide an opportunity for members to talk about their ongoing research, to colleagues who are outside their specialist area.

This benefits all Centre members by providing updates about colleagues' work, as well as helping identify opportunities where interdisciplinary approaches will be valuable.

Topics this year have included international law and conceptions of leadership. Details of sessions can be found in **Appendix 3**.

Listen...



**AI, Data Centres, and
The Great Energy Problem**

Listen...



**The Ongoing Case of Humanity
vs Planet Earth**



*Professor Jan Bebbington delivering a Research Explainer Session on Benchmarking, May 2025.
Photo: Madiha Ahmad*



Camilo Cornejo delivering a Research Explainer Session on Turning points in Climate Justice: What recent International Rulings mean for sustainability, Nov 2025. Photo: Madiha Ahmed.

Connect

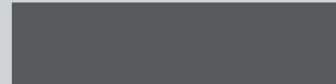
We seek out opportunities to connect members to one another, and to create links and connections with external organisations to enhance the impact of our work. Highlights this year include celebrating our 10th anniversary as well as deepening our links in Malaysia.

Festival of Sustainability

2025 was the year that the Centre turned ten years old, marking a decade of research and engagement focussed on making business a force for good. To mark the anniversary, we invited members, partners and friends of the Centre to attend a Festival of Sustainability. Our guests included academic members of the Centre, visitors from an Egyptian University, Pentland Brands' Positive Business Director, students, and Professional Services staff.

Our keynote speaker on the day was the amazing Jane Davidson, former Welsh Government minister, and key architect of the Welsh Well-being of Future Generations Act. Her keynote took us through the development of that piece of legislation, and she linked the learnings of this to actions that businesses can take to be more sustainable.

We also took the opportunity to record videos with contributors and attendees on a variety of themes, including **10th Anniversary Thoughts**, **What are you passionate about in sustainability?**, **What are the key enablers for sustainability in business?**, **What does sustainability leadership look like?**, and **Why should businesses pursue sustainability?**



You can see the programme, a broader gallery of images the day, and the videos, on our **Festival of Sustainability webpage**.



Images from Festival of Sustainability 26 June 2025, including: Audience during questions and answers following Jane Davidson's keynote, Jane Davidson and Professor Jan Bebbington in conversation during keynote, participants chat and get some lunch. Photos: Jodie Bawden.

Here's what participants thought of the event:

“ The celebration showed the real sense of community and shared purpose across the Centre and provided insight into what is going to come next. ”

“ Excellent engagement from all those who attended the parallel session - everyone in the room contributed to the discussions and learnt from each other. ”

“ Jan's guided discussions brought out deeper reflections from participants, making the sessions feel both dynamic and meaningful. It wasn't just about sharing information; it was about creating space for critical thinking and genuine connection. ”

“ It was a thought-provoking and inclusive day, bringing together a diverse audience and range of speakers. The atmosphere encouraged open dialogue, making space for different voices and perspectives, which added real depth to the conversations around sustainability. ”

“ I met a few lovely people I did not know before; I found the keynote very inspiring; the same goes for the morning talks, I attended the modern slavery session, which was eye opening. Beforehand I often only considered sustainability aspects when buying garments without giving modern slavery much thought. ”

“ All the sessions I was able to attend were good, but probably the session on Sustainability in Lancaster University stood out, out of personal/organisational interest. ”

“ Congratulations on achieving 10 successful years addressing one of, and probably the most important, challenges of our time. When commitment and motivation are waning and misinformation serves to put the brakes on the efforts of the committed minority, the robust work undertaken at policy and grass-roots level, underpinned by rigorous research, is a fundamental cog in a necessary wheel (and thanks to Jan for making the broader agenda fun and accessible). ”



Participants at Building Collaborative Pathways for Responsible Management Education event, Sunway University including Associate Professor Dr Stephen Homer (seventh from left). Photo: Stephen Homer.

Sustainability in Malaysia

Malaysia is an ASEAN country, and ASEAN stands for the Association of Southeast Asian Nations. It is made up of 11 member countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste, Singapore, Viet Nam) with the chairmanship of the association moving each year.

Lancaster University has had a relationship with Sunway University in Malaysia since 2006, through a strategic partnership focused on transnational education. Transnational education means that students in Malaysia study for both Lancaster and Sunway degrees, supported by the partnership between the two institutions. This partnership also creates opportunities for sustainability focused engagements. We have Centre members who are in Sunway and UK Centre members visited Malaysia twice during 2025.

Being linked to a country and region where sustainability in business is different from the UK/Europe is a way to connect Centre research to the wider world. Indeed, Sunway operates a 'campus with a conscience' that seeks to enact Sustainable Development Goals principles in its operations, teaching, research and engagement.

PRME in Malaysia – What Sunway University is doing

Over the past year, Dr Stephen T. Homer has helped strengthen Sunway University's contribution to the Principles for Responsible Management Education (PRME) both within Malaysia and across the wider ASEAN region. His work has focused on building stronger regional collaboration, advancing responsible management education scholarship, and deepening sustainability engagement within the University.

A key milestone was his appointment to the steering committee of the PRME ASEAN+ Chapter as Head of Research, reflecting Sunway University's growing role in shaping the regional PRME agenda. To support this, he facilitated two sharing sessions among PRME ASEAN+ members, creating space for institutions across the region to connect, exchange ideas, and begin developing stronger research and practice-based networks.

Dr Homer also supported the launch of a call for papers for a forthcoming Business and Society Review special issue on responsible management education in ASEAN, due to be published at the end of 2026. This initiative will help showcase regional perspectives and strengthen ASEAN's voice in the global PRME conversation.

At Sunway, he led the first PRME-supported Climate Literacy Training linked to Climate Literacy Project certification, marking an important step in embedding sustainability literacy more meaningfully into the University environment. He also became a founding committee member of the new PRME Working Group on 'Responsible Work and Purposeful Careers,' contributing to an important international conversation on the future of values-driven work.

Alongside these activities, a new initiative with Global Compact Malaysia and Brunei, co-designed with Bursa Malaysia, has begun exploring how graduate sustainability competencies can be embedded into the curriculum. This is especially timely given growing evidence that students across the region care deeply about sustainability but often see a gap between awareness and action. Together, these efforts position Sunway as an active contributor, shaping more responsible, sustainability-oriented management education in ASEAN.

Listen...



You can find the Transforming Tomorrow Malaysia mini-series on **YouTube**



Visit 1: A Malaysian podcast series and getting to know the place

In our first visit to Malaysia, Paul Turner and Professor Jan Bebbington met with several stakeholders as well as recording a podcast series that explains the sustainability challenges that business in Malaysia faces. While travel has a carbon cost, meeting face to face is an important aspect of getting to know people, a country and a culture. A particular pleasure was meeting Nik Nazmi bin Nik Ahmad (who at the time was the Minister of Natural Resources and Environmental Sustainability in the Malaysian Government) and having a dialogue about points of common interest. We were thrilled later in 2025 to welcome him to Lancaster University to continue those conversations and to have him on the podcast to offer a distinctive political insight that only an elected representative can offer.

Professor Jan Bebbington (second left), Paul Turner (third right) and Ben Peng (far right), all from Lancaster University, with colleagues from the British Malaysian Chamber of Commerce after a productive 'meet and greet', February 2025. Photo: Paul Turner



BDO Executive Director (far left) along with Paul Turner (second right) and Professor Jan Bebbington (far right) at Sunway Lancaster University dinner at Malaysian Parliament, February 2025. Photo: Paul Turner



Visit 2: Nature and Biodiversity in Malaysia

In October 2025 Professor Bebbington returned to Malaysia with Dr Neytullah Ciftci (Centre Research Associate focused on business and biodiversity) for another series of engagements at Sunway University and to attend the ASEAN Capital Markets Summit.

In 2025 Malaysia was the chair of ASEAN and focused on the themes of inclusivity and sustainability. During this visit we returned to Sunway for more interactions with colleagues, staff, students and members of the public as well as taking part in the Capital Markets Summit where the connections between business and biodiversity were to the fore.

Malaysia is a 'mega biodiversity' country and has been proactive in understanding how business activities affect its natural environment.

Our visit to the country was very much a two-way interaction and we are increasingly aware that while countries and businesses in some part of the globe are stepping back from sustainability issues, ASEAN countries are not. This makes the region an important place to get to know better.

