

A spotlight on the vibrant north west chemicals sector

# Elements

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- Patenting research outputs – monetising your intellectual property
- IP audits - what are the benefits?
- Plus further fantastic articles on investments, partnerships and Award recognitions for our member companies
- New members spotlights – Indaver Solvents and STEM Learning.

**Plus... news and articles from a wide range of our members.**





# Chemicals Northwest 2025 awards

20th March 2025  
at the  
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Hotel  
Liverpool

Chemicals  
northwest

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## Membership

Would your company benefit from joining an organisation that supports and promotes the chemistry-using sector in the Northwest? Do you want to understand more, and contribute to, the industry issues within the region?

If you are a manufacturer, chemical user or offer products and services to the sector, why not join us today?

<https://www.cia.org.uk/chemicalsnorthwest/Membership/Benefits-Costs/>

**2024 rates. (from 1st April 2024)**

Micro corporate membership	(1 - 10 employees)	£486.23
Standard corporate membership	(11-100 employees)	£845.70
Large corporate membership	(100+ employees)	£1076.25

*Our membership year runs from 1 April to 31 March. A pro-rata basis usually applies to joining at other times in the year and we'd be happy to discuss on application.*



# Welcome

Dear Reader,

## Welcome to the Summer edition of Elements.

We hope you are all enjoying the UK Summer so far. Since the last edition of Elements, the team at Chemicals Northwest have been working on the 2025 Awards and plans are being put in place for the next awards dinner in March 2025. We are delighted to confirm it will be hosted in the Titanic Hotel in Liverpool on the 20th March. Please keep a lookout via the bulletins and website for further information.

CNW were delighted to participate at CHEMUK 2024 in Birmingham on the 15th and 16th May. Ian Cranshaw from the Chemical Industries Association and Chemicals Northwest gave a presentation "The future of the UK chemical industry" at the event and it was extremely well received. It was great to catch up with colleagues and friends, old and new and new contacts. The team at CHEMUK are planning on building on the success of the 2024 event with plans to expand in 2025.

Alex attended the Business of Science Conference on the 22nd May at Salford University, the event was very well attended and extremely interesting. It was great to see the collaborations between industry and schools at the event and the recognition awards were all very well deserved for industry colleagues and the school children and young adults who won the awards.

Our Regulation and Trades update event took place on the 4th June hosting a wealth of speakers. Silvia Segna from the Chemical Industries Association joined us online giving an update on UK REACH policy. We had updates from Bryan Zhou and Li Xiang from CIRS giving updates on two large topic area including REACH Updates from other countries and Sustainability and carbon footprint including CBAM. John Adams from Dr Knoell Consult Ltd presented the GB Mandatory Classification and Labelling List (MCL). Our final presenter was Ian Cranshaw from Chemicals Northwest and the Chemical Industries Association who gave updates on trade.

At the time of going to print, Chemicals Northwest and STFC were hosting a joint breakfast event at the Hartree Centre with a site tour of some of the facilities available on the Daresbury site. This event was taking place on the 20th June. We also had some further speakers from membership confirmed as Phil Redshaw and Keel Heubner from Yordas Group and Chris Beckenham from SRG presenting at this event.

As always, please keep your good news stories, case studies and thought leadership articles coming in to be featured in Elements.

Further details of our events can be found here - <https://www.cia.org.uk/chemicalsnorthwest/CNW-Events>

**Alex Abraitis** - Member Services and Events Manager

## About us...

Chemicals Northwest is an established business network wholly owned by the Chemical Industries Association.

With around 130 members we actively promote this important regional sector and our objective is to help membership to grow through;

- **facilitating** networking events, common interest groups and interactive workshops, all aimed at covering topical industry issues.
- **supporting** projects and programmes that identify and enhance business performance and generally support continuous improvement across the sector.
- **promoting** science and engineering based skills, helping to address the region's future needs.
- **improving** the image of the industry overall, including generating a positive reputation, through communicating achievements and success.
- **contributing** to the industry's strategic voice and the national growth agenda aligned to the work of the Chemical Industries Association.
- **connecting** the community of chemistry-using businesses and the vital supply chains here in the Northwest.

Chemicals Northwest really does bring people together! It is an essential feature of successful networking strategies used by many organisations. We coordinate a range of meetings and events to enable 'face to face' networking for the benefit of all members. Every successful business networking organisation also needs effective communications channels.

As a result of gradual development over recent years, getting messages across, promoting member companies and reporting news, Chemicals Northwest has reached new levels of topicality and quality.

## Here are the the main features and benefits of membership...

### Annual Awards Dinner

During the annual Chemicals Northwest awards programme we are privileged to witness the many achievements made in our sector. Culminating in

a great night of celebration each year's awards are a fantastic way your company can support the region's chemicals sector and help raise your own profile. Over 300 guests from across the industry gather on the night in Manchester and everyone can see for themselves the amazing achievements made by our industry, people and organisations.

### Breakfast Networking

Chemicals Northwest has gained a good reputation for high quality breakfast networking events. With no specific theme, delegates are encouraged to come along and make a short business pitch about their company, its products and services plus news announcements! The breakfast meetings have proved to be very popular and currently run quarterly with up to 40 in attendance. New contacts can lead to new opportunities and new business. All are welcome and the event is free of charge to attend.

### Partner Events

Over the years CNW has focused on a range of highly topical and relevant business issues. We run these focussed events in conjunction with members. Technical, regulatory and operational insights have been delivered by experts in their fields. These events ensure good practices are shared and all attendees gain new knowledge. As businesses get to grips with the changing landscape there will always be new issues for members to analyse.

### Common Interest Group

Chemicals Northwest have launched a "Regulation and Trade" update group. This quarterly meeting is a round up of the latest news for the industry on REACH, Regulations, Trade issues and negotiations and any other topics of interest for the industry to keep up with the latest developments. This group is open to members of Chemicals Northwest and is free of charge to attend.

### Elements Magazine

This is a great opportunity to establish an association between your organisation and important sector issues, by contributing free editorial and press releases as part of membership. Companies who do business in the chemicals sector may also wish to look at advertising options. The CNW sector directory is integrated into Elements showing our service suppliers to the sector.

### Website

The website is regularly updated with industry news and events from CNW and the sector. Companies are increasingly using it for enquiries. Viewers of the directory pages can search the whole of our supply chain providers to find where to buy products and services.

### E-bulletin

Chemicals Northwest send out a monthly bulletin with the latest industry news, export opportunities, events from Chemicals Northwest and the sector. Plus ad hoc bulletins with latest/ urgent calls. All members and new members are able to send a "meet the member" bulletin. A paid for advertising service is also available for those wishing to advertise their events or company news.

### LinkedIn

The Chemicals Northwest LinkedIn group provides the opportunity for chemical industry professionals to share ideas and knowledge. There is also the CNW LinkedIn company page which provides a forum for information sharing between CNW and our members.





Safe | Smart | Sustainable

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Key to the successful identification, assessment and management of risk is engagement with the right people, using the right processes at the right time.



Safety Risk



Business Risk



Environmental Risk

Collaboration is key to our approach. Our team will work with you provide clear outputs that can then be fed into pragmatic risk management solutions. We use transparent techniques and focus on communicating complex information in a clear and accessible way.

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## Artificial Intelligence in HAZOP Studies

Once the subject of comic books and films, Artificial Intelligence (AI) is increasingly changing the way we live our lives. Many of us have voice assistants and smart devices in our homes. In industry it is being used to take on repetitive tasks, help improve productivity, and assist in the decision-making process.

