



Annual Review 2022/23



2 **Innovation at CPI**
Insights into CPI's journey of innovation and growth throughout 2023.


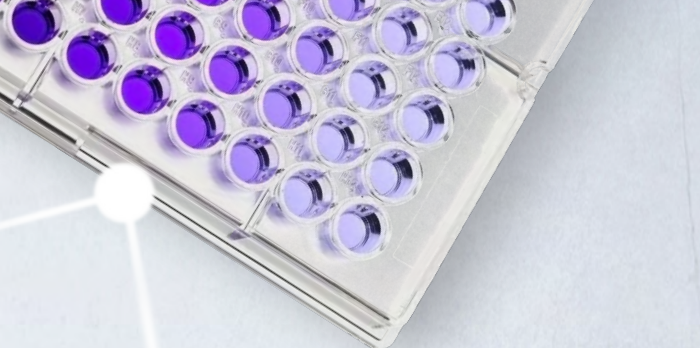


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This annual review was compiled and produced by: Amira Ali, Helen Anderson, Yvonne Armitage, Louise Barker, Daniel Bettridge, Farai Carter, Alex Cole, Craig Edwards, Becky Fields, Arun Harish, Matthew Herbert, George Hurley, Dominic Inman, Tony Jackson, Rahul Kapoor, Rachael Lee, Frank Millar, Michelle Morrison, Abi Sawyer, Sarah S, Tom Simpson, Peter Smith, Dave Tudor, Hannah Wade, Sophie Walton, Jackie Waring, Sarah Williamson, and Jennie Younger.



Foreword

Welcome to CPI's 2022/23 annual publication, a summary of our incredible work in the UK innovation system. There are moments in any business' evolution when it's important to recognise progress and celebrate our successes, enabling us to aim higher and achieve more when we return to the challenges ahead. The last year has provided such moments.

Alongside colleagues in the High Value Manufacturing Catapult, we've worked to measure our impact on industry. The evidence demonstrates how, by leveraging the Catapult model, we've been able to support our industrial and academic partners to further the translation of research and development to deliver beneficial commercial outcomes.

At CPI, 60% of our privately-funded projects are with SMEs and 27% of our collaborative R&D projects span the innovation system from academia through the Catapult network and into industry. I am proud of the work we've done to demonstrate our sustained commitment to deep-tech innovation, ensuring the successful delivery of economic and societal improvements for the UK.

In the coming year we will celebrate CPI's 20th anniversary. Our identity as a social enterprise alongside our purpose to help companies develop, prove, scale-up and commercialise disruptive and transformative innovations remains as clear today as it was two decades ago.

By enabling innovations that catalyse advanced technologies and manufacturing solutions, we're responding to the national and global challenges of our age. We're helping to reduce the effects of climate change, lower the cost of healthcare, enable healthier living and promote industrial transformation in some of the most economically challenged places in the UK.

The UN Sustainable Development Goals provide the foundation for CPI's Sustainability Strategy. Focussing on three interconnected pillars — People, Planet and Partnerships — it demands that we act in a way that delivers positive outcomes for people, our planet and our business.

It's not just in the wider world where our organisation aims to make an impact however, we're also creating change closer to home. At CPI, we're committed to creating an inclusive workplace, a place where everyone can learn and grow together. We know that diversity is our strength, it fuels our desire for innovation and to deliver impact for all. We continue to make our commitments visible, aligning with others who share our values and are prepared to challenge and support one another. Our signature of the Catapult Network Inclusivity in Innovation Charter, Inclusive Employers Standard accreditation, and membership of the 5% Club, are just some of the ways in which we live our values, hold ourselves to account and learn from colleagues across the UK.

As an independent organisation we champion those who are willing to share their knowledge and expertise. In this publication, we've captured some of those voices, sharing opinions and experience on many of the key features that enable CPI to deliver value.

I would like to thank all my colleagues at CPI, the Board, and my Executive Leadership Team for their enduring commitment to this incredible company.



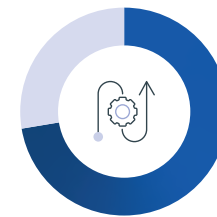
Frank Millar (He/Him)
Chief Executive Officer, CPI





CPI connects the dots within the innovation ecosystem to make great ideas and inventions a reality.

We're a pioneering social enterprise that accelerates the development, scale-up and commercialisation of advanced technology and sustainable manufacturing solutions. As a trusted partner of industry, academia, government, and the investment community — we're the catalyst that delivers sustainability and healthcare innovations to benefit people, places, and our planet.



Business support activities

SME	2287 (72%)
Non-SME	872 (28%)



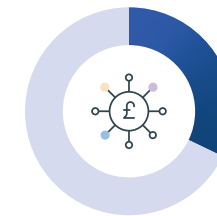
Commercial projects

SME	947 (60%)
Non-SME	628 (40%)



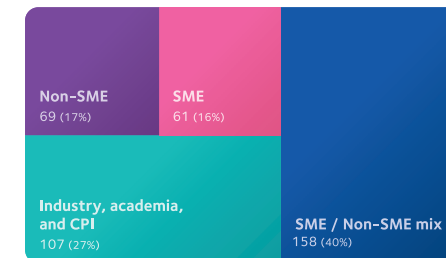
Engagements

SME	3596 (74%)
Academic	1280 (26%)



Leveraged match funding

SME	£15.5 million (72%)
Non-SME	£33.8 million (28%)



CR&D projects

Proportional split of collaborative CPI projects categorised by the types of external organisations involved.