Poster for the Inclusive Leadership Series, featuring Professor Jan Bebbington talking about supporting business to take nature into account. October 2025. Image: Sunway University



Dr Neytullah Ciftci and Professor Jan Bebbington at the ASEAN Capital Markets Forum. ASEAN Capital Markets Forum, October 2025 Photo: Jan Bebbington

Listen...



Power to the People: A Political Perspective on Sustainability

Inspire

Without inspiration, shaping the case for sustainability in business is impossible.

Sustainability at Lancaster: an inspiring campus

During 2025 Lancaster University continued its journey towards lowering its carbon footprint associated with direct energy use. Anyone who has visited the campus will have seen the University wind turbine. Adding to this renewable energy capability has been work in progress during 2025 with the development of a solar photovoltaic farm that when operating will generate 11 megawatts of electricity. The facility has been designed with consideration for biodiversity and includes a field demonstrator (for others to learn from the University's work) which explores how land can be used for both solar electricity and agricultural production.

In addition, the Net Zero Energy Centre has been taking shape on campus, supported by more than £21 million of funding from the Government's Green Heat Network Fund (with matched funding from the University). The energy centre will reduce the use of gas on campus by using an Air-Source Heat Pump Array combined with energy storage.

You can find out more about both projects on the [University's energy and carbon webpages](#).

Listen...



Building Sustainability into Project Management

Pentland Centre strategic projects: inspiring for the future

Centre members continue to be hard at work, delivering inspiring teaching and building knowledge to support sustainability in business impacts. In our 10th anniversary year, the Centre has also embarked upon some new projects including:

- Understanding how decent work can be enabled through detecting and preventing labour exploitation. This work links closely to the Modern Slavery, Justice and Complex Supply Chain work.
- Building on earlier work on how business thinks about current challenges and future longevity we are going

to explore how generational governance may support sustainability foresight. Generational governance involves younger people (around 30 years old) being active participants in formal corporate governance routines. What this might involve and what business think about this idea is being investigated.

- Exploring how business professions can better support companies to address nature and biodiversity issues. This project will seek to bridge the functional focus of professions (on procurement, strategy, reporting, etc) with the need for a 'whole of business' response to nature and biodiversity challenges.
- Working with a local large-scale and long-term land restoration initiative, to better understand how ecology, human health and local economies may be affected by landscape level restoration activity.

Transforming Tomorrow Podcast: 2025 In Review

Part of the Pentland Centre's mission is to communicate beyond academia and the reach of published journal articles and in-person events as a way of inspiring a larger number of people and organisations to find out how others have championed sustainability in business. The **Transforming Tomorrow podcast** is an invaluable platform to do this and is a globally impactful podcast that spreads the message of the Pentland Centre and the work of its members to new ears.

Launched in autumn 2023, and hosted by Centre Director Professor Jan Bebbington and member Paul Turner, it has now achieved more than 15,000 unique downloads (a key measure in podcasting). At the end of 2025 the podcast reached the milestone of its 100th episode. We were delighted to welcome Nik Nazmi bin Nik Ahmad, the former Minister of Natural Resources and Environmental Sustainability in the Malaysian Government to offer a political perspective on sustainability.

2025 proved to be Transforming Tomorrow's most successful year so far across several metrics, building on the success of the first 15 months. The podcast reach has grown substantially – by more than 17% in terms of unique downloads year-on-year across audio-only formats despite releasing fewer total episodes (40 in 2025 compared to 49 in 2024). On YouTube, views were up by 31% for the year,

with consumption time increased by 66%. Listenership is spread across six continents, with high numbers of downloads in nations such as the UK, Ireland, Australia, and the USA, and also in Chile, Turkey, and Finland.

The influence of the show has been evident in its inclusion on reading lists for academic programmes both here at Lancaster and at other higher education institutions. By covering core issues and explaining principles in easy-to-understand ways Transforming Tomorrow is a useful tool for lecturers. Spikes in listener numbers in Ireland soon after students there were guided towards several episodes demonstrate that not only are we on these lists, but also that students do take the time to download and engage with the show and then remain as listeners after their 'required' listening is over.

The podcast has also seen an increasing number of requests from academics and other figures to appear as guests. Some are Pentland Centre members keen to spread the word of their work, but others are new contacts – including researchers at IMD in Switzerland, businesses in the USA, and authors and practitioners in Norway. Not all are selected for episodes, but new relationships have been established and the reputation of the Centre for curating interesting conversations has grown.

The past year saw the podcast record its second mini-series of episodes, this time on the Plastic Packaging in People's Lives (PPIPL) project. The ability to engage with a spread of academic researchers across disciplines, as well as the local authority and business shows the benefit of a weekly show that can spend time getting to the heart of subjects while still retaining the everyman accessibility we strive for.

Jan and Paul also travelled to visit colleagues and centre members at Sunway University and record four episodes on Malaysian sustainability and business topics. These episodes have led to a 700% increase in listenership in Malaysia which is now our eighth most popular 'market' in 2025, having been outside the top 20 in 2024. The visit also saw Jan meet then-Malaysian government minister Nik Nazmi, who visited the Centre and appeared on the podcast in the autumn.

Series three will continue through until mid-2026, with plans well underway for a fourth season in 2026/27.

Most-listened episodes (audio only):



- 1 Sustainability Inspiration, Optimism – and the Edmonton Oilers
- 2 AI, Data Centres, and the Great Energy Problem
- 3 Human Trafficking

Most-viewed episodes (YouTube):



- 1 Designing Sustainability into Your Business
- 2 Global Entrepreneurship and Sustainability
- 3 Malaysia's Sustainability Ambitions

Total unique downloads: 8,458



Top five countries on audio formats:



- 1 UK
- 2 USA
- 3 Australia
- 4 Japan
- 5 Germany

Read more...

In 2025, Paul Turner began to write a series of monthly blogs pulling out key themes emerging from the podcasts. [Read here.](#)



Knowledge and Action Hubs highlights

The Centre uses Knowledge and Action Hubs to support areas where we have a concentration of members and/or where we have strategic ambitions for developing expertise (find out more about these **on our website**). Each of the hubs provide some highlights below.



*KTP team L-R, top-bottom: Professor Jess Davies, Professor John Quinton, Phil Scott, Dr Laura Giles, Professor Jan Bebbington
Photo: Lancaster University*

Business and biodiversity

Supporting knowledge sharing

A Knowledge Transfer Partnership (KTP) project to better understand 'carbon' in upland farms was completed in 2025, having been initiated in 2023. KTPs are co-funded by the UK Government and business to support collaborative work on an issue of concern. The project focused on understanding the 'carbon' footprint of livestock production in Cumbrian upland farms, where the Lake District Farmers (LDF) source their meat from and involved a Dr Laura Giles working with the LDF to track the carbon footprint of farms. An innovation in this project was to map the carbon in the soils of case study farms which informed the realisation that retaining soil carbon is an essential element in land management for climate goals.



Watch a **short film** that summarises the project and its outcomes.

Supporting business ecological literacy

Using the YouGov platform, we surveyed the attitudes of senior British business decision makers in 2022 and 2024 to find out how they are thinking about nature and biodiversity and the extent to which they were taking actions in these areas.

Based on these surveys, we made two key observations:

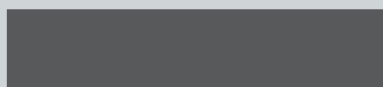
- 1. Given all businesses are connected to nature in some way, business leaders need to enhance their ecological literacy so they can understand and act in response to economic impacts from nature and biodiversity disruption. Literacy would also include understanding where business depends upon nature/biodiversity in their business model.**
- 2. There is a need for more transparency around what businesses are doing in this area. If those at the 'leading edge' of practice in this area tell others about what they are doing and how they are doing it then others will be inspired and better informed about how they might take action.**

Our work in 2026 will focus on how we might support business become more ecologically literate.

Listen...



You can find the Transforming Tomorrow Lake District Farmers mini-series on **YouTube**



**Business, nature and biodiversity:
Baseline evidence for business literacy**



Private sector supported ecosystem restoration

During 2025 the Centre was very pleased to play a supporting role for a Lancaster Environment Centre colleague, Dr Tim Lamont, who has received a Future Leadership Fellowship. These are long term projects funded by UK Research and Innovation, with Tim's project being

called ENTERPRISE (standing for ENSuring Transformative Ecosystem Restoration by the PRivate Sector). This is a five-year fellowship which will focus on how the power of the private sector can be best leveraged to achieve global sustainability targets. The project will be kicking off in 2026, and we look forward to what it will achieve.