These developments have, however, sparked worldwide concerns around automation-spurred job loss, algorithmic bias caused by bad data, and data security yet despite this, it seems that its exponential growth will only continue.

So how does all this fit in with high hazard industry, particularly when it comes to process safety management? What are the advantages of AI for you and your site? Can it help you in mitigating your risks? Is it the panacea you've been looking for?

One area which has seen the development of AI tools is the Hazard and Operability (HAZOP) study. HAZOPs are rigorous and thorough studies, taking each line of equipment one by one, considering every parameter, and how it might deviate from the design intent. Whilst being both incredibly important and effective, they are often viewed as time-consuming and expensive and, as a result, research into the use of AI to automate HAZOP studies has been ongoing since the early 1990s.

Designed to reduce both the time and number of specialist personnel required to attend a HAZOP workshop, there are now several AI HAZOP tools available which can be used on demand, at any time of the day or night. This is obviously advantageous as it saves on additional downtime, reduces the absence of key personnel from the front line, and removes the need for further expenditure of money in travel time and cost.

In addition, tests have shown that an AI-assisted HAZOP has the potential to help with a range of tasks such as data analysis, consequence estimation and recommendation generation, thereby reducing the time spent on manually evaluating the output. Entering unique information also ensures that these tools are not working on a one-size-fits-all basis and provides you with something that is bespoke to your site.

But does the investment in an AI tool of this type automatically provide you with a win-win situation. What about the human element in all of this? Process safety is concerned with the safety of people, property, and the environment. Can you place your trust in something artificial when the consequences can be so real and, potentially, so devastating?

Let's go back to thinking about the savings made by using an AI tool in a HAZOP. As we've already stated they can be significant. But what about knowledge transfer? Whilst the value of this can often go unrecognised, involving a multi-disciplinary team in your study is essential when it comes to gaining valuable insight from real life experiences. It

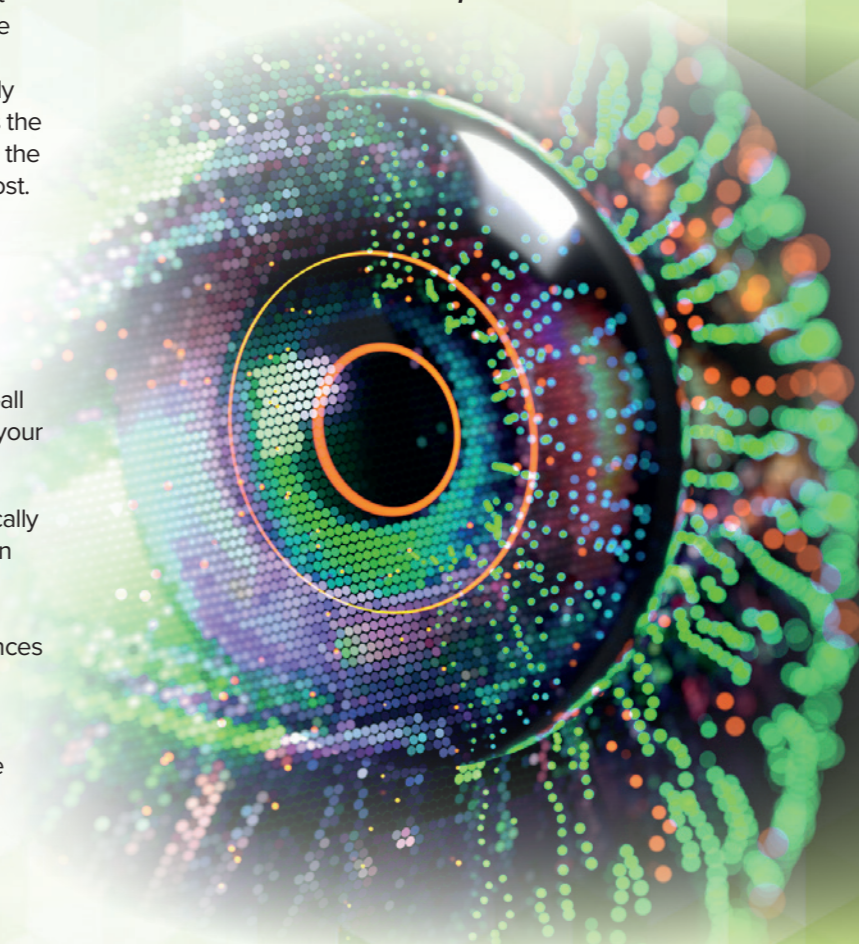
also serves as a learning opportunity for less experienced members of the team. Design engineers become more proficient, and operators gain an increased awareness of how particular operations influence the project as a whole. Whilst you will undoubtedly make savings in the short time, what cost is the loss of legacy of knowledge if, going forward, you increasingly being to rely on an AI tool for every HAZOP study you undertake?

It is also worth considering the adage, "What you put into things is what you get out of them" and AI tools can only be as good as the data they have been trained on. Quality is, therefore, essential; inaccuracies could be catastrophic. Can you be sure that the data used in training the tool was error free? Are you confident that your chosen tool is as competent as you think it is? Is it as competent as your team who know your operation inside out? You might ask a human to sense check – if you thought participating in a HAZOP was boring, what would it be like to review a computer generated one!

For every positive it seems there is a negative and every question seems to raise another. If you think about quality, human error is a possibility in any project so why should that make us look at AI tools any differently? But should we be starting to think about AI as the sole instrument for completion of HAZOP studies?

We believe that whilst it has the potential to act as an enhancer in the field of process safety, it should only be used alongside the industry experts we value and trust who have lived experience and can alert us to the risks that AI might not have computed.

*For further details please visit [www.ras.ltd.uk](http://www.ras.ltd.uk)*







Find out more

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# SIEMENS

## Digitalisation, Decarbonisation, and the Chemicals Industry: What's Next?

In the last few years, the chemical industry has faced pressure from all angles: from rising costs to supply chain challenges, cyber security threats, skill shortages, and the need to rapidly decarbonise. Such challenges will be unwelcome as the industry looks to prioritise R&D, innovation and delivering for customers. But in a crucial silver lining, pressures have created a platform for change, which has accelerated both digitalisation and sustainability in the sector – something the industry had long needed to happen.

### Gaining momentum

Few will deny that the chemical industry had a slow start to Industry 4.0.

Legacy infrastructure, born from the chemical industry's long heritage in the UK, made change difficult. Integrating digital technology into legacy production sites required time, investment, and resources.

Legacy infrastructure also delayed decarbonisation, with initial focus in the sector going to low hanging fruit over bold transformation, such as finding renewable energy sources, recycling waste and by-products, decarbonising the supply chain, and improving current systems.

But challenging market conditions have catalysed investment, helping the chemical industry to make much needed gains in areas that will shape the future of the sector. The increasing need to digitalise to decarbonise has led to the adoption of technology that has supported not only net zero strategies, but also improved efficiency, time-to-market, and profitability.

While market pressures may have prompted change, chemical manufacturers have now built the momentum needed to continue its advancement. So, where will technology take them next?

### Embracing digital transformation

Sustainable manufacturing, incorporating digitalisation and AI, is becoming the industry standard, where it's the actual processes that are going green.

Companies are also starting to embrace digital transformation and are setting up task forces to explore the potential of new technologies, while also collaborating with industry bodies to share knowledge and experiences.