Innovating in future food systems

CPI's expertise is helping to ensure global food security through sustainable agriculture and innovation to provide alternative protein sources, novel biocontrol products, improved sustainable packaging solutions and much, much more.

Collaboration drives sustainable biotechnology



Yvonne Armitage (She/Her)
Director of Biotechnology
CPI

CPI is leading the charge towards a more sustainable biotechnology industry by ensuring we deliver projects with cost-effective, productive, and environmentally friendly processes and operations.

Industrial biotechnology heals people with new pharmaceuticals, fuels nations with energy, and feeds the world with novel foods and animal feed. Biotechnology supports circular supply chains and sustainable innovations by utilising resources more efficiently, minimising waste, and offering bio-based alternatives to new and existing chemicals and materials.

When designing new biotech processes and plants, we try to use raw materials that come from sustainable sources, including evaluating waste feedstocks where possible. We look at where energy savings can be made by shortening process times or implementing continuous processing for improved outputs. We look at minimising water usage and ensure that we choose the most appropriate equipment to minimise energy expenditure.

We also identify opportunities to make processes more resource efficient. Our expertise in biotechnology stretches from product design to commercialisation, and we ensure that processes are well-characterised and developed before they are scaled up, for greater efficiency and sustainability.

In the midst of climate breakdown, our food production system needs a radical overhaul if we're to responsibly protect our planet and its resources. We're supporting innovations that will reduce the environmental impact of our food production system. For example, our partnership with Azotic Technologies delivered a natural nitrogen fixation technology that addresses the overuse of synthetic fertiliser, benefitting both farmers and our soil ecosystems.

We are also enabling the innovative use of carbon dioxide to produce food and animal feed in the form of alternative proteins, with the potential to ensure animals are healthier and reduce emissions from livestock production.

Next steps

- **Develop our dedicated Novel Food Innovation Centre and put the North East at the forefront of a green food revolution.**
- **Establish CPI as a leader on the challenges and opportunities for alternative proteins.**

Watch innovation in action



Discover how our Grand Challenge on Sustainable Packaging is developing bio-based materials and other smart packaging solutions to reduce environmental impact.



See how we're harnessing natural substances, derived from a range of sources — from bacteria to spiders — to keep our soil healthy with eco-friendly biocontrol products.

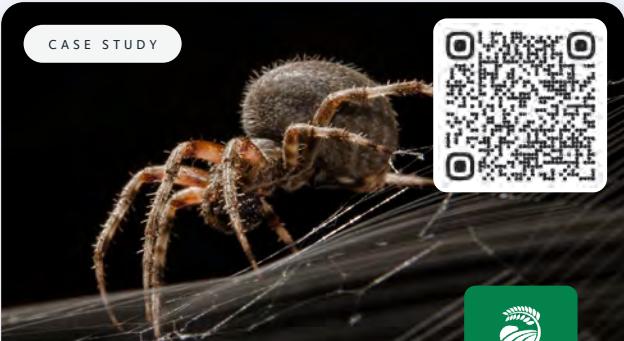


Alternative protein sources are a healthy option for both people and the planet; find out how CPI is exploring a range of sustainable substitutes to mass meat production.



Cells to sirloin

We worked with 3D Bio-Tissues, a biotech start-up and spin-out from Newcastle University, to create eco-friendly, chemically defined, animal-free, and cost-effective growth media products marketed under the City-Mix™ brand. These supplements help yield a viable, ethical, environmentally friendly and delicious alternative product to traditional resource-intensive meat production.



Protecting plants with spider safeguard

We helped scale up the production of a selective biopesticide developed from spider venom. The use of biopesticides like those developed in the EcoStack project could maintain or improve crop yields while reducing harm to pollinating insects, humans, non-crop plants, and other wildlife: keeping our important biodiversity and ecosystem healthy whilst boosting food resources.

Innovating in HealthTech

Through our world-class multi-disciplinary capabilities and our extensive network of partners, we are providing transformative innovation to the HealthTech ecosystem.

Breaking down barriers for UK HealthTech SMEs



Rahul Kapoor (He/Him)
Director of HealthTech
CPI

I was delighted to join CPI in June 2022 and build on our success in supporting companies to commercialise innovative health technologies.

With an ageing society and spiralling healthcare costs, innovations in HealthTech are needed to ensure we maintain and improve the levels of care provided. We are committed to enabling transformative technologies to reach the market faster, improve preventive healthcare, drive earlier diagnosis, and deliver better treatment outcomes. But many barriers prevent HealthTech innovators from developing and scaling their innovations, including challenges related to technology, supply chain, regulatory processes and commercial adoption.

Our work enables innovators to scale up technologies faster and connects actors across the HealthTech ecosystem to drive open innovation – including large corporations, investors, government, regulators, and industry bodies.

One example of how we do this is our 5G testbed, developed with Cellnex for hospitals. Working with innovators, we’re looking at opportunities to improve patient outcomes and support healthcare workers.

In October 2022, we outlined the regulatory challenges and opportunities for UK HealthTech and published a diagnostics roadmap based on workshops and surveys with HealthTech stakeholders and over 350 SMEs. It revealed that about one in five companies now target the USA for launch, thanks to its large market potential and more favourable regulatory environment.

The report helped the British HealthTech community to collectively shape key recommendations that central and local government is already acting upon.