Waste and the Circular Economy

In 2025, members were active across several projects, events, and collaborations that reflect the breadth and growing ambition of this research area.

The International Communications Platform for Food Plastic Packaging (ICP) builds on the foundations of the 3.5-year **Plastic Packaging in People's Lives (PPiPL)** project. ICP is a partnership between Lancaster University and Sunway University, funded by UKRI and the Lancaster University

Strategic ODA/ISPF Fund, the ICP focused in 2025 on translating research into accessible outputs, including a whitepaper and infographics. This was complemented by two knowledge exchange events: a Malaysia Knowledge Transfer Workshop held at Sunway Resort Hotel in March, and a digital international forum in July, *Packaging Responsibility in the UK & Malaysia: Policy, People & Waste Management*, which brought together academics and practitioners to explore packaging regulation, household consumption practices, and opportunities for cross-country learning.



Plastic Packaging in People's Lives Malaysia Pilot: Household and Waste Management Practices

Plastics play a critical role in society and the economy in Malaysia. Plastic pollution has sparked debate about waste management, environmental and health impacts. The Malaysian Plastic Sustainability Roadmap (MPSR) 2021-2030 aims to coordinate action.

Knowledge from research is essential to support Malaysia's move to a circular zero waste society.

Key challenges

Speaking to ten households and eight organisations, six key challenges were identified.

- Plastic packaging overconsumption
- Plastics delayed from entering waste streams
- Lack of clear guidance about waste practices
- Infrastructure for plastic recycling
- Capturing quality plastic packaging recyclables
- Navigating regulated and unregulated practices

Opportunities

There are four clear opportunities that support the ambitions of the MPSR.

- Reduce consumption of single-use plastics
- Enhancing consumer education on recycling practices
- Improve material quality by reducing contamination
- Improve data collection and transparency from recycling collection facilities

Future research

Three research agendas emerged to move towards a circular zero waste society.

- Rethink the consumer attitude behaviour gap. Support behavioural shifts to reduce plastic packaging consumption and improve recycling practices.
- Map circular material and social flows of plastics. Examine fates for plastic packaging recycling to support high-quality material recapture.
- Digital monitoring of material flows. Focus on the role of technology in collecting and recording recycling rates.

To learn more our researchers gathered insights in Selangor, Malaysia as part of a twelve-month pilot project.

Please get in touch to help us expand these research ideas. Let's address the plastic challenges facing this growing economy.

Contact:
a.stowell@lancaster.ac.uk

© Plastic Packaging in People's Lives Project Team, Lancaster University. Infographics designed and created by Nifty Fox Creative Ltd 2025.

PPiPL Plastic Packaging in People's Lives

Rethinking the attitude-behaviour gap

Plastic pollution is an urgent global concern, sparking debates about its environmental impact, health consequences, and the efficacy of alternative materials.

The UK Plastics Pact was developed to support the removal of problematic or unnecessary single-use packaging.

It focuses on:

- Reusability
- Recyclability
- Compostability

How do we ensure the UK Plastics Pact is achieved?

The Plastic Packaging in People's Lives Project used robust research methods to gather insights.

It involved:

91 Organisations & **552** People

Rethinking the attitude-behaviour gap

Five recurring themes emerged that impact plastic pollution in the UK.

- Contamination**: Consumers' reluctance to rinse packaging impacts on recycling.
- Moralities and paradoxes of plastic**: Alternative food packaging also poses environmental challenges.
- Identification as a tacit and experiential activity**: Sight, touch and gut instincts are used to identify plastic packaging.
- Convenience**: Plastic-packaged foods are embedded in everyday lives.
- Extending from private to public practices**: Public and workplace waste regimes are different from home.

Recommendations for other packaging contexts

- Communicate**: Promote an understanding of environmental damage.
- Collaborate and Co-create**: Involve multiple stakeholders to encourage shared perspectives.
- Packaging Design**: People identify packaging through tactile sensations.
- Packaging Info**: Labelling is important.
- How Packaging is Used**: Product use should be considered beyond the household.
- Disposal and Recapture**: Consider recapturing packaging back into the production process or nature.
- Transport**: Challenge assumptions about the distance packaging travels for production, consumption, and disposal.

Next steps

Learn more about our research by reading 'Rethinking the Attitude-Behaviour Gap' online.

<https://zenodo.org/records/10839740>

Visit the project website at: www.lancaster.ac.uk/ppipl/

Work with us on:

- Mapping alternative packaging landscape.
- Examining perspectives on convenience in alternative food packaging.
- Household relationships with bins and containers.
- Simplicity of waste disposal in public and commercial spaces.
- Circular flows.

© Plastic Packaging in People's Lives Project Team, Lancaster University. Infographics designed and created by Nifty Fox Creative Ltd 2025.

Also drawing on PPiPL, the In the Loop project at Lancaster University is funded by the UKRI EPSRC Impact Accelerator Account and the UK Shared Prosperity Fund and works in partnership with Booths supermarket and Lancaster City Council to advance dialogue on recycling, plastic packaging circularity, and food packaging innovation. Ongoing research aims to build trust across retailers, customers, and local government by making visible the journey of recycled food plastic packaging from kerbside collection back to supermarket shelves.

Lancaster University and Small World Consulting, the project examines the environmental costs of digital research tools — including AI, digital twins, and the Internet of Things — and works with stakeholders to co-design more sustainable approaches. It is one of nine projects funded under the UKRI EPSRC call *Research for a Digitally Enabled Circular Economy and Sustainable Digital Technologies*.

Beyond these projects, Pentland Centre members were active in the broader research community. The 4th iteration of the *Opening the Bin – Waste Research* conference, held in December 2025 at the Lieu Totem de Rudologie, brought together more than 140 researchers from the humanities and social sciences across 25 countries. The four-day event featured 80 papers, keynote contributions from leading international scholars, and artistic installations exploring themes of waste and discard, with the Waste and Circular Economy Knowledge and Action Hub supporting the event and members contributing to its organisation.

A PhD researcher affiliated with the Hub also presented two papers at the 2025 Academy of Marketing conference at University College Cork, sharing early theoretical work and initial findings on how marketing and trade promotions can support circular economy transitions in Ghana.

You can find the Transforming Tomorrow PPiPL mini-series on **Youtube**



Pentland Centre members are also contributing to **Reimagining Digital Research Infrastructure in Environmental Science for a Sustainable Future**, a three-year EPSRC-funded project that began in early 2025. Led by the UK Centre for Ecology & Hydrology in collaboration with

Pentland Centre members additionally joined the newly launched FIVE-C Network, a cross-sector initiative led by the Centre for Sustainable Innovation connecting academics, industry, and policy across the digital, construction, fashion and textiles, renewable energy, and healthcare sectors in pursuit of a regenerative circular economy. Looking ahead, the focus for the coming year will be on building capacity in waste and circular economy research and developing clear areas of expertise across the Hub.



PhD researcher Emmanuel Bissah conducting fieldwork on circular economy transitions in Ghana. Photos: Emmanuel Bissah

People and the Ocean

This interdisciplinary Hub, led by **Dr Celine Germond-Duret**, draws together expertise on the wide range of connections between people and the coastal and marine environment. In 2025, activities centred on ocean justice.

One Ocean Science Congress, June 2025, Nice, France

The One Ocean Science Congress (OOSC) was a United Nations Oceans Conference special event organised by French research bodies CNRS (Centre national de la recherche scientifique) and IFREMER (Institut français de recherche entièrement dédié à la connaissance de l'océan). It aimed at providing Heads of State, Governments, and broader society with scientific insights on the Ocean's health and future trajectory. Over 2,000 scientists took part, including three members of the Hub. **Professor Christina Hicks** delivered a keynote speech on Diverse Food Systems Support Justice and Nutrition. Dr Germond-Duret delivered a talk on *Co-creating a just and inclusive blue economy: an analysis of ocean justice in policy and legislation*. And Dr Cristina Ruano Chamorro gave a talk on *The impact of fishmeal and fish oil factories on food security in West Africa*. They were joined by Lancaster University's Dr John Childs, who delivered a talk on *Knowing the Deep Seabed: Towards a Just and Inclusive Cartography*.