New technologies are also being adopted in production processes. Sensors on production lines are feeding digital twin software, enabling companies to optimise, maintain and test new configurations with more precision. Many in the industry are also now combining digital twins with AI for predictive maintenance, saving time and money. Chemical companies are even turning to automation to address perennial challenges like the skills shortage in engineering.

### Achieving decarbonisation

Of course, the chemicals industry still faces many challenges, of which energy is perhaps the biggest, with rising costs, emissions,

and supply worries necessitating the implementation of efficiency measures.

As a result, energy monitors are becoming more common in the industry to make energy consumption more visible and manageable. Renewable energy is seen as a potential solution for stable energy supply while also meeting net-zero goals, with some organisations going so far as to invest in offshore wind farms to power their own sites. Meanwhile, others have been lobbying for adjustments to green taxes to align with international competitors.

The use of clean energy sources like green hydrogen produced through electrolysis shows promise, but there are barriers to overcome in terms of cost and technology. However, advancements in catalyst technology and electrolyser production, along with the use of data and artificial intelligence, provide hope for resolving these challenges.

Sustainability efforts in the chemical industry are also concentrating on reducing the number of chemicals used in production via R&D – taking inspiration from the pharma sector. Other sustainability avenues being explored in the chemical industry include carbon capture and storage, although this is still in the early stages of development.

### An agenda for transformation

Innovation and enthusiasm for digital and sustainability transformation in the chemicals sector is changing. Despite its challenges, the chemicals industry is leaning into digitalisation to find new solutions to its most pressing problems. While slow to start, adoption of digitalisation and sustainable technology is now gaining momentum as businesses experience and communicate the key benefits and drivers of these advancements. It's exactly the direction we should be heading in – and I'm excited to see where we'll go from here.

**Accelerate your digital and sustainability transformation in the chemicals industry with Siemens at Transform 2024. Hear from and collaborate with industry experts, experience transformative technology in our showcase, and co-create tangible solutions to be more competitive, resilient and sustainable in the chemical sector. Join us on 17-18 July 2024 at Manchester Central. [Find out more here.](#)**

**Stephen Crimin, Account Development Manager - Environmental Power, Siemens**





# Sustainable Solutions for industry hot topics

As the demand for expertise in environmental sustainability, chemical regulations, and hazard communication related topics continues to grow, companies are looking to upskill their staff to stay ahead of the curve. However, companies must navigate a complex web of compliance requirements to ensure their products meet global standards.

This article delves into four critical areas essential for maintaining regulatory compliance and sustainability: Life Cycle Assessment (LCA), REACH and IUCLID 6, global REACH-like regulations, and hazard communication.

## Life Cycle Assessment: A Systems Approach

Life Cycle Assessment (LCA) is a globally recognised tool that provides a comprehensive view of a product's environmental impacts from cradle to grave. By examining the energy and material flows involved in a product's life cycle, LCA helps businesses evaluate their performance against key environmental indicators, including climate change, ozone depletion, and marine toxicity. With diverse applications across strategic planning, process improvement, green procurement, and product claims, LCA can be a game-changer for companies seeking to future-proof their products and demonstrate their commitment to sustainability.

## REACH and The Question of IUCLID

Identifying the IUCLID 6 functionalities required to prepare and submit a dossier is key to ensuring compliance with REACH regulations. In addition, companies may want to master the process of creating accurate and complete endpoint summaries and study records to fulfil the requirements for REACH registrations. Then comes the question of how to leverage the validation tool to ensure data accuracy and integrity and how to generate reports to demonstrate compliance with REACH regulations. To streamline your REACH registration process, you must know these essential functionalities of IUCLID 6 as the industry-standard software for chemical registration.

## Global "REACH": REACH-like Regulations Across the World

The chemical regulatory landscape is rapidly evolving, presenting significant challenges for those responsible for

compliance. With the proliferation of REACH-like regulations, competing deadlines, and shifting company structures, supply chains, and geopolitics, it's essential to stay informed and adaptable. But how?

- Employ a proactive and integrated approach to chemical compliance and learn how to anticipate and prepare for regulatory changes, leveraging a holistic approach to ensure compliance across multiple jurisdictions.
- Get up-to-date on the latest requirements and trends in EU, UK, India, Korea, Turkey, China, South-East Asia, the US, and Canada, including key differences and similarities.
- Know the tools and resources better so as to increase efficiencies (e.g., software, templates, and expert guidance)

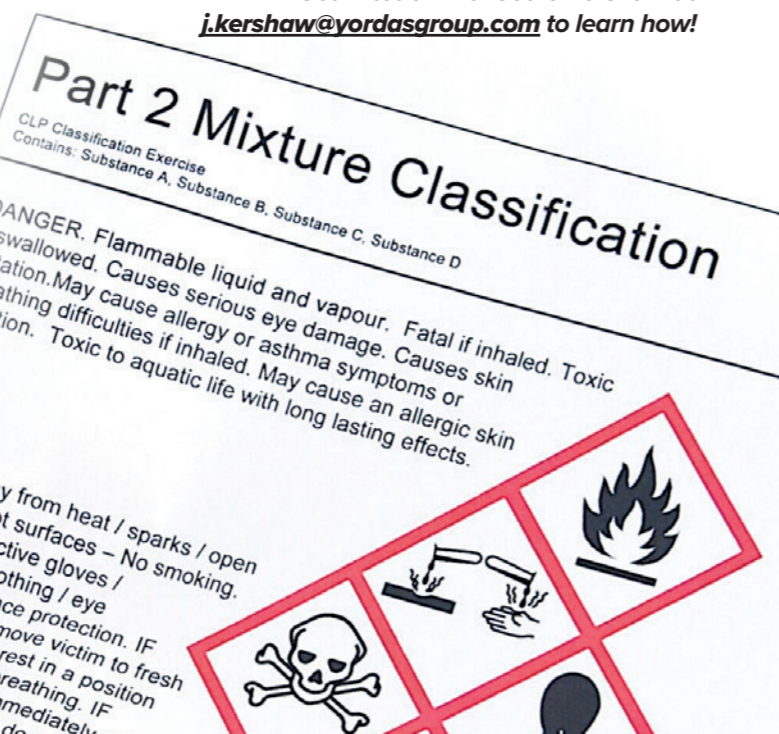
## Hazard Communication

Stakeholders in the hazardous chemical industry must meet the latest CLP and SDS requirements before placing their products in the market. The main priority is to focus on the changes in classification systems and their far-reaching impacts on labelling and supply of chemical products within the EU. Gaining a deep understanding of the new labelling requirements and how to navigate the challenges they pose, both in business-to-business and business-to-consumer settings, will benefit companies in a number of ways such as evaluating the associated infrastructure and costs.

## Yordas Group's Autumn 2024 Training Lineup

Our training solutions are designed to address your specific business goals and challenges concerning all the hot topics described in this article. Furthermore, Yordas' training team can work closely with you to develop a bespoke programme that boosts performance, enhances skills, and drives results.

Get in touch with Jodie Kershaw at [j.kershaw@yordasgroup.com](mailto:j.kershaw@yordasgroup.com) to learn how!



# Inherent Sustainability: The value of life cycle assessments

What is an LCA? Owing to the rise in incorrect environmental claims and green washing, in recent times Life Cycle Assessments (LCAs) have garnered a lot of attention in the press and public, having mostly been the domain of academia previously. These controversies highlight the importance of adopting robust, proven approaches to LCAs. But what is an LCA?