Our offer to deep tech innovators is multi-disciplinary technical and product development for their innovations – including digital, electronics, photonics, formulation, nanotechnologies, materials, biotechnology, and biologics. We’re also in the unique position of being able to guide them through the regulatory journey.

Next steps

- Building a new and actionable roadmap for the UK digital health industry.
- Launching exciting public-private partnerships on sustainable materials in HealthTech and early diagnosis technologies.
- Regulatory training and support for HealthTech innovators.

Watch innovation in action



Learn how CPI’s unique range of capabilities is supporting the development of novel *in vitro* diagnostic medical devices and helping bring them to market.



Regulatory support for UK HealthTech SMEs

Funded by Innovate UK, we worked with ABHI to deliver a UK-first programme that helped HealthTech SMEs to access much-needed regulatory support. Programme funds directly supported over 270 companies and helped many more through training and by highlighting the main challenges of SMEs to the UK Government.



Wearable physiotherapy for stroke rehabilitation

We worked with KnittRegen to develop smart technology to help individuals regain body movement following brain injury, via a wearable device that can be integrated into clothing. We helped develop product concepts for large scale manufacturing, mechanical and electronic designs, as well as developing the initial prototypes.



Innovating in sustainable materials

Across polymers and plastics, chemicals and composites, we're developing novel technologies and leveraging more efficient manufacturing and recycling to create environmentally friendly materials of the future.

Formulating a sustainable future



Tony Jackson (He/Him)
Director of Formulation
CPI

Whether it’s glass, metal, textiles, composites, chemicals, or soft materials – such as liquids and polymers – very few formulations on the market today are designed with circularity in mind.

But this unsustainable path must be altered. We need to innovate from the very start of the formulation process to shift towards reducing waste, improving biodegradability, and minimising the carbon footprint of manufacturing. Our broad range of expertise in chemistry, materials science and chemical engineering helps our partners manufacture materials, and then develop processes that make those materials more sustainable. We work across a spectrum of industry sectors from food to pharmaceuticals and in collaboration with academia, government, and enterprises ranging from start-ups to large corporates.

Enabling the circular economy is an important driver for us. We develop sustainable recycling technologies for existing materials or design recyclability into new materials. Recycling the complex composite materials used, for example, in wind turbine blades, is becoming essential. Developing the right processes to recycle these significant future waste streams and avoid landfill is vital to ensure renewable energy is truly sustainable.

We’re also supporting work on recycling waste electronic materials – so-called WEEE waste – using deep eutectic solvents to leach out valuable, scarce materials, such as gold and copper for reuse. Current WEEE recycling processes are very energy intensive, but the process our partner, DEScycle, aims to deliver is a much lower energy, lower carbon approach. We’re excited to support with scaling up this process to offer a revolutionary alternative to outdated recycling techniques.

Our expertise in polymer formulation delivers innovative solutions that are helping to reduce environmental impact for our partners in everything from packaging applications to tree planting. We’ve also recently grown our expertise in formulating nature-based polymers using seaweed, for example, and other biodegradable products.

Another key area for us is energy materials, where we’re supporting sustainable transport initiatives – in particular, electric vehicles. CPI can formulate battery materials, test them, and even look at pilot scale manufacture. In addition, we support the training infrastructure needed to provide skilled workers for these future industry sectors.

And this is where place-based innovation comes in. We’re working with universities, the UK Battery Industrialisation Centre (UKBIC), and with other members of the High Value Manufacturing Catapult, like WMG, to develop end-to-end capability in the UK – and in the North East in particular – for supporting companies to innovate. It’s an exciting time.

Next steps

- North East Battery Alliance conference.
- Conclusion of a European project addressing freshwater scarcity and industrial water pollution in textile manufacturing.
- Improving battery performance and sustainability through more efficient manufacturing.

Watch innovation in action



Discover how CPI is helping disruptive deep tech company DEScycle to pioneer a low-cost, clean recycling technology.



Our process engineering expertise in novel chemistries, formulation, and coatings is advancing battery materials for use in electric vehicles. Find out how.



Taking flight with sustainable aviation fuel

We collaborated on the FastAceJet programme to develop novel processes to create sustainable aviation fuels by recycling waste carbon dioxide and hydrogen. This research could place the UK at the heart of the sustainable jet fuel industry, bringing economic opportunities and high value jobs to the UK.



Biopolymers reduce forestry plastic pollution

Tree planting is responsible for introducing up to 700 tonnes of plastic pollution into forests globally each year. Our expertise in formulation of biopolymers and processing helped Chestnut Bio develop a 3D printed tree guard system that functions for up to 5 years before biodegrading naturally.

Innovating in pharma

We're working with cutting-edge innovations to accelerate the development of promising drugs and to deliver solutions for tomorrow's vaccines and therapeutics.

Revolutionising pharmaceutical manufacturing



Dave Tudor
Managing Director, Medicines Manufacturing,
Biologics, and Quality, CPI

We’re trying to take the pharma industry to the next level of sustainability. Our ambitious Grand Challenge (GC) model is looking to deliver a step change in today’s technology and digital approaches within the pharma supply chain.

These GCs not only reduce the carbon footprints of pharma manufacturing but also deliver better compliance, performance, and productivity benefits.

GC1 focuses on continuous manufacture of tablets: the batch manufacture of tablets is a century-old process that in some cases can be incredibly wasteful of the active ingredient. But continuous direct compression reduces active ingredient wastage from 30% to less than 5%. A digital twin of that technology is allowing pharma to build predictive models to build confidence in the adoption of this new technology.