Professor Christina Hicks, talking about UNOC3 at the Festival of Sustainability, Jun 2025. Photo: Jodie Bawden



Dr Senia Febrica (right) and Dr Celine Germond-Duret (third right) along with Fabien Cousteau (centre) and other side-event participants.
Photo: Senia Febrica

UN Oceans Conference, June 2025, Nice, France

Championing fair and inclusive blue economy

The Hub supported a 'side event' at UNOC3. Titled 'Ocean justice: Championing fair and inclusive blue economy', the solution-focused event, organised by Dr Febrica and Dr Germond-Duret, explored how different delegates understand ocean justice and the obstacles to achieving an inclusive blue economy. Participants included representatives from the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the United Nations Division for Ocean Affairs and the Law of The Sea, Peace Boat, and the Ministry of Environment and Climate Change, Government of Fiji. Fabien Cousteau, a third generation aquanaut, and founder and chief oceanic explorer of Proteus Ocean Group concluded the event.

Mobilizing youth to accelerate ocean action

Dr Germond-Duret and emerging youth leaders from the Global North and the Global South together with Minister of Environment of Chile, Hon. Maisa Rojas, and Minister for Fisheries and Ocean Resources of Kiribati, Hon. Ribanataake Tiwau, along with various NGO partners, emphasised the importance of cross-sector partnerships for youth engagement in research, policy, and outreach at the 'Mobilizing Youth for Ocean and Climate Action – Harnessing Citizen Science and Capacity-Building' side-event. Drawing from her British Academy SeaSights project, Dr Germond-Duret reiterated the importance of arts in connecting young people to the blue space. As she put it: 'any form of arts, photography, painting, sketching are important to invite young people to explore connections with the blue space, and what matters to them. Arts could serve as a bridge between young people and other stakeholders, including decision makers. Decision makers should use arts to engage young people with the ocean and ocean decision-making.'

Bridging Local Wisdom and Innovation for Coastal Communities Resilience

The UN Development Programme Archipelagic and Island States Forum led side-event 'Bridging Local Wisdom and Innovation for Coastal Communities Resilience' explored how bridging local and traditional knowledge with scientific and technological innovation can strengthen climate resilience in coastal and island communities while advancing sustainable ocean-based livelihoods and inclusive development. Dr Germond-Duret and Dr Febrica's presentation on 'Blue Economy and Climate Resilience' noted that acceleration in blue economy activities has often brought injustices to ocean-dependent economies such as dispossession, displacement, pollution and waste. They urged stakeholders to place communities at the heart of climate-resilient blue economy pathways including in co-designing trajectories, strategies, choices and actions.

Science Summit (Alongside UNGA 80)

Dr Febrica conveyed a session on Centring multispecies justice in the blue economy to address ocean-climate-biodiversity at the Science Summit organised alongside the 80th session of the UN General Assembly (UNGA 80). Professor Jan Bebbington, Hub member and Director of the Pentland Centre, talked about the role that seafood businesses can play to foster multispecies justice. Dr Germond-Duret highlighted the need to consider the local to global dimensions of multispecies justice, starting with the most marginalised communities. Panel members also included speakers from the Scottish Oceans Institute, SOAS University of London, Music for the Sea, Restore Coral and Peace Boat.

Modern Slavery, Justice and Complex Supply Chains

Working closely with Distinguished Professor Linda Hendry, we sought to understand and articulate the **expertise and interest** that exists across the Pentland Centre relating to Modern Slavery and complex supply chains. In March 2025 we built on this to identify the key external organisations aligning to our expertise, aiming to understand which might be interested in closer working. In March 2025 we hosted an event, *Modern Slavery: co-creating joint research agendas to swing the pendulum towards supply chain justice*, to pull together academic expertise with practitioners from a range of NGOs, and policy makers, to collectively identify what questions exist in policy and practice that we could collectively respond to.

By supporting this activity with some seedcorn funding we inspired projects such as Dr Divya Jyoti and Dr Raf Savva's FAIRwork project which is developing and utilising methodologies to incorporate lived experience into regulatory and legal practices and has subsequently received additional funding. This is one of the benefits of being able to fund 'starter' projects that then go on to attract more resources and achieve greater success.

By providing a network of connections we have also helped progress Dr Mahmoud Gad's project which is developing an **AI tool to improve modern slavery reporting**. This support has directly led to a collaboration with the Office for the Director of Labour Market Enforcement where we engaged with multiple NGOs, government departments, and industry representatives to collate and synthesise evidence to inform a Future Orientated Prevention Strategy designed to help inform the strategic direction of the Fair Work Agency. The **report** was published in early 2026. This demonstrates the value of being 'challenge-led' but within the specified context of the collective expertise and interest we have within the Pentland Centre.



Top image: Distinguished Professor Linda Hendry introduces the work of the Modern Slavery and Justice Hub, March 2025. Photo: Jodie Bawden.

Lower image: Participant discussion at 'Modern Slavery: co-creating joint research agendas to swing the pendulum towards supply chain justice', March 2025. Photo: Jodie Bawden.

Cross-cutting work: Transition and Transformation



Knowledge Exchange event with Reed Talent Solutions, Stephen King (centre) and other participants, Photo: Jodie Bawden

Knowledge Exchange Team

The Lancaster University Knowledge Exchange Team works closely with the Pentland Centre to act as a connection point to policy and practice, collaborating with academics to support and facilitate this translational activity. As an active member of the Centre, the case studies described below gives a snapshot of how Stephen King has developed this activity across a range of settings and scenarios:

The Reed Group are a long-term partner of Lancaster University Management School. With a company purpose of 'improving lives through work' they align with the ethos and values of the Pentland Centre and work closely with academics across the Management School, particularly those in the Department of Organisation, Work & Technology. The partnership began with The Reed Group employees supporting research grant applications, acting as advisory board members for funded projects, and delivering guest lectures. This was a positive interaction, and we proactively built on this to co-create a future partnership agenda. Working closely with academic members of the Pentland Centre we have, through a series of events and workshops with industry and students, set out this future collaborative focus. This includes AI, skills and future workforce considerations with a multi-generational perspective. This collaboration has also generated multiple additional benefits, for example a close connection with **The Better Hiring Institute** who run the **Modernising Employment APPG**. Professor James Faulconbridge, Ben Harrison, and Stephen King sit on the steering committee and help to set the future agenda in this space. This connection has also resulted in **Dr. Huw Fearnall-Williams** contributing to the development of **AI at work and Artificial Intelligence in Hiring guidance**, and a Private Members' Bill on AI Regulation. This demonstrates the value of taking a proactive, co-designed approach to partnership development and the offshoot benefits that close collaborations can deliver.

Lancashire Football Association is another key regional partner, having co-ordinated and developed multiple collaborative projects touching on many areas of interest for the Pentland Centre. One particular focus has been on overcoming the structural, cultural, and multi-faceted barriers facing potential football players of South Asian descent in Lancashire. The deep understanding of this challenge and the role the Lancashire FA is taking to try and overcome this enabled us to draw links through to the 'Right to Play' theme within Pentland Brands' sustainability framework, and Mitre's role as a grassroots football brand. This activity demonstrates the value of gaining a deep understanding of our partners so that meaningful and beneficial connections can be made.