In our day-to-day lives, most of us try to reduce our impact on the planet – however we have limited foresight of unforeseen consequences across the lifecycle of the products we use. For example, you could buy an electric car in hopes of reducing carbon emissions from the use of the car, but the manufacturing stage of the batteries involves mining minerals that cause pollution and could be sourced unethically.



An LCA in these instances would empower you with the knowledge to make more reasoned and ultimately sustainable choices. It does this by quantifying the environmental (and sometimes social) impacts of a product or service across its entire lifetime, usually against multiple criteria.

Each LCA study is unique and tailored to the client's objectives, which affect the scope of the LCA. For instance, the most comprehensive approach would be 'cradle to cradle' which assess all life-cycle stages, up to the point of re-use, meaning the entire environmental impact of the product is revealed.

The scope is not the only defining feature of an LCA, as the type of LCA will dictate the number of requirements the LCA will have. An LCA conducted for internal purposes will have less stringent requirements than one used for marketing purposes, which will have to follow further International Organisation for Standardisation (ISO) sub standards that set out guidelines for environmental claims to ensure transparent methodology and reporting.

## What are LCAs used for?

Some clients, for instance, may use the results to make comparative claims about the benefits of their products/services – e.g. being 'environmentally friendly'. These claims serve not only to differentiate their products in the marketplace but also to communicate their commitment to sustainability to consumers and other stakeholders. More recently it's a baseline that most stakeholders expect them to meet. LCAs serve as a robust mechanism for generating credible data and insights in response to such expectations.

Other clients may wish to identify the 'hot spots' in their life cycle, so that interventions can be made to eliminate

or reduce negative impacts. This targeted approach not only improves environmental performance but can also enhance operational efficiency, reduce costs, and enhance brand reputation. Moreover, by continually monitoring and reassessing these hot spots over time, companies can continue to adapt and evolve their sustainability strategies to address emerging challenges and opportunities in their supply chains and operations.

In general, LCAs can aid in supporting regulatory compliance. Many industries and regions of the world have, or are in the process of, bringing in specific regulations that mandate or encourage the LCAs for products or supply chain processes. Many regions have developed Environmental Product Declaration (EPD) programmes that encourage or require LCAs for certain product categories, such as construction materials.

## How can SLR help?

SLR's LCA team have practical experience in delivering studies on an extremely wide range of products, technologies, and services. We understand the reputational risks and benefits, and that there is no 'one size fits all' approach for LCA, so each project is carefully tailored during commissioning to ensure we deliver on your specific goals, as efficiently as possible.

In one such project SLR conducted evaluated the carbon footprint (CFP) of the hydrogen product from a Steam Methane Reforming (SMR) facility. The project also examined how this initial carbon footprint would change as a result of capturing some of the carbon dioxide in the waste gases and purifying it for retail, generating a CFP for that liquid product as well.

LCAs represent more than just a methodological tool, they embody a commitment to sustainable practices and informed decision-making. As businesses navigate an increasingly complex landscape of environmental challenges, the value of LCAs in guiding responsible action and optimising resource use, as well as mitigating risks, cannot be overstated.

Get in touch to see how SLR's LCA team can support your sustainability objectives.



# 173 Bridges

Lessons from our latest large-scale asset inspection programme.

IKM's engineering team, with a depth of experience in asset lifecycle management and life-extension strategies, recently undertook a crucial infrastructure inspection at a prominent COMAH installation. The objective was clear:

- Evaluate the various bridge constructions spread across the expansive 160-hectare site.
- Identify defects.
- Propose improvements.
- Ensure the safety and reliability of critical infrastructure in high-hazard environments.

## The Inspection Approach:

The Engineering Team embarked on a comprehensive inspection program with multiple objectives:

- Conduct a thorough structural review of the bridges.
- Review past inspection reports to assess historical trends and issues.
- Identify common defects and rates of deterioration, focusing on potential safety hazards.
- Propose enhancements to the current inspection standards to improve efficiency and effectiveness.
- Suggest management strategies to address the identified issues and ensure seamless operations.

## Findings and Challenges:

The inspection revealed a mixed picture of the bridge conditions. While the majority (84%) were deemed in good condition, a significant portion (10%) fell below the acceptable standards, necessitating immediate action. Notably, two types of bridges, Precast Concrete C-Section Bridges and Larssen Sheet Pile with Concrete Deck Bridges, accounted for a staggering 76% of the inspection failures.

The primary issues plaguing these bridges were twofold: water ingress through bridge decks and congestion of service pipework, which hindered the effective maintenance of both steel and concrete bridges. Addressing these challenges required a multifaceted approach, focusing on

early detection, targeted interventions, and recognition of maintenance's impact on vulnerability.

## Solutions and Recommendations:

Proactive measures such as early detection and targeted interventions were proposed to mitigate soffit spalling and water ingress in precast concrete bridges. Additionally, bridge design considerations were emphasised, highlighting the importance of accessibility for maintenance, which aligns with CDM Regulations.

## Foundation Challenges and Sustainable Solutions:

The site's geological conditions, particularly soft clay soil on reclaimed land, presented significant challenges for bridge foundations. Two viable options emerged: the use of raft foundations to spread loads over a larger area and piled foundations for cases requiring more concentrated loads. However, the key to success is reusing existing bridge foundations wherever possible. Not only did this approach mitigate geotechnical risks, but it also offered substantial environmental and financial benefits.

The sustainability focus extended beyond foundation reuse. By replacing only the bridge superstructure, traditional construction time was significantly reduced, leading to cost savings and a substantial reduction in embodied carbon compared to conventional replacement programs. This streamlined approach minimised environmental impact and enhanced operational safety and efficiency.

By diligently evaluating bridge constructions, identifying key issues, and proposing practical improvements, we aimed to ensure critical infrastructure assets' safety, reliability, and longevity. Our approach prioritised addressing challenges such as water ingress and service pipework congestion while emphasising the importance of sustainability and efficient resource utilisation. Through collaboration, expertise, and a focus on practical outcomes, we strive to make meaningful contributions to managing high-hazard environments, ultimately enhancing operational safety and efficiency.

For further information please visit <https://www.ikmconsulting.co.uk/>

Article by: Neil Caffrey, Principal Engineer

# Anacarda received a Kings Award for Enterprise for International Trade 2024

Already holding the coveted Queens Award for innovation, Anacarda is delighted to have received a Kings Award for Enterprise - International Trade 2024. The Wigan-based company secured the award, the UK's most prestigious accolade for business success in the international trade category for its phenomenal sales of specialist Phenalkamine products offered under the Cardamine brand.

Anacarda Ltd is named after the tropical tree that bears the fruit of its primary raw material feedstock, Anacardium Occidentale, or the cashew nut tree. Anacarda specialises in cashew nutshell liquid (CNSL) derivatives and the generation of niche polymers that convey desirable characteristics because of the unique chemical structure of this interesting biomass. Despite this business being established over a decade ago, it is more recently that the interest in bio-based polymers has increased as part of the drive towards sustainability, and to address climate change. CNSL is recognised as being one of the most abundant commercialised renewable feedstocks available. The dark aromatic liquid is extracted from the inedible protective shell of the cashew nut. The crude material is used in the generation of some phenolic polymers, but the Anacarda process uses a refined version in the generation of hydrophobic epoxy curing agents for marine and industrial applications.