In GC2, just-in-time manufacturing for clinical trials will streamline the complex clinical trial supply chain. With Pharmacy Automation for Clinical Efficiency (PACE) technology, we’re helping the right patients get the right medicines at the right time.

Oligonucleotides are an exciting nucleic acid-based technology, but their production is the most inefficient of all drug and vaccine manufacturing processes. With the liquid membrane technology and enzyme bio-catalysis we’re developing in GC3, we could halve the carbon footprint of oligo manufacturing and significantly improve productivity and output.

The Digital Manufacturing Innovation GC focusses on our core digital strategy to drive productivity and carbon efficiency.

Three forthcoming Grand Challenges will look at smart bioprocessing for biologics manufacture, improving lipid nanoparticles to support the bright future of RNA vaccines and therapeutics, and introducing a new process for continuous crystallisation of active ingredients.

Can the pharma industry find solutions that reduce the carbon footprint and cost, while maintaining standards? We believe advanced technology, digital solutions, supply chain excellence, and a combination of facility and energy management solutions can achieve this.

I recently travelled to India, which produces around 40% of the world’s medicines. Sponsored by the British Consulate and the UK Government’s Department of International Trade, we’re supporting the British and Indian science ministers to assess the pharmaceutical supply chain in India and share some of the advanced technologies being developed in the UK. We’re looking at how to evolve the carbon footprint of the Indian pharma industry into scope 1, 2, and 3 emissions, and identify where we could help drive change towards net zero.

Globally-recognised standard approaches to measuring the industry’s carbon footprint are limited, making it difficult to compare and contrast technologies and approaches within the pharma industry. Working with the UK Government through the Medicines Manufacturing Industry Partnership (MMIP), we’re helping to map supply chains, standardise measurement systems to demonstrate progress, and partner with key pharma players to drive an even bigger change.

Watch innovation in action



The winner of Bionow’s 2022 Project of the Year Award, our expertise is helping to develop a patient-friendly drug delivery system to target inflammatory bowel disease with fewer adverse side effects.



RNA-based vaccines were a success with COVID-19. Explore how CPI is helping to shape the future of RNA-based therapies to tackle cancer and other serious medical conditions.



Digital design accelerates pharma development

We worked on the Digital Design Accelerator Platform to improve the design and development of new pharmaceutical formulations. It takes data from across pharmaceutical development functions to support more consistent product quality, reduce waste and assist faster product development to get better medicines to patients quicker.



Scaling up synthetic DNA

We’ve established a long-term partnership with Touchlight to help them produce synthetic DNA at the speed, scale, and purity necessary to support the rapid growth of genetic medicines. The developed platform technology is applicable to many areas of biologics and brings genetic medicines to market five times faster than traditional manufacturing methods.



Investing in innovation

CPI's venture capital arm is investing in companies with the potential to develop advanced technologies that solve global challenges.

CPI Enterprises fuels deep tech entrepreneurship



Hannah Wade (She/Her)
Managing Director
CPI Enterprises

CPI Enterprises, the venture capital and investor engagement arm of CPI, connects investors and entrepreneurs across the UK to stimulate the growth of advanced technology companies.

One of our investments is in Q5D, which leverages additive manufacturing and 5-axis robotics to revolutionise the production of wire harnesses that are used in multiple applications, from electric vehicles and aircraft to white goods and consumer electronics. Production of these essential components remains predominantly manual and labour-intensive. As a result, manufacturers have had difficulty meeting rising demand while accommodating supply chain disruption from the COVID-19 pandemic and war in Ukraine.

We're working with Q5D to develop model ink formulations for its non-contact additive deposition method, coupling knowledge of material properties with process parameters to provide a better ink selection. We are also rigorously characterising commercially available inks to ensure they fit the required characteristics identified by Q5D for its prototypes and final product designs.

Qkine, a manufacturer of animal-free, bioactive and innovative proteins and growth factors for life science applications, closed a funding round of £4.3 million in support of its proprietary protein production and engineering processes. The company's route to unique and high-purity products will tackle fundamental biological and production challenges for the fast-growing stem cell, regenerative medicine, and cellular agriculture sectors.

CPI Enterprises is the Commercial Development Partner for DEScycle, a company that is commercialising a revolutionary new approach to the treatment of e-waste. It is using a class of chemicals termed deep eutectic solvents (DES) as an alternative to conventional roasting and smelting operations. Correctly formulated, DES can dissolve different metals in a targeted and less toxic recycling operation, unlocking value in materials that have historically been uneconomic to process.

We've invested in DEScycle to help it transition the DES process from lab-scale to commercial plant operation. DEScycle expects its technology to offer a clean, modern alternative to century-old recycling processes, revolutionising how industries transition to a net zero low carbon economy.

“Working with CPI is allowing for a smoother and faster development of our new product, from R&D to commercial development expertise. Our technology empowers engineers to rethink wire harnesses for a safe, sustainable, and reliable all-electric, connected future.”