Appendix 1:

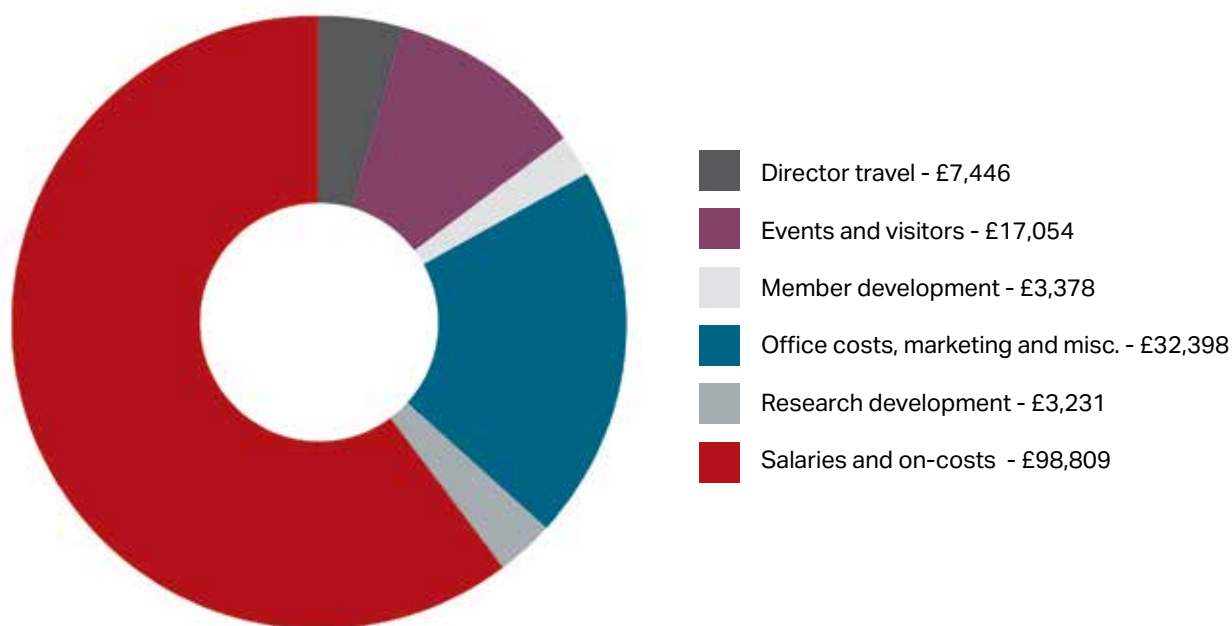
Donation and spending

The Pentland Centre is funded through a philanthropic donation from the Rubin Foundation Charitable Trust. The core grant is £200,000 per annum. The Centre focuses on supporting initiatives beyond activity undertaken by the University.

In this reporting period, we spent £162,337, with approximately 61% of this being salaries and oncosts for the professional and research staff team. This team ensures that the Centre programme of work can be delivered. 20% of expenditure was for office costs and marketing, which includes the Transforming Tomorrow podcast; 11% was spent on events and visitors; 5% on Director travel; 2% on research development and 2% on member development.

Spending this year was 21% down from the last reporting period with the reduction largely due to a Centre researcher salary cost being supported from an external research grant and slightly delayed starts to some projects during a period of change at the University.

Pentland Centre spend 1 Jan 2025 - 31 Dec 2025



Appendix 2: People

Pentland Centre staff

Jan Bebbington	Centre Director, Rubin Chair of Sustainability in Business
Madiha Ahmad	Projects, Events & Membership Co-ordinator
Isabelle Hoggmascall	Projects, Events & Membership Co-ordinator
Desna Mackenzie	Centre Manager
Ophelia Chidgey	Research Fellow for Decent Work
Neytullah Ciftci	Research Associate for Business and Biodiversity
Elliot Groombridge	Research Assistant - Sustainability Impacts of Data Centres
Lauren Thornton	Research Associate for Trustworthy and Accountable Decision Making
Lucy Treasure	Research Associate for Trustworthy and Accountable Decision Making
Nick Barter	Honorary Professorial Fellow
Guy Duke	Honorary Professorial Fellow
Duncan Pollard	Honorary Professorial Fellow
Alex Ryan	Honorary Professorial Fellow
Nadine Andrews	Visiting Researcher
Rod Bain	Visiting Researcher
Katherine Ellsworth-Krebs	Visiting Researcher
Laura Giles	Visiting Researcher
Salaheldin Hamad	Visiting Researcher
Meng Jia	Visiting Researcher
Carolynne Lord	Visiting Researcher
Kyla Raby	Visiting Researcher
Lucy Wishart	Visiting Researcher

Lancaster University Management School

Paula Ainsworth	Quality Assurance and Enhancement Manager
Anis Alich	Doctoral Research Association, ENST
Sophie Alkhaled	Senior Lecturer, ENST
Kostas Amiridis	Senior Lecturer, OWT
Aaron Anvuur	Senior Lecturer, Management Science
Salma Atcha	Business Networks Officer, ENST
Sue Atherton	Head of Faculty Operations
Richard Baguley	Teaching Associate, ENST
Shantanu Banerjee	Honorary Researcher, Accounting & Finance
Jody Bawden	Project Administrative Support Officer, Engagement Operations Assistant

Burak Boyaci	Senior Lecturer, Management Science
Martin Brigham	Senior Lecturer, OWT
Lenka Brunclikova	Teaching Associate, OWT
Nicole Bulawa	Lecturer, Marketing
Mohammed Cheded	Lecturer, OWT
Maria Cherednychenko	Research Associate, Accounting & Finance
Justin Chircop	Professor, Accounting & Finance
Elisavet Christou	Lecturer, OWT
Hameed Chughtai	Senior Lecturer, OWT
Emma Connolly	Events & Marketing Officer
Darren Dalcher	Professor, Management Science
Rory Daly	Head of Careers
Ahmad Daryanto	Professor, Marketing
Mark Dawson	Director of Digital Education
Dakshina De Silva	Professor, Economics
Allan Discua Cruz	Senior Lecturer, ENST
Quynh Do Nhu	Lecturer, Management Science
Sylvia D'Souza	Lecturer, OWT
Huw Fearnall-Williams	Lecturer, OWT
Josiane Fernandes	Lecturer, Marketing
Marta Ferri	Research Associate, OWT
Chris Ford	Senior Lecturer, Accounting & Finance
James Freund	Lecturer, Marketing
Yu Fu	Teaching Fellow, OWT
Mahmoud Gad	Senior Lecturer, Accounting & Finance
Eman Gadalla	Lecturer, Marketing
Magnus George	Professor, ENST
Victor Giannandrea	Entrepreneur in Residence, ENST
Brian Gregory	Teaching fellow, ENST
Charlotte Hadley	Research Associate, Marketing
Noor Hashim	Lecturer, Accounting & Finance
Linda Hendry	Distinguished Professor, Management Science
Anthony Hesketh	Senior Lecturer, OWT
Marian Iszatt-White	Senior Lecturer, ENST
Sarah Jack	Distinguished Professor, ENST
Craig Jones	Lecturer, OWT
Divya Jyoti	Lecturer, OWT
Steve Kempster	Professor Emeritus, ENST

Joanne Larty	Senior Lecturer, ENST
Lingxuan Liu	Senior Lecturer, Management Science
Rebecca Liu	Senior Lecturer, Marketing
Felix Martin	Lecturer, Marketing
Jan Maskell	Associate Lecturer
Clare Mumford	Senior Research Associate, OWT
Radka Newton	Personal Chair, ENST
Emad Noureldeen	Research Associate, Accounting & Finance
Dermot O'Reilly	Senior Lecturer, OWT
Sena Ozdemir	Senior Lecturer, Marketing
Libby Packham	Alumni Officer, LUMS Careers
Argyro Panaretou	Professor, Accounting & Finance
Niki Panteli	Professor, Management Science
Maria Piacentini	Professor, Marketing
Martin Quinn	Reader, OWT
Neil Ralph	Senior Teaching Fellow, OWT
Ghadafi Razak	Visiting Researcher, Management Science
Clare Rigg	Visiting Researcher
Jekaterina Rindt	Lecturer, Marketing
Anita Schiller	Senior Lecturer, Economics
Kostas Selviaridis	Professor, Management Science
Mark Shackleton	Professor, Accounting & Finance
Aurelie Slechten	Senior Lecturer, Economics
Dasha Smirnow	Lecturer, Accounting & Finance
Valerie Stead	Professor Emeritus, ENST
Ian Steel	Entrepreneur in Residence, ENST
Mark Stevenson	Professor, Management Science
Alison Stowell	Senior Lecturer, OWT
Mohan Subbiah	Teaching Fellow, Accounting & Finance
Cong Tao	Lecturer, Accounting
Emre Tarim	Lecturer, Marketing
Johanna Telfer	Leader in Residence, ENST
Paul Turner	Content Manager – Research & Engagement
Savita Verma	Visiting Researcher, Management Science
Di Wang	Lecturer, Accounting & Finance
Georgie Watson	Industrial Liaison Manager, Management Science
Peter Watt	Lecturer, OWT
Rose White	External Accreditation Manager

Jane Wigston	Student Programmes Co-ordinator, ENST
Chelsea Yao	Senior Lecturer, Accounting & Finance
Steve Young	Professor, Accounting & Finance

Faculty of Science & Technology (FST)

Antonio Allegretti	Lecturer, LEC
Alona Armstrong	Professor, LEC
Oliver Bates	Research Fellow, Computing & Communications
Kirsti Cleminson	Faculty Resources & Projects Officer
Felix Conteh	Senior Research Associate, LEC
Adrian Friday	Professor, Computing & Communications
Christina Hicks	Professor, LEC
Timothy Lamont	Senior Lecturer and Research Fellow- UKRI Future Leaders Fellow, LEC
Cristina Ruano Chamorro	Senior Research Associate, LEC
Marcia Smith	Senior Research Associate, Computing & Communications

Faculty of Humanities, Arts & Social Sciences (FHASS)

Becky Bawden	Faculty Resources Manager (Equality, Diversity & Inclusion)
Celine Germond-Duret	Lecturer, School of Global Affairs
Carlos López Galvis	Professor, School of Arts
Carys Nelkon	Partnership Development Manager, Morecambe Bay Curriculum
Rafael Savva	Lecturer, School of Law
Rachel Verrall	Faculty Resources Manager (Facilities, Health & Safety)

PhD Candidates across Lancaster University

Mo Abbasi Esbourezi	PhD Candidate, ENST, LUMS
Maryse Abi Haidar	PhD Candidate, ENST, LUMS
Nour Almajed	PhD Candidate, Accounting & Finance, LUMS
Farmon Asadov	PhD Candidate, Marketing, LUMS
Emmanuel Bissah	PhD Candidate, Marketing, LUMS
Nermine Bouabid	PhD Candidate, Accounting & Finance, LUMS
Camilo Cornejo Martínez	PhD Candidate, School of Law, FHASS
Fatemeh Jafarzadeh Dogouri	PhD Candidate, OWT, LUMS
Ellie Dolmor	PhD Candidate, Marketing, LUMS
Fabian Fluche	PhD Candidate, OWT, LUMS
Jason Harrison	PhD Candidate, School of Arts, FHASS
Matt Healey	PhD Candidate, ENST, LUMS
Sunanda Jain	PhD Candidate, OWT, LUMS

Amal Khoja	PhD Candidate, Accounting & Finance, LUMS
Abdul Qadus	PhD Candidate, Management Science, LUMS
Michael Scotney	PhD Candidate, Accounting & Finance, LUMS
Sarah Wiggins	PhD Candidate, Marketing, LUMS
Yingting Zhu	PhD Candidate, ENST, LUMS

Other areas of Lancaster University

Georgiana Allison	Head of Sustainability, Facilities
Hilary Barraclough	Head of Business Development and Academic Events Services, Facilities
Natalie Bauer	Marketing & Communications Officer, Marketing
Candace Davies	Assistant Director of Commercial Services, Facilities
Stuart Foy	Development Manager, Facilities
Stephen King	Partnership Development Manager, Research & Enterprise Services
Matthew Pawelski	Impact Development Manager, Research & Enterprise Services

Partner institutions

Fiaz Ahmad	PhD Candidate, Sunway University
Jose Alcaraz-Barriga	Lecturer, Lancaster University Leipzig
Yuka Fujimoto	Professor / Associate Dean, Sunway University
Marlene Hohn	Lecturer, Lancaster University Leipzig
Stephen Homer	Director - Yunus Social Business Centre, Associate Professor, Sunway University
Mahrukh Iqbal	PhD Candidate, Sunway University
Imran Rautan	PhD Candidate, Sunway University
Ummara Razi	PhD Candidate, Sunway University
Jian Wang	Senior Lecturer, Lancaster University Leipzig

Advisory Board Members

Stephen Rubin	Chair of the Pentland Group plc
Steve Brammer	Dean of the School of Management, University of Bath
Edwin Charnaud	EMEA Chairman for Aon M&A and Transaction Solutions
Paul Druckman	Trustee, Accounting for Sustainability & Deputy Chairman, SHIFT
Linden Edgell	Global Sustainability Director, ERM
Darian McBain	Corporate Sustainability Advisor
Richard Spencer	Director of Sustainability, ICAEW
Tom Trezise	Chairman, Patient Privacy Rights

Appendix 3: Programme of Events

22 Jan 2025: *Virtual Common Room on Industry 5 and Society 5: Future Sustainability in Business from West to East*, led by Dr Rebecca Liu, Steve Kremer (Periphass) and Professor Jan Bebbington.

28 Jan 2025: *Public affairs and the higher education sector*, led by Joseph Finkle-Sprigge and Professor Jan Bebbington.

5 Feb 2025: *Accounting for Carbon on Upland Livestock Farms*, led by Dr Laura Giles, Professor Jan Bebbington, Dr Dmitry Yumashev (Small World Consulting), Phil Scott (Lake District Farmers) and Professor Matthew Brander (University of Edinburgh).

11 Feb 2025: *Research Explainer Session on Leadership-as-stewardship: Honouring our past while ensuring our future*, led by Dr Marian Iszatt-White.

13 Mar 2025: *Workshop on Going beyond or just accepting businesses' responsibilities? Driving customer behaviour and lifestyle change at home*, led by Dr Dermot O'Reilly, Dr Alison Stowell, Dr Patrick Elf (Middlesex University), Professor Jan Bebbington.

27 Mar 2025: *Research Explainer Session on Corporate Biosphere Stewardship*, led by Professor Jan Bebbington.

29 Apr 2025: *Research Explainer Session on Business and Biodiversity*, led by Professor Jan Bebbington.

14 May 2025: *Research Explainer Session on Benchmarking*, led by Professor Jan Bebbington.

20 May 2025: *Justice in (garment) supply chains: Critically reflecting on novel creative approaches for theorizing worker voice and decent work*, led by Dr Victoria Stephens (University of Manchester) and Distinguished Professor Linda Hendry.

22 May 2025: *ESG in Family Firms: A Review of Research, Regulations and Practice Guidance*, led by Professor Mat Hughes (University of Leicester), Dr Bingbing Ge and Professor Sarah Jack.

19 Jun 2025: *From Footprints to Mindsets – sustainability transformation in universities*, led by Dr Alex Ryan.

26 Jun 2025: Festival of Sustainability – see pages **8-9** and **visit the event webpage**.

1 Jul 2025: *Research Explainer Session on Plastic Free July and the experiences of the Plastic Packaging in People's Lives Team*, led by Dr Alison Stowell.

18 Sep 2025: *Uninformed and unethical consumer behaviour: What Australia's Modern Slavery Act represents as the 'problem' of modern slavery*, led by Kyla Raby (University of South Australia). **A recording is available online**.

11 Nov 2025: *Research Explainer Session on Turning points in Climate Justice: What recent International Rulings mean for sustainability*, led by Camilo Cornejo.

27 Nov 2025: *Incorporating sustainability into research practice: Gaining insight from different perspectives*, led by Dr Valerie Seymour and Dr Georgiana Allison.

Appendix 4:

Members publications & grants

All the teaching and research members of the Pentland Centre have 'academic homes', in specific departments at Lancaster University, at other higher education institutions or with external organisations. These publications represent the insights that members have brought to the business/sustainability literature that may be of interest to you.

Likewise, members are actively bidding for, and are successful at being granted, research projects. The list on page 31 shows successful internal and external grant applications by members during the reporting period where connection to the Centre has been a factor in a grant application.

We are not claiming credit for these achievements. Rather these lists demonstrate the added value being a member of the Centre, and therefore the Rubin Foundation Charitable Trust, brings to other areas of the University and partner institutions.

If you see something interesting here, please be in touch with Pentland Centre members directly.

Publications

Abbasi, H.A., Ting, D.H., Moughal, W., **Hamad, S.** / An integrated model for encouraging consumer EV purchase: UTAUT extended with electric vehicle knowledge and advertisement. *Research in Transportation Business and Management*. 2025, Vol. 63.

Abbasiantaeb, Z., Verberne, S., **Wang, J.** / Tracing science-technology-linkages: A machine learning pipeline for extracting and matching patent in-text references to scientific publications. *Information Processing & Management*. 2025, Vol. 62, No. 6.

Akzambekkzy, A., **Dalcher, D.**, Sarkambayeva, S. et al. / Creating a sustainably impactful project: Organizational prerequisites. *Foundation of Management*. 2025, Vol. 17, No. 1. pp. 97-112.

Alkhaled, S. / Doing' gender to 'undo' culture: Entrepreneurs' cultural marginalisation and legitimacy work in (neo)patriarchal societies: In the Shadows: Tales of Cultural Marginalization in Modern Society. *Research in the Sociology of Organizations*. 2025.

Allegretti, A., Ayilu, R., Okafor-Yarwood, I., Standen, S., Hicks, C. / Beyond growth? Understanding the grassroots entrepreneurship of women fish processors in Ghana. *World Development Perspective*. 2025, Vol. 38.

Alqahtani, F. , **Selviaridis, K.**, **Stevenson, M.** / How incentive alignment along the supply chain fosters incremental innovation: Evidence from defence performance-based contracts. *International Journal of Operations and Production Management*. 2025, Vol. 45, No. 6. pp. 1250-1275.

Alsamarra'i, Z., **Panteli, N.**, John, B. / Leading with Algorithms: Empathetic Leadership for Hybrid Work. *The Australian Journal of Information Systems*. 2025.

Amiridis, K., Introna, L., **Jyoti, D.**, **O'Reilly, D.**, **Stowell, A.** / Reflections on a pedagogy of responsibility. *Research Handbook of Critical Management Education*. editor / Clare Rigg, Kiran Trehan. Cheltenham: Edward Elgar, 2025. pp. 274-289

Bates, O., Remy, C., Tyler, A., Smith, M. T., Friday, A. / Playful Explorations: Non-domestic energy research through games design. *ICT for Sustainability*, Dublin, Ireland.

Bates, O. (Artist), Kirman, B. (Artist). / Making a Meal out of a Mountain: Doing Research through Games Design. [Artefact].

Blaydes, H., Gardner, E., Whyatt, J.D., Potts, S.G., Dunford-Brown, R., Redhead, J.W., **Armstrong, A.** / Solar farms as potential future refuges for bumblebees. *Global Change Biology*. 2025, Vol. 31, No. 10.

Bluhm, H., Wohlschlager, D., Pohl, J., Beucker, S., Bieser, J., Schien, D., Widdicks, K., **Friday, A.**, Blair, G.S. / Understanding digitalization's environmental impact: why LCA is essential for informed decision-making. *npj Climate Action*. 2025, Vol. 4, No. 1.

Brewster, L., Chekar, C. K., Lambert, M., **Mumford, C.** et al. / Medical training pathways and underdoctored areas: a qualitative study of doctors working in areas that struggle to recruit and retain. *Health & place*. 2025, Vol. 96.

- Brown, S. D., Gasparin, M., **Quinn, M.** / How to Construct a Time Machine: The Anthropocene in an Indigo Vat. Southern Anthropocenes. editor / Casper Bruun Jensen. London: Routledge, 2025.
- Burke, M.K., Conley, M.A., **Jack, S.L.** / Neruda through copper-coloured glasses: the role of place attachment in the embeddedness of Chilean entrepreneurship. *Entrepreneurship and Regional Development*. 2025, Vol. 37, No. 7-8. pp. 956-982.
- Burton, N., Sinnicks, M., Hedley, C., **Discua Cruz, A.** et al. / Firms as Quasi-Traditions: The Moral Backbone of Social Legacy. *Academy of Management Perspectives*. 2025.
- Carvalho, F., Lee, H.K., Blaydes, H., Treasure, L., Harrison, L.J., Montag, H., Vucic, K., Scurlock, J., White, P.C.L., Sharp, S.P., Clarkson, T., **Armstrong, A.** / Integrated policymaking is needed to deliver climate and ecological benefits from solar farms. *Journal of Applied Ecology*. 2025, Vol. 62, No. 7. pp. 1579-1586.
- Chircop, J.**, Tarsalewska, M., Trzeciakiewicz, A. / Learning to be green: Accounting comparability and environmental violations. *British Accounting Review*. 2025, Vol. 57, No. 5.
- Chircop, J.**, Nguyen, N., Nguyen, T. / Climate news and accounting comparability. *Advances in Accounting*. 2025, Vol. 69.
- Clapp, J., Vriezen, R., Laila, A., Conti, C., Gordon, L., **Hicks, C.**, Rao, N. / Corporate concentration and power matter for agency in food systems. *Food Policy*. 2025, Vol. 134.
- Dalcher, D.** / Thinking Strategically: In search of social value. *PM World Journal*. 2025, Vol. XIV, No. VI.
- Dalcher, D.**, Piwowar-Sulej, K., Soltysik, M. (Editors) / Sustainability and agile project management: Methodologies for sustainable development. New York: Routledge, 2025. 148 p. (Routledge Frontiers in Project Management).
- Do, Q., Stevenson, M.** / The Dual Brokerage Role of Digital Platforms in the Transition to a Circular Economy. *Journal of Operations Management*. 2026, Vol. 72, No. 1. pp. 108-130.
- Elstub, S., Carrick, J., **Andrews, N.** et al. / Climate assemblies and the public: An analysis of UK cases. *Environmental Science and Policy*. 2025, Vol. 172.
- Fernandez Chulian, M., Garcia-Torea, N., Larrinaga, C., **Bebbington, J.** / Boundary objects: sustainability reporting and the production of organizational stability. *Accounting, Auditing and Accountability Journal*. 2025, Vol. 38, No. 2. pp. 509-536.
- Galloway, E., Massam, A., Allard, J., Oldham, P., Sarailidis, G., Catto, J., **Germond-Duret, C.**, Young, P. / Catastrophe risk models as quantitative tools for climate change loss and damage: A demonstration for flood in Malawi, Vietnam, and the Philippines. *Journal of Catastrophe Risk and Resilience*. 2025, Vol. 3.
- Garcia-Ortega, B., Galan-Cubillo, J., **Do, Q., Stevenson, M.** / Circular ecosystem orchestration and institutional change in the fashion industry. *Business Strategy and the Environment*. 2025.
- Gordon, N., Morel, P., **Dalcher, D.** / Sustainability and AI: Ethics at the Edge of Innovation. *ITNOW*. 2025, Vol. 67, No. 4. pp. 10-11.
- Gu, B., Zhang, M., Zhou, M., Fu, H., Hu, Q., Gu, C., Wang, Y., Fujiwara, T., **Liu, L.** et al. / Nationally localized strategies for zero-carbon municipal solid waste management. *Nature Sustainability*. 2025, Vol. 8. pp. 1211-1222.
- Gürbüz, M. Ç., **Ozdemir, S.**, Sena, V. et al. / Linking up for resilience: Supply chain structures as SME survival tools. *Impact*. 2025, Vol. 2025, No. 1. pp. 31-35.
- Huang, J., **Daryanto, A.**, Hogg, M. et al. / What Drives Participation in Green Loyalty Programmes? Examining Reactance, Guilt, and Staff Attractiveness. *International Journal of Contemporary Hospitality Management*. 2025, Vol. 37, No. 13. pp. 1-54.
- Huang, J., **Daryanto, A.**, Hogg, M. et al. / Green Loyalty Programmes: customer trait reactance and reward preferences. *Journal of Consumer Behaviour*. 2025, Vol. 24, No. 4. pp. 2019-2032.
- Ismail, K., Nikookar, E., Pepper, M., **Stevenson, M.** / The implications of Industry 4.0 for managing supply chain disruption and enhancing supply chain resilience: a systematic literature review. *International Journal of Production Research*. 2025, Vol. 63, No. 19. pp. 7278-7304.
- Jones, C.** / Disimagination and Corporate Futurity: The Neoliberal Enclosure of Outer Space. *Future Spaces of Power: The Cultural Politics of Digital and Outer Spaces.* editor / Caroline Alphin, Leigh McKagen, Shelby Ward. London: Bloomsbury Academic, 2025.
- Jouffray, J. B., Viridin, J., **Bebbington, J.** et al. / Identifying and closing gaps in corporate reporting of ocean impacts. *Nature Sustainability*. 2025, Vol. 8. pp. 1371-1380.
- Jyoti, D.** / "Thinking about the people who make the products": Conversations for Sustainable Futures. *Organizational Dynamics*. 2025, Vol. 54, No. 2.
- Lenney, P., Gunther, L., **Dawson, M.** / In Pursuit of Practical Wisdom: Making Good Judgments in a Wicked World. Ethics Press, 2025.

- Maconachie, R., **Conteh, F.M.** / Stuck in transition? Artisanal mining, livelihood diversification and rural change in Sierra Leone. *The Extractive Industries and Society*. 2025, Vol. 22.
- Meng, J., Stevenson, M.,** Wilhelm, M., **Hendry, L.** / From the few to the many: Scaling up sustainability-oriented supplier development projects. *International Journal of Operations and Production Management*. 2025.
- Nikookar, E., Ali, I., **Stevenson, M.** et al. / Necessary Antecedents of Supply Chain Resilience: The Nonnegotiable Influence of Supply Chain Responsiveness and Collaboration. *Journal of Supply Chain Management*. 2025.
- Owusu-Kwarteng, A., Forson, C., Dada, L., **Jack, S.** / A symbolic violence approach to gender inequality in academia. *Gender, Work and Organization*. 2025, Vol. 32, No. 1. pp. 436-457.
- Owusu-Kwarteng, A., **Jack, S.,** Forson, C., & (Lola) Dada, O. / In pursuit of the third mission: Exploring women's participation in academic engagement activities in sub-Saharan Africa. *Technovation*. 2025, Vol. 141.
- Panteli, N.,** Nthubu, B. R., Mersinas, K. / Being Responsible in Cybersecurity: A multi-layered Perspective. *Information Systems Frontiers*. 2025.
- Piacentini, M., Stowell, A., Hadley, C., Mumford, C., Verma, S.,** Cronin, J., Hardy, J., Hendry, L., Skandalis, A. / The Paradox of Plastic Packaging. *The Routledge Companion to Marketing and Sustainability*. / Peattie, K., De Angelis, R., Koenig-Lewis, N., Strong, C. (Eds.) London: Routledge, 2025. pp. 123-137
- Raelin, J. A., **Iszatt-White, M.,** Carroll, B. et al. / Introductory Article: Next Generation of Leadership-as-Practice: Reconceptualizing Change. *Journal of Change Management*. 2025, Vol. 25, No. 1. pp. 1-10.
- Rao, N., Marzi, E., Baudish, I., Laila, A., Conti, C., **Hicks, C.** / Citizen voice and state response in the context of food system transformations. *Food Policy*. 2025, Vol. 134.
- Razak, G., Hendry, L., Stevenson, M.** / African socio-cultural characteristics: Enabling or hindering sustainability? *International Journal of Operations and Production Management*. 2025.
- Remy, C., **Bates, O., Friday, A.** / ContextViz: Making Context and Systems Knowledge Visible in Non-Domestic Energy Demand Dashboards. *ICT for Sustainability*, Dublin, Ireland.
- Robinson, J. P. W., **Fernandes, J.** / The hidden role of market-making in the rise of farmed salmon. *Environmental Research Letters*. 2025, Vol. 20, No. 8.
- Rockström, J., Thilsted, S.H., Willett, W.C., Gordon, L. J., Herrero, M., **Hicks, C.** et al. / The EAT–Lancet Commission on healthy, sustainable, and just food systems. *The Lancet*. 2025, Vol. 406, No. 10512. pp. 1625-1700.
- Savva, R.** / Encouraging Institutional Shareholders to Undertake Double-Materiality-Minded Engagement Practices Through Regulation - Much to Do and Lots to Consider. *InterEULawEast: journal for the international and european law, economics and market integrations*. 2025, Vol. 12, No. 1. pp. 195-246.
- Savva, R.** / Plus Ça Change, Plus c'est la Même Chose — Preliminary Reflections on the United Kingdom Stewardship Code 2026. *International Company and Commercial Law Review*. 2025, Vol. 36, No. 12. pp. 621-634.
- Schiller, A., Slechten, A.** / Effect of natural resource extraction on school performance: Evidence from Texas. *Energy Economics*. 2025, Vol. 144.
- Selviaridis, K.,** Spring, Martin. / Innovation intermediation in supply networks: Addressing shortfalls in buyer and supplier capabilities for collaborative innovation. *Journal of Operations Management*. 2025, Vol. 71, No. 1. pp. 40-80.
- Shackleton, M.,** Yao, C., Zuo, Z. / Corporate social responsibility and insider horizon. *Journal of Corporate Finance*. 2025, Vol. 90.
- Shah, S. Q. A., Lai, F-W., Shad, M. K., **Hamad, S.** et al. / Exploring the Effect of Enterprise Risk Management for ESG Risks Towards Green Growth. *International Journal of Productivity and Performance Management*. 2025, Vol. 74, No. 1. pp. 224-249.
- Silva, M., Santos, K., Pereira, S., **Hendry, L.** / Switching the telescope lens: a sociomaterial perspective of sustainable agricultural (proto)practices transfer in an agrifood supply chain. *Journal of Operations Management*. 2025, Vol. 71, No. 4. pp. 529-549.
- Smirnow, D.,** Cooper, D. J. / Expanding the analysis of accounting regulation: On the operationalization of disclosure regulation. *Accounting, Organizations and Society*. 2026, Vol. 116.
- Sobkowiak, M., **Bebbington, J.,** Blasiak, Robert et al. / Accountability in collaborative settings: understanding inter-corporate sustainability initiatives. *Accounting Forum*. 2025.
- Statsenko, L., Scholten, K., **Stevenson, M.** / The influence of global value chain governance on supply network resilience. *Supply Chain Management: An International Journal*. 2025, Vol. 30, No. 2. pp. 161-177.

Tang, D., Yan, J., **Yao, C.** / The Determinants of ESG Ratings: Rater Ownership Matters. *Journal of Accounting Research*. 2025.

Tarim, E. / Using Imagination in Management Education: The Case of Actual Jobs and Imagined Diaries. *Journal of Scholarship and Innovation in Management Education*. 2025, Vol. 1, No. 2. pp. 1-4.

Van der Giessen, M., Koptsyukh, A., Kodeih, F., **Alkhaled, S.** et al. / From emergency relief to empowerment: Transitioning government-led social entrepreneurship practices to support Ukrainian refugees. *Journal of Business Venturing Insights*. 2025, Vol. 24.

Wang, D., Cooper, S. M., Chapman, C. S. et al. / Sustainability (Environmental, Social, and Governance) Reporting: Tracing Materiality's Visionary and Relational Role over 25 Years through Boundary Objects and Boundary Work. *The Accounting Review*. 2025, Vol. 100, No. 4. pp. 417–441.

White, R. / The Effect of PRME on Curriculum: A Case Study. *Journal of Scholarship and Innovation in Management Education*. 2025, Vol. 2, No. 2.

Wong, N., Smith, A., **Discua Cruz, A.** et al. / How Do Firms Manage Ethically-Contested Organizational Paradoxes? Insights from two Historical Case Studies of Modern Slavery. *Business History*. 2025, Vol. 67, No. 2. pp. 629–657.

Zhang, J., Tyfield, D., **Liu, L.** / How can food system actors influence food system resilience? A literature review via an actor-based lens. *Environmental Research: Food Systems*. 2025, Vol. 2, No. 2.

Research Funding

Environmental Injustice in the UK: Exploring the Relationship Between Socioeconomic Status and Pollution Exposure. **Professor Dakshina De Silva, Dr Anita Schiller, Dr Aurelie Slechten.** Economics. £8,983.

FLF: ENTERPRISE: ENSuring Transformative Ecosystem Restoration by the PRivate Sector. **Dr Timothy Lamont.** Lancaster Environment Centre. £1,544,976.

Marketing Innovation for the Day After Tomorrow: Navigating Marketing 5.0 in the Era of Industry 5.0. **Dr Rebecca Liu.** Marketing. £14,801.

Market-making and innovation support organisations. **Dr Nicole Bulawa.** Management Science. £39,935.

NERCOUTE Inclusive Natural Environment Futures. **Professor Christina Hicks.** Lancaster Environment Centre. £43,672.

Racial Diversity UK Fund. **Dr Divya Jyoti, Dr Martin Quinn.** Organisation, Work and Technology. £140,336.

Research for a digitally enabled circular economy and sustainable digital technologies. **Professor Adrian Friday, Dr Alison Stowell.** £780,072.

SPOON – exploring Social Practices and the Organization Of food Networks for sustainable and healthy diets. **Dr Josiane Fernandes.** Marketing. £10,000.

Understanding impact of innovation policy on UK supply chains. **Professor Kostas Selviaridis.** Management Science. £3,410.



The Pentland Centre for Sustainability in Business
Lancaster University
Lancaster
LA1 4YX

+44 (0)1524 510694

www.lancaster.ac.uk/pentland
pentlandcentre@lancaster.ac.uk