Cashew nuts are grown and harvested in tropical locations. India has the largest throughput of the extracted oil and the subsequent refinement process that generates the cardanol component. Phenalkamine technology is not new and developed by 3M in the 1970's. As you might expect, India is the largest producer of conventional Phenalkamines. Their economies of scale, domestic feedstock availability in some cases with backward integration, low overheads and low-cost labour means it is very difficult to compete with these producers. However, through innovative design, Anacarda was able to manufacture and supply products that could compete, despite their higher cost base and resultant pricing. The Phenalkamine structure conveys an inherent hydrophobicity because of the long alkyl side chain attached

to the phenolic nucleus. This in turn contributes flexibility and the excellent corrosion protection that is associated with this generic class of curing agent. These attributes make them the curing agent of choice for anti-corrosion coatings so to enable sales, Anacarda had to seek savings and value elsewhere. The solution was to provide products with all of the beneficial characteristics of the conventional Phenalkamine technology but with reduced hazard, improved performance and enabling coatings to be applied and completed more efficiently taking the cost out of the application. The technology that enabled the formulation of such coatings is the basis of the innovation award, the subsequent export sales and associated growth is the

reason for this latest award. With export sales now exceeding 99% of the revenue, Anacarda is able to compete in all areas of the globe, purely through the advantageous characteristics afforded by this enhanced bio-base chemistry and the innovative nature of the products.

Paul H Jones, Managing Director and owner stated, "We are delighted to have received this further recognition and the Kings Award for Enterprise. This specialist business was set up to develop new disruptive technology, and it is an honour and a privilege to be recognised with this award.

However, we don't tend to sit back and admire our work. We are progressing next generation materials, horizon scanning for legislative changes, identifying opportunities to provide solutions to customer and market needs whilst addressing anthropogenic damage, and seeking safer chemical alternatives to those on the market. We want to be part of the current change and make our contribution to societal needs through scientific advancement."

Anacarda are focused on the design, development and supply of some new products linked in with Paul's other business, Bitrez Ltd who manufacture the products on behalf of Anacarda, and CPS who have some Patented technology that is used in the Anacarda portfolio. These other two business are also recipients of Queens and Kings Awards for Enterprise respectively.

For further information visit <https://www.anacarda.com/>





## Graham Hart Processing Technology Ltd donates defibrillator to local community

Graham Hart Processing Technology Ltd., the Bradford based heat transfer manufacturing specialists, have donated a defibrillator to the Friars Industrial Park for members of the local community to access.

The new model of defibrillator was purchased through the London Hearts Charity and is designed to make saving lives as simple as possible. Located on an external wall of their workshop on the industrial park in the Idle area of the city, the life-saving device features real time feedback that guides the rescuer through the process with animation coaching and voice prompts. Defibrillation within 3-5 minutes after cardiac arrest can produce survival rates as high as 50-70%.

*Chris Hart, Managing Director of Graham Hart Processing Technology Ltd., says: "Safety is paramount to our company ethos, and installing a defibrillator on-site aligns with our commitment to supporting the well-being of our community. One of our team recently had a pace-maker fitted, which further prompted our decision to purchase the defibrillator. Placing it in a readily accessible location ensures that anyone in need can promptly access life-saving assistance, potentially saving precious minutes that can make a critical difference in cardiac emergencies."*

## Heat transfer manufacturing specialist becomes first in sector to win seal of approval for hydrogen and carbon capture supply work

Graham Hart Process Technology Ltd, the heat transfer manufacturing specialist has become the first heat transfer manufacturers granted 'Fit for' status under the new standards programme for the hydrogen production and carbon capture industries.

The Bradford based company, which is a leading global design and manufacturer of high integrity heat transfer and specialised pressure equipment, has passed a series of assessments and audits under the schemes Fit for Hydrogen (F4H2) and Fit for Carbon Capture, Usage and Storage (F4CCUS).

The Government backed programme demonstrates that companies working within the supply chain for hydrogen and carbon capture understand the specific requirements of their potential customers and can demonstrate high standards of quality management and performance across their business.

Achieving 'granted' status for both standards strengthens Graham Hart's proposition for customers working on



The global engineering company has not only funded the acquisition and installation of the defibrillator but has also pledged to undertake the ongoing maintenance of the equipment which is registered with the national defibrillator network, The Circuit which provides the NHS ambulance services with vital information about defibrillators across the UK.

Graham Hart Processing Technology Ltd. recently celebrated their 50th anniversary as a global design and manufacturer of high integrity heat transfer and specialised pressure equipment. Renowned for supplying bespoke products to leading corporations and manufacturers worldwide across diverse sectors such as oil and gas, food and drink, pharmaceuticals, and aerospace, Graham Hart Ltd. has built a reputation for excellence in both innovation and performance.

**For more information about Graham Hart Processing Technology Ltd. and their services and products, please visit [www.graham-hart.com](http://www.graham-hart.com)**



regional, national and global engineering projects focused on decarbonisation.

*Chris Hart, Managing Director, said: "Achieving F4H2 and F4CCUS status is a significant milestone in our service offering, and demonstrates confidence in our capability to supply the growing hydrogen and carbon capture markets. We are the only heat exchange manufacturer to have achieved AMRC's Fit for Nuclear status, and these additions only further strengthen our credentials as a leading manufacturer for the energy industry."*

After a pilot programme in the Humber region in 2023, F4H2 and F4CCUS have become approved as extensions of a long-standing 'Fit for' model of supplier development led by the Nuclear Advanced Manufacturing Research Centre (AMRC).

**Further details on the services offered by Graham Hart can be found at [www.graham-hart.com](http://www.graham-hart.com)**

# Vynova awarded a Platinum rating

Vynova has been awarded a Platinum rating for its sustainability performance by EcoVadis, a leading independent provider of business sustainability ratings. Platinum is the highest rating awarded by EcoVadis and the result places Vynova in the top 1% of over 130,000 companies assessed across 220 industries and 180 countries.

"Sustainability is at the core of our strategy and our mission of offering solutions that bring the benefits of chemistry to society while preserving the planet's climate, environment and resources. We are therefore delighted that our continued focus on improving our sustainability management systems was recognized by EcoVadis," comments Vynova CEO Christophe André.

"After two consecutive Gold ratings, this Platinum EcoVadis medal is a next milestone in our sustainability journey and reflects our hard work and unwavering commitment to sustainability excellence, ethics and responsible business practices. We look forward to continuing implementing our sustainability strategy and working together with our customers and suppliers to further progress in the area of sustainability, for example through our VynoEcoSolutions range of circular, renewable and low-carbon products," adds Nella van der Eerden, Vynova Vice President Sustainability and ICI Chief Sustainability Officer.

EcoVadis is recognised as the world's largest and most trusted provider of business sustainability ratings. The agency assesses the sustainability efforts of more than 130,000 companies and ranks their sustainability and corporate social responsibility (CSR) activities.

The EcoVadis sustainability assessment methodology evaluates how well a company has integrated the principles of sustainability & CSR into its business and management system. It illustrates performance across 21 indicators in four themes: Environment, Labour & Human Rights, Ethics and Sustainable Procurement.

**For more information, visit [ecovadis](http://ecovadis.com) - [www.ecovadis.com](http://www.ecovadis.com) and Vynova - <https://www.vynova-group.com/>**





# Atlas Copco Specialty Rental UK and Ireland makes multi-million-pound investment

Atlas Copco Specialty Rental UK and Ireland – a leading provider of temporary industrial and offshore rental equipment – has made a multi-million-pound investment following a substantial growth period, and to drive future growth.

To meet ever-increasing demand for its rental equipment, the company has strategically invested in an extensive range of new assets. This includes power generators, electric and diesel-driven air compressors, nitrogen generators, and associated accessories.

To facilitate the growth, the company has also significantly bolstered its team of experts, increasing its workforce from 36 to 51 employees over the past eighteen months.

In addition, the investment will also see the company further upgrade its South Shields and Dundee depots - which have recently undergone a revamp - in line with its sustainability goals. This includes the installation of electric heating to remove dependency on natural gas and the installation of more solar panels to reduce CO2 emissions.

Atlas Copco Specialty Rental UK and Ireland specialises in the provision of state-of-the-art temporary compressed air, nitrogen, power modules and steam boilers for short or long-term demands, planned contingencies or unexpected emergencies.

In addition to its rental assets, Atlas Copco Specialty

Rental UK and Ireland also provides a host of supporting services including freight and logistics; installation, commissioning and decommissioning; fuel management and energy management; on-site operators; training, supervision, and specialist technicians.

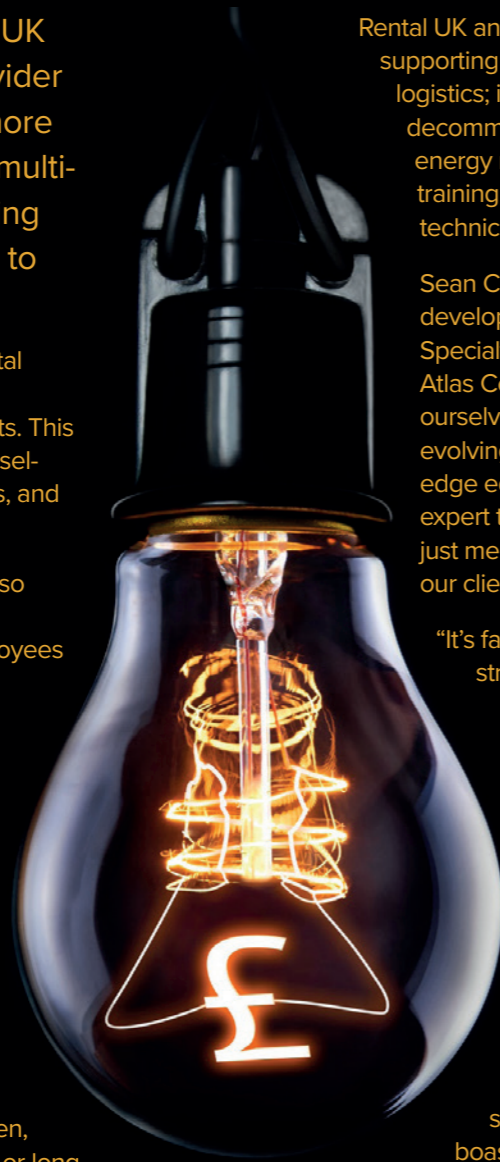
Sean Clemens, UK sales and business development manager for Atlas Copco Specialty Rental UK and Ireland, said: "At Atlas Copco Specialty Rental we pride ourselves on staying ahead in an ever-evolving market. Our investment in cutting-edge equipment and the expansion of our expert team reflect our commitment to not just meeting but exceeding the demands of our clients."

"It's fantastic that we have had such a strong year and that we are proactively investing in our future, be that bolstering our portfolio or further driving forward our sustainability commitments."

"I am excited about the future, and we are committed to delivering exceptional service to our valued customers as we continue on this trajectory of success."

Atlas Copco Specialty Rental serves a range of industries and boasts a portfolio of specialised products for these sectors. Industries served includes pharmaceutical, chemical, manufacturing, offshore, oil and gas, and food and beverage.

For more information, visit [www.atlascopcorental.com](http://www.atlascopcorental.com)



# Funding boost helps Lankem to focus on sustainability

Greater Manchester specialist manufacturer Lankem has boosted its environmental commitments following a six-figure investment to support the development of a next generation bio-based surfactant. Financial backing has been secured from NPIF – FW Capital Debt Finance, which is managed by FW Capital and is part of the Northern Powerhouse Investment. The six-figure loan is supporting the launch of the new BioLoop range together with the creation of three new jobs.

Lankem was founded in 1999 and this year is celebrating 25 years in business. It is a rapidly expanding firm located in Dukinfield which supplies industrial surfactant products such as coatings, emulsion polymerisation, agrochemicals, textiles, industrial cleaning oils and lubricants. Recently Lankem has focused on the development of a range of novel bio-based surfactants.

The funding is supporting the introduction of this new range of bio-based surfactants containing components that come from renewable sources. Unlike many bio-based surfactants, these products offer excellent surfactant properties and can be used as more environmentally friendly alternatives to conventional synthetic non-ionics, such as alcohol ethoxylates. Unlike palm-based surfactants, the BioLoop range contains soybean oil which is considered to be a great sustainable source.

**Sean Hodgkinson, Director at Lankem explains:**

"Sustainable products from renewable sources have been around for many years but the majority have very limited functionality in terms of performance compared to synthetic counterparts. Our remit was to develop a range of bio-based products that offer comparable performance against the synthetic products across a wide range of applications. This product is plant based which has huge benefits to the planet but is also ultra mild so can be used in personal care and cosmetics. This is the first of its type in the world and is made from 'new' carbon. We've been busy manufacturing the

BioLoop product over the last 18 months. The funding from FW Capital is supporting the development of BioLoop and our launch to market. This is a very exciting time for everyone at Lankem."

**Laura Rees, Senior Investment Executive at FW Capital added:** "The development of innovative products is critical for the future and BioLoop is a very exciting one that delivers on sustainability, without compromising on performance. I'm thrilled to support Lankem with the growth and launch of their BioLoop product. This is a real game changer for the surfactant industry."

**Debbie Sorby, Senior Manager, the British Business Bank said:** "Investments like this play a pivotal role in propelling businesses like Lankem towards their sustainability goals

and the next stage of growth. NPIF funding not only fuels innovation but also plays a vital role in fostering local job creation, allowing businesses to take a step towards a greener and more prosperous future."

The current NPIF investment phase has now completed with the British Business Bank launching the Northern Powerhouse Investment Fund II in March 2024.

The Northern Powerhouse Investment Fund project is supported financially by the European Union using funding from the European Regional Development Fund (ERDF) as part of the European Structural and Investment Funds Growth Programme 2014-2020 and the European Investment Bank.



For further information visit - <https://www.lankem.com/>



# John Hogg Technical Solutions Partners with Tunley Environmental on Net Zero plans

John Hogg Technical Solutions, a pioneer in fuel marking technology and solvent dye manufacturing since its establishment in 1981, is proud to announce its dedicated focus on sustainability through a 12-month support package with environmental consultancy Tunley Environmental.

With a legacy of over 40 years in supporting governments and serving the petroleum, lubricant, and speciality chemical industries, John Hogg Technical Solutions has been at the forefront of safeguarding product quality, combating fuel fraud, ensuring compliance, and enhancing tax revenues in over 70 countries. Notably, the company has catered to esteemed clients such as Shell and BP, earning the prestigious "Queens Award for Industry" in 1997, and the Chemicals Northwest International Trade Award in both 2012 and 2024.

Tunley Environmental, a renowned global sustainability consultancy specialising in carbon and biodiversity footprints for organisations and products, is excited to embark on a partnership with John Hogg Technical Solutions. The commitment of John Hogg Technical Solutions to expedite its transition to Net Zero for its products underscores its proactive approach to sustainability. Through this collaboration with Tunley Environmental, John Hogg Technical Solutions demonstrates its steadfast commitment to making a positive

impact on the world while assisting its clients in their sustainability endeavours.

"At John Hogg, we understand the importance of behaving as a responsible corporate citizen, and we are committed to taking ownership of our environmental and societal impacts," said James Page, Marketing Manager at John Hogg Technical Solutions. "Tunley are a fantastic partner and we are excited to work with them to drive our sustainability efforts forwards."

"We are honoured to join forces with John Hogg Technical Solutions in their sustainability journey," said Dr William Beer, CEO at Tunley Environmental. "Their dedication to sustainability aligns perfectly with our mission to help organisations reduce their environmental impact. We look forward to

leveraging our expertise to support John Hogg Technical Solutions in achieving their sustainability objectives."

**For more information about net zero assessments, visit Tunley Environmental's website:**  
<https://www.tunley-environmental.com/measure-your-businesses-carbon-footprint-with-a-carbon-reduction-assessment>

**For further information, please contact:**  
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# Why Process Safety is vital for net zero

To keep the transition to net zero on track, we must ensure that process safety is at its heart.

Our work is about learning from events such as the Buncefield Fire and Explosion on 11 Dec 2005, which resulted in numerous injuries, damage to assets and the environment so we do this by trying to make processes inherently safe. As my university lecturer and Process Safety guru Trevor Kletz said, in summing up inherent safety: "What you don't have, can't leak."

## How to make processes inherently safe

- Minimise – reduce the amount of hazardous material present
- Substitute – replace one material with another of lower hazard
- Moderate – reduce the strength of an effect
- Simplify – eliminate problems by design rather than adding additional equipment or features to deal with them
- Error tolerance – design to withstand faults and deviations from design
- Resilience – limit consequences of failure by designing:
  - Against knock-on effects
  - To make incorrect assembly impossible
  - To make status clear
  - For ease of control.

Kletz also goes on to share a further key message, "Organisations have no memory – only people have memories and after a while they move on taking their knowledge and experience with them." This is why process safety requires continual attention.

The net zero economy will require key industrial chemicals, such as hydrogen which can be considered inherently unsafe. However, they can still be used in processes that are themselves inherently safe by building process safety into every aspect of a project, from management systems to human factors, and every stage of a project, from inception to decommissioning.

This continuity is crucial because it's during times of change that mistakes can happen. For example, with the introduction

of new environmental laws in the 1990's to reduce emission of volatile organic compounds (VOCs), some companies linked vents together through collection systems to form a single vent from which to remove contaminants. However, plant components weren't originally designed to be connected and joining them together magnified any potential incident. The risks weren't always assessed and mitigated, leading to several explosions at plants around the world.

## Net zero process safety: hydrogen

Hydrogen projects are now being progressed as a decarbonised energy vector for example in the process industry sector and as transport fuels. This means that these chemicals will be handled and utilised in settings that are in some cases unfamiliar and out with current practice.

A focus on process safety can prevent and control incidents in the processes at the heart of the UK's plans for net zero – and by doing so, build and maintain social acceptance of them. Such a focus has been achieved after past incidents, with companies appointing directors responsible for process safety and creating separate departments to focus purely on process safety, irrespective of timescale and cost.

As we continue to move towards net zero, and new companies deploy new technologies, we must not let this focus slip; we must not forget the process safety lessons of the past. The processes we need for net zero can be inherently safe, if we design, engineer and operate them that way.

AXIOM are currently supporting companies who are progressing towards net zero particularly in the area of considering the viability from an operation and process safety point of view in switching to Hydrogen. This includes assessing what are the Materials and Mechanical Engineering considerations in repurposing existing equipment vessels, furnaces, pipework etc for Hydrogen along with Process Safety in terms of Hazardous events, consequence assessment and effect on Area classification.

**Peter Hunt, Director - AXIOM**  
[peter.hunt@axiom-ltd.com](mailto:peter.hunt@axiom-ltd.com) [www.axiom-ltd.com](http://www.axiom-ltd.com)

## Reference list

Kletz, T.A. (1993) Lessons for Disaster – How Organisations Have No Memory and Accidents Recur, Rugby: Institution of Chemical Engineers.





# Attracting top talent on a budget...

As Chemical specialist headhunters, we have an interesting overview of the market specifics; we can often see what is working and what is not when it comes to attracting talent.

Our advice on this topic applies to every company, from corporates to high growth SME's and start-ups. Most of the teams we talk to, whether established or early stage, are often constrained by budgets so we have put together our tips to help you attract top talent on a budget.

## 1. Keep up to date and adapt

In markets that are close, competitive, with skills shortages, as an employer you need to keep up to date. Don't ignore how your competitors are adapting to attract and retain top talent – this may be as simple as keeping up to date with salary levels, employee training benefits and wider remunerations benefits including pensions, saving schemes etc. Know that your reputation goes before you – for good or bad.

- Don't get known as a company who is set in its ways regarding your recruitment policies with a slow, archaic internal process, who never gives feedback, or you will struggle to attract the best talent and over time lose your good people to fast-paced, more agile businesses.
- Well-known 'heritage' brand names or long-established companies should know the attractiveness of their brands and 'local' reputation, but do not overly rely on this. You need to be responsive in your recruitment process to compete 'and lead the way' to attract and keep securing exceptional candidates.
- Always promote the attractiveness of your business, through Marketing and PR. Be innovative, proactive, and open-minded in promoting your company as an employer of choice.
- Be a leader in areas such as CSR, Sustainability, Innovation and most importantly Skills/Diversity/Equality/Talent Development/STEM Development in your sector. Be willing to collaborate, to listen, try new ideas and offer different incentives.

## 2. What excellent candidates want

'Money isn't everything' ...but it also matters and why most of us work. A company needs to attract a candidate by showing they are seriously listening to their motivations and requirements to attract them to their company and retain them longer term.

- Good candidates want to see their skills are recognised and appreciated, and paid for accordingly, via a comprehensive, overall 'fair' package and they are achieving a better progressive offer. This becomes an exceptional package in the candidate's mind when it is offering what is important to their individual needs.
- The best talent for your company will be excited by what you do, your strategy for growth, your people, the challenge, development, and prospects for themselves within this – 'Sell' to them (it's a two-way thing) what successes they can achieve

to contribute as a key member of your team, and don't forget to keep this communication going post induction.

## 3. Make it real

Whatever combination of benefits, work-life flexibility options, reviews or other reward-recognition schemes your company choose to offer, make sure the culture is 'real' and the policies you offer are achievable and supported as your real values and actions, and not just 'lip-service' or 'greenwashing'. Your employees (and ex-employees) will know the real culture and will react accordingly so make sure your values are real.

## 4. Ideas in the market

Businesses are offering an array of benefits to attract the best candidates besides salary including:

Team Development Days	Secondments and Sabbaticals	LTIPs	Share Options/ Employee Ownerships
Flexible Working	Dependent Leave	Enhanced Pension	Private Healthcare/ Dental
Enhanced Sick Leave	Wellbeing Policies/Gym Membership	EV Schemes	Bike to Work Schemes
Performance Related Bonuses	Professional Subscriptions and Fees	Additional Holidays	Flexible Locations

Our advice is to regularly check in with your employees on what they need, as it will vary during their working life in line with personal milestones as these change too. Be willing to listen, flexible to an extent, have a suggestion box and always encourage 360 review discussions.

## 5. Investment versus cost

It still holds true that good employers are the ones who genuinely see the costs of attracting top talent and development of its people as an investment; something that is essential for the future growth of its own business, as opposed to ones who see recruitment or training as a wasted cost off the bottom line.

For further information visit - <https://www.rmq-uk.com/>



# IP audits - what are the benefits?

Intellectual Property (IP) is an important asset of any business; it provides security over the business' innovation and branding and can be essential when looking to attract funding and investment. However, identifying the IP rights which are relevant to your business can be a challenging task.

An IP audit provides an overview of the IP rights that are relevant to your business and provides recommendations on how you can improve your business' IP position.

## What is an IP audit?

An IP audit is a comprehensive review undertaken by an IP professional, such as a patent or trademark attorney, which details your existing IP rights and looks at other existing or future IP which could be protected. IP audits focus on all IP rights relevant to your business, including patents, trademarks, copyright, and (registered and unregistered) designs. The audit may also discuss potential issues relating to IP owned by third parties. The IP professional will work closely with you to understand your business model and strategic goals and tailor the audit to meet these requirements.

The audit will also provide guidance on managing your IP portfolio, dealing with contracts and licensing agreements and handling confidential information, including trade secrets and know-how.

## What are the benefits of an IP audit?

An IP audit can assist you in identifying and prioritising your IP, which will provide your business with a commercial advantage. Additional benefits of the IP audit include:

- identification of new markets and revenue streams;
- identification of previously under-appreciated assets;
- assistance in securing funding and investments by demonstrating the value of key assets; and
- guidance on the implementation of appropriate contracts and licensing agreements when dealing with third parties.

An IP audit can be conducted at any stage of a business' development but may be particularly useful before a significant investment or scale-up of activities, or before expanding the business in a new direction.

## How to obtain an IP audit?

Businesses can self-fund an IP audit by contacting an IP professional. The cost of the audit will vary depending on the required depth and purpose of the audit.

Alternatively, small and medium-sized enterprises (SMEs) can apply for a part-funded IP audit through the UK Intellectual Property Office (UKIPO) IP Audit Scheme. The cost of an IP audit under this scheme is fixed at £3000 with businesses receiving a grant of £2500 towards this cost. Applications must be submitted to the UKIPO through one of the partner

support schemes, which includes Innovate UK Edge, Scottish Enterprise, the Highlands and Islands Enterprise, or the Welsh Government. The IP audit is then carried out by an IP professional selected by the business.

The UKIPO is also set to pilot a new, tiered financial support scheme in Summer 2024. Whilst the final details of the scheme are yet to be released, it is expected that it will offer a part-funded IP audit to SMEs that would benefit from an in-depth review. The scheme is also expected to offer SMEs:

- a discussion with an IP professional around specific IP issues in circumstances where a full IP audit is not appropriate; and
- funding towards professional advice to implement an IP strategy, such as IP protection, management or commercialisation.

*Appleyard Lees has extensive experience in conducting IP audits, in securing IP rights and also assisting companies in the development of their IP strategies. If you have any questions or would like any more information about IP audits, please contact Rachel Mercer - [rachel.mercer@appleyardlees.com](mailto:rachel.mercer@appleyardlees.com)*



## INTELLECTUAL PROPERTY RIGHTS





## Develop your skills

The Institution of Chemical Engineers (IChemE) is a market leader in process industry training. We offer a wide range of courses to help you develop core chemical engineering and process safety skills as you progress your career.

Learn online or face-to-face, and consider an in-company course if you have a team to train.

Browse our courses and discover how we can support your training needs.



### Process safety techniques

- Hazard identification and risk analysis techniques (including HAZOP and LOPA)
- Process safety management
- Understanding different hazards (eg hydrogen)
- Human factors in the chemical and process industries

### Process and plant operations

- Chemical engineering core concepts
- Distillation technology
- Plant and production management
- Scale-up of chemical processes

### Sustainable process engineering

- Introduction to sustainable process engineering
- Sustainability leadership
- Sustainability measurement
- Material resource management

### Contract and project management

- Contract law for engineering contracts
- Engineering project management
- Applying the IChemE Forms of Contract

[www.icheme.org/training](http://www.icheme.org/training)



## Patenting research outputs – monetising your intellectual property

As we continue our series on considerations for researchers interested in patenting their research outputs, WP Thomson looks at how you can monetise your intellectual property and turn potential competitors into collaborators.

Your patent is part of your intellectual property and, like all property, it is an asset that can provide value. In the same way that your company might exchange products for money, you can exchange your patent, or the right to work the invention claimed in that patent, for money or something else of value.

### Selling

Selling a patent involves the seller (“assignor”) assigning the rights to that patent to the buyer (“assignee”). Typically, this takes the form of an assignment agreement or assignment deed, signed and dated by representatives of both parties. An assignment agreement requires “consideration” – that is, something must be paid for the rights being assigned, though in many countries this may be a token amount, such as £1. On the other hand, a deed requires no consideration but should state that it is a “Deed”, and signatures of the parties must be witnessed.

Rights can easily be assigned incorrectly and care should be taken when drafting assignment documents. For example, since patents often form part of a family of rights, mistakes can occur resulting in rights not being transferred as intended. Poorly drafted assignments might fail to transfer priority and/or future rights which can potentially be fatal if entitlement is later brought into question. Documents might also unwittingly assign rights in additional or different countries to those intended when the assignment was drafted, and it may not be possible to rectify such mistakes at a later stage.

### Licensing

Often patent proprietors wish to maintain ownership of their patent but see a financial benefit in allowing one or more third parties to work part or all of the claimed invention. For example, a third party might be able to bring the

product to market faster or more cheaply than the patent proprietor could on their own, or they may want to utilise the patented technology in non-competing fields or operate in countries where the patentee has protection but is not currently operating. In such cases, a license may be of great commercial benefit.

Licenses can be i) “sole” licenses whereby only the proprietor and licensee may work the patented invention; ii) “exclusive” licenses, whereby only the licensee can work the patented invention; or iii) “non-exclusive” licenses, whereby licenses may be awarded to multiple licensees. Much like an assignment, the terms of a license should be scrutinised carefully to ensure that no more or fewer rights are licensed than intended, and that the type of license is what both parties expected.

### Cross-Licensing

As explained in the previous issue of CNW Elements magazine, chemical patents often carve out niches of protection. For example, if a process carried out at 20-70°C is already patented, the same process carried out at 40-45°C with an inventive purpose (e.g., a surprising increase in productivity) might still be patentable. However, whilst the proprietor of the second, narrower, patent could stop the proprietor of the earlier patent working their process at 40-45°C, they are not free to work their own invention because it infringes the earlier broader patent.

In this case, both patentees might be interested in acquiring licenses, allowing both parties to operate without fear of infringing one another’s patents. Such licences could permit the different parties to operate in non-competing manners, such as in different territories or to produce different products. Alternatively, they could become direct competitors with regard to the invention defined by the overlap between the patents, while keeping additional competitors from entering the market.

As you can see, whilst a patent gives its owner the right to prevent others from working the claimed