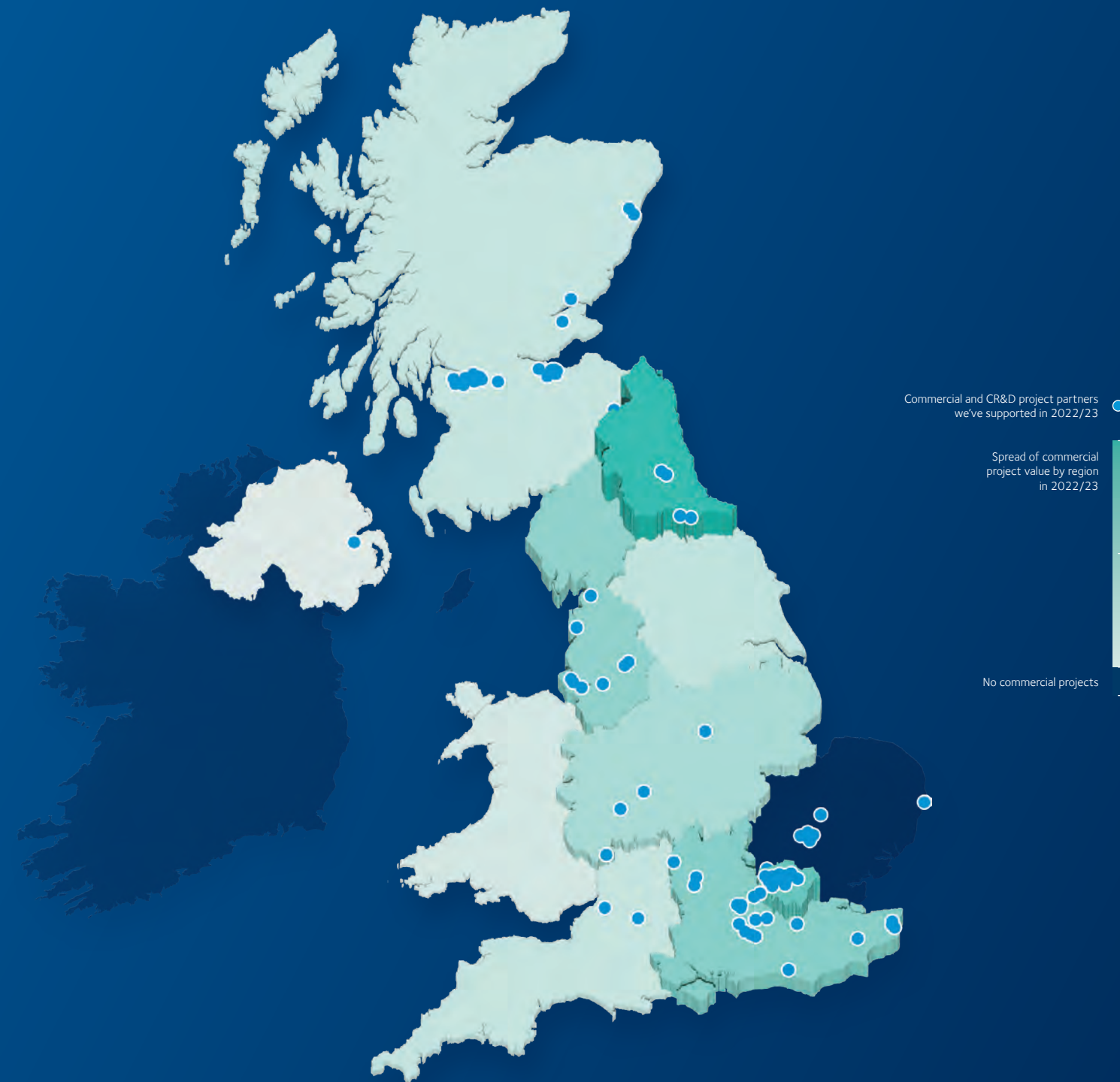


Stephen Bennington
CEO and Co-founder, Q5D



Mapping our impact

Our collaborations create high-value jobs, tackle industrial and societal grand challenges, transform regions, and bring new products and processes to market. From conception to delivery, we track the impact of every project we've supported.





Transforming industrial landscapes



Sophie Walton

Director of Strategic Partnerships
CPI

We're nurturing place-based innovation to create "golden assets" in regions across the UK, helping to level up economic prosperity and create jobs of the future by building hubs for high-value manufacturing on the national and global stages.

At NETPark in County Durham, we've helped transform a brownfield site into a home for exciting new manufacturing industries. As an anchor tenant since 2008, we now host three National Centres on the site, offering laboratory, clean room, and manufacturing space.

We've collaborated with partners to deliver £72 million of R&D activities and enabled those businesses to secure over £283 million of follow-on private investment. We incubated 15 of these businesses — six of which have since moved into their own premises.

We also have a strategic Memorandum of Understanding with Durham University and Business Durham around our shared vision for NETPark. Business Durham has started construction on a 26-hectare expansion with the potential to support 1,250 new direct jobs and 2,200 supply chain jobs — a testament to NETPark's success.

In addition, Darlington Central Park is home to our recently opened RNA Centre of Excellence and National Biologics Manufacturing Centre. We're also next-door neighbours to our partner Teesside University's National Horizon Centre, dedicated to training and research in health and biosciences.

By 2030, Darlington Central Park's partners are aiming for the area to be a thriving 50,000 square metres of commercial scientific research and innovation space. Green areas, an ecological reserve, and a public square will complete the development, attracting players from the digital, biologics, and bio-pharmaceuticals sectors.

We're involved in early discussions about Atom Valley — a large site

7 miles outside Manchester city centre. This ambitious project is poised to accelerate economic growth and industrial regeneration across Oldham, Bury and Rochdale by creating 1.6 million square metres of employment space, 20,000 jobs, and 7,000 new homes. We're primed to help realise the innovation components of this development — contributing our experience and expertise to support the local vision.

CPI is also collaborating on the development of the Advanced Manufacturing Innovation District Scotland (AMIDS). Building on the existing strengths of the Glasgow City Region and sitting next to Glasgow Airport, we opened our Medicines Manufacturing Innovation Centre there earlier this year, which sits alongside the National Manufacturing Institute Scotland, and established businesses such as Rolls Royce, Vascutek, and Thermo Fisher.

The UK has immense innovation potential, and we're proud to be building on solid local foundations to maximise each region's unique characteristics and individual strengths.



Our journey to sustainability



Louise Barker
Director of Impact
CPI

Sustainability is at the heart of what we do at CPI. Our whole business model is built around supporting our clients to create positive environmental, societal, and economic impact.

In 2022/23, we implemented a Sustainability Framework and Roadmap to help us achieve net zero by 2030. The Sustainability Framework aligns with CPI's vision to enable a healthier and more sustainable future through deep tech innovation, whilst also incorporating 10 of the 17 UN Sustainability Development Goals.

The framework we developed is based on three fundamental pillars that set out our ambition to:

- Support, empower and build thriving communities.
- Commit to protecting the environment and reducing global warming to below 1.5°C.
- Collaborate with our partners to develop innovative solutions that solve some of the key global challenges.

In the coming year, we'll also seek to develop a programme of work to embed a culture of sustainability that will become as ingrained in our behaviours and actions as Health and Safety.

We recognise there will be challenges and the journey we're on will have bumps along the way. For example, we know we must carefully

balance our desire to reduce energy usage whilst also growing as an organisation. One way we'll seek to mitigate this will be to adopt new tools and systems to better understand the resources used across our sites and obtain real-time data on our utility usage to take timely interventions.

Key to our plan is maximising the role a large organisation like CPI plays in supporting our local communities. This year we've supported the Middlesbrough Football Club Foundation. And in future, we'll continue to fundraise for outreach programmes that support projects in lower socio-economic areas and support grassroots organisations that develop local people's skills, opportunities and aspirations.

We'll continue to work with our partners, government, and academia to solve some of the most pressing global challenges. Just one example of this kind of work is our project with Chestnut Bio to ensure that the millions of trees being planted to solve one problem, don't create another issue by using plastic tree guards, which might pollute soil or get eaten by wildlife. Chestnut Bio's innovative product means new trees can be planted with biodegradable tree guards that are much kinder to the environment.

We are setting out on an ambitious journey, but we know we only have one planet and as my favourite quote says, "The greatest threat to this planet is the belief that someone else will fix it."

In CPI's case, we want to be part of the solution.

"I'm currently working on projects that centre on food and feed; we're looking at alternative proteins and alternatives to meats. We have a great vision for sustainable innovations that benefit people, places, and our planet, and these projects align with our mission."



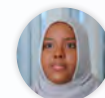
Lara Picknett
Apprentice Scientist
CPI

What does



mean to us?

"My favourite part of the job is improving medicine production. The end user is a patient who will benefit from an improved medicine so knowing that what I'm doing is improving quality of life or even saving a life, is incredibly inspiring."



Amira Ali (She/Her)
Apprentice Scientist
CPI

"Initially, it was the industry that attracted me to CPI but now it really goes so much further than that and it's all about the real-world challenges that the CPI teams work on and the processes and techniques that will be used in our future world – that excites me every day!"



Becky Fields (She/Her)
Marketing and Communications
Business Partner, CPI

"CPI does some really exciting work, and our involvement in and response to the COVID-19 pandemic was particularly impressive."



Lena Rusa (She/Her)
Finance Business Partner
CPI

"As someone with Crohn's disease, it was very exciting to see that CPI was working on a project to bring about transformational new treatments. It's absolutely amazing to think that the company I work for could actually end up changing my life."



Louise Barker
Director of Impact
CPI



Connecting people for a stronger CPI

At CPI, we celebrate our differing backgrounds and experiences that make us an empowered collective of incredible people..

Our Diversity and Inclusion affinity groups provide our people with a space to meet with others from communities they identify with and offer opportunities for those who want to support people in marginalised groups. The members of the groups work together to share experiences and create positive change.

Disabilities, Hidden Conditions and Carers (DHCC)

"As someone who has a hidden condition, I think it's important to advocate for myself and others who are affected by one."

Kristi Porter
Process Engineer

We're a group for everyone who identifies as having a disability, hidden condition or illness (physical or mental), people with caring responsibilities that impact their work and daily lives, and those who simply want to offer their support. We focus on raising awareness, supporting policy development, and improving the access and accommodation available for disabled staff and visitors to CPI.

In 2022, we...

- ✓ Marked Neurodiversity Celebration week with a talk from CPI's Scott Gorman on experiences from a neurodiverse perspective.
- ✓ Collaborated with the HR team on enhancing policies that affect those working with a disability, hidden condition or caring responsibilities.
- ✓ Created a calendar of awareness days and events for 2023.

Next steps

- Helping to improve access to work guidance and sickness absence policy.
- Hosting talks and raising awareness around events.

Rachel Lee (She/Her)
DHCC Chair

Amira Ali (She/Her)
DHCC Co-chair

Yvonne Armitage (She/Her)
WiCPI Chair

Abi Sawyer (She/Her)
WiCPI Co-chair

Women in CPI (WiCPI)

WiCPI is for people of any gender who want to work towards equity for women at CPI. It's also a safe space for people of any gender to seek support or guidance on any gender-related concerns. As a new affinity group, we're still finding our feet, but we'll have lots of updates over the coming year and beyond.

Next steps

- Ensuring CPI's communications, platforms and policies align with our vision for gender equity.
- Increasing mentorships for women and increasing the number of women becoming mentors to help ensure every woman achieves her potential.
- Developing a calendar of social events for networking opportunities.

"Having seen first-hand gender gaps in the workplace over the last two decades, I'm excited to be a part of the WiCPI group and continuing to help raise awareness and building a community of like-minded colleagues who champion inclusivity."

Yvonne Armitage
Director of Biotechnology

"While gender equality is improving all the time, there's still some way to go, particularly due to the influences of the pandemic/working from home era which have had a greater impact on women's pay and advancement. I'm excited to see the group continue to grow and work closely with the other D&I groups in CPI and the wider network."

Rachel Lee
Project Manager

"Being part of two affinity groups makes me feel more connected to my communities of LGBTQ+ people and people with disabilities (which in my case are hidden disabilities) and less siloed. I know that I could go to the affinity groups for advice if I needed to, and I feel more empowered to raise any issues."

Hazel Hart
Senior Research Technician

"PRISM is passionate about facilitating change within CPI but also acts as a safe space for discussions with likeminded people. I'm extremely proud of the progress that we have made so far, and I am certain that the group will have a long-lasting impact on CPI."

George Hurley
Downstream Scientist

PRISM

We're keen to amplify CPI's queer voices whilst making a positive impact on our company culture. PRISM provides a safe space for our LGBTQIA+ colleagues, celebrates LGBTQIA+ stories, improves awareness of issues, promotes allyship, and drives change within CPI to support equity for our colleagues.

In 2022, we...

- ✓ Became founding members of Pride in Catapult – the cross-Catapult LGBTQIA+ Affinity Group.
- ✓ Implemented gender inclusive toilet facilities at all our sites.
- ✓ Created a calendar of awareness days and events to mark in 2023.

Next steps

- Developing the Trans Inclusion Policy and Transition at Work Policy and raising awareness of pronouns awareness, allyship, and LGBTQIA+ experiences in the workplace.
- Support of wider LGBTQIA+ activities across the Catapult, including a roadshow for Pride Month in June.
- Representing CPI and the High Value Manufacturing Catapult at Northern Pride 2023.

Tom Simpson (He/Him/They/Them)
PRISM Chair

George Hurley (He/Him)
PRISM Co-chair

Farai Carter (He/Him)
EmBRACE Chair

Religion, Culture, and Ethnicity (EmBRACE)

EmBRACE welcomes everyone with an interest in finding out more about the diverse religious, minority cultural, and ethnic backgrounds of CPI staff, and how these might influence their daily lives and experience of work.

Reflecting on 2022

- ✓ In-person events for Black History month, Yalda, Diwali, and Chinese New Year.
- ✓ Understanding Islam "lunch and learn" events.
- ✓ Published guidance for all line managers on how to support employees during Ramadan.

Next steps

- Continuing to share experiences and challenges, raising awareness of inequalities, and promoting positive action.
- Supporting the enhancement of policies and procedures for grievances and onboarding from outside of the UK.
- Celebrating different religious and cultural events throughout the year, such as A Taste of the World: What People Eat and How They Celebrate Around the Globe.



"As someone who has experienced and is affected by racism, I take a keen interest in raising awareness, promoting positive actions and engaging in activities to promote equality and equity. The activities of EmBRACE and other affinity groups are important in helping us live out our value of Diverse People, which helps us deliver impactful innovation."

Edwin Ntainjua
Principal Bid Proposal Development Manager

"I created this group to raise awareness, educate, celebrate our differences, and embrace those from different minority cultures, ethnic backgrounds and religious beliefs. I hope that these D&I affinity groups feel empowered to proactively challenge the status quo in pursuit of delivering CPI's purpose, always bringing positive change and solutions to the table."

Farai Carter
Team Leader, Colloid Science

Q&A with Jackie Waring

In 2022 we welcomed Jackie Waring to our Board as a Non-Executive Director. Jackie is the founder of Investing Women Angels and AccelerateHER, and a Fellow of the Royal Society of Edinburgh.

We sat down with her on International Women's Day to find out more about her commitment to supporting and developing innovative, female-founded companies.

Can you tell me a bit about your background?

I'll start when I was appointed Chief Executive of the Enterprise Agency in Scotland at only 25. It was a not-for-profit agency helping Scottish SMEs grow and flourish as part of a UK-wide network of enterprise trusts operating in the 'twilight zone' between the public and private sectors. Working there gave me a passion for business innovation.

It already sounds as if you are a good fit for CPI. What happened next?

Well, I ran a spin-out company for 3 years, and during that time, I got married and had my son. I had become interested in women's leadership through a research project at the Enterprise Agency; I took this forward when I was contracted as a policy advisor to UK Government, for what was then the Department for Trade and Industry, investigating barriers to investment in women-led businesses. Only 2% of the business angel community (investing in early-stage companies) was female when we started.

I founded Investing Women Angels in 2015, and around the same time, I founded AccelerateHER to accelerate the work of female entrepreneurs.

Now you are on CPI's Board, what are you focusing on?

I'm contributing to the future strategy and I'm looking for companies that would benefit from working with CPI, with a focus on Scotland; we offer fantastic opportunities for companies there; particularly now with the opening of the Medicines Manufacturing Innovation Centre.

I can see fantastic potential for CPI Enterprises to do a lot in Scotland working alongside other investors and angel groups. Crucially, CPI's scientists can provide due diligence, answering the question of will this company's science work? Angel investors who are not scientists often struggle with this.

And finally on the people side, I'm on committees dealing with remuneration and nominations, which is so important because it's the people that make this organisation great.

What made you realise you wanted to be a part of CPI?

My appointment came about because one of our angels asked me to circulate an advert for CPI non-execs. Then she tapped me on the shoulder and said, "... by the way, this includes you!" I was unsure initially because I don't have a scientific background, but I soon realised that was precisely the point. I love that CPI is a diverse mix of people with different backgrounds. This organisation has fabulous people doing amazingly innovative work, and I've been blown away by everyone that I've met so far.

I'm so inspired by what CPI does and I'm thrilled to be a part of it.

Looking ahead to 2023/24



Jennie Younger

Non-Executive Chair
CPI

A look through the pages of this magazine should leave you in no doubt that CPI is delivering on its mission to catalyse advanced technologies and manufacturing solutions that benefit people, places, and our planet.

Frank Millar, our CEO, recently wrote about how a few years ago, he stood on an empty patch of land next to Glasgow Airport, gazing out at what was to become our Medicines Manufacturing Innovation Centre. We recently welcomed Dame Ottoline Leyser, Chief Executive of UK Research and Innovation to that facility, where exciting pharma projects are underway. The Centre is on its way to generating 100 high-value jobs and attracting £200 million of inward investment to the region.

CPI continues to evolve. In 2022, we expanded our operations to Manchester, Liverpool, and Newcastle to transform industrial landscapes and high-potential places into hubs of innovation. We now consist of ten national innovation centres and regional offices, each connecting the dots of the UK's innovation ecosystem to provide access to our incredible capabilities spanning future food systems, HealthTech, sustainable materials, and pharma.

We are continuing to build on our strong roots in the North East, and expand the scope of our work and investment in healthcare and HealthTech. In the past year, we've opened the doors to our new RNA Centre of Excellence and RNA Training Academy in Darlington to

address the RNA skills gap. Meanwhile, CEPI (Coalition for Epidemic Preparedness Innovations) has also funded us to lead a consortium to scale up and manufacture Caltech's new all-in-one coronavirus vaccine.

In 2022, we became part of The North East Battery Alliance to support and stimulate growth in the sector with a strong regional ecosystem. We also launched the Digital Process Manufacturing Centre in Ayrshire, which aims to future-proof process manufacturing in Scotland and will reduce its carbon footprint with emerging Industry 4.0 technologies.

We signed a Memorandum of Understanding with the Universities of Manchester and Liverpool, strengthening our alliance to help researchers and entrepreneurs commercialise deep tech and sustainable manufacturing solutions.

These are just some of the breakthroughs and successes that we've achieved at a strategic level, in addition to which our collaborative projects have been delivering advancements in fields such as digital pharmaceutical production, biopesticides, flexible electronics for sports and medical applications, and synthetic DNA manufacturing, to name just a few.

On behalf of the Board, I would like to thank every one of our people for the central role they play in CPI's success and in improving manufacturing productivity and sustainability across the UK and beyond.

Shaping the innovation ecosystem



Arun Harish (He/Him)
Chief Strategy Officer
CPI

This publication is full of shining examples of how CPI has helped accelerate the innovation, development, and commercialisation of many disruptive and market-creating innovations across future food systems, HealthTech, sustainable materials, and pharmaceuticals.

In this publication, you’ve seen how CPI, as a leading UK-based deep tech innovation organisation, is tackling urgent global issues such as food security, helping to deliver the next generation of vaccines and therapies for devastating diseases, and identifying solutions to overcome reliance on unsustainable packaging, chemicals, and materials.

With nearly 20 years of contributing to and shaping the UK innovation ecosystem, we’ve established a solid foundation that will support our ambitious goals. By continuing to drive collaborative approaches to innovation development and commercialisation, we’ll address global societal and industrial challenges and create opportunities for the UK economy. Achieving this vision will require a highly multi-disciplinary approach. CPI’s vital role in convening stakeholders in the innovation ecosystem — industry, academia,

government, and investors — is crucial. We’ll build and strengthen our national and global RD&I partnerships over the coming decade by supporting our global customer base and attracting inward investment into the UK for RD&I by playing our part as an anchor organisation.

We’ll also further enhance our presence in the North West of England and Scotland, building on our strengths in the North East. Together with partners, we’ll invest in innovation to contribute to regional economic growth. Our role in supporting workforce development and skills agendas in new areas of growth for the UK will become ever more important. Together with the High Value Manufacturing Catapult, we’ll support skills foresighting activities and industry-relevant training programmes in niche areas to create the workforce of the future.

A key focus for the next decade is to leverage and unlock further private investment into the UK RD&I ecosystem through inward investment, and angel and venture capital investment.

We’ll continue to exemplify how new models of engagement and innovation can deliver benefits to people, places, and our planet, fostering new relationships and projects using the same collaborative spirit we’ve employed with our existing clients and partners.





Find out more about how we're driving innovative sustainability and healthcare solutions.



Share your thoughts on the future of technology and innovation.



Let's innovate together
www.uk-cpi.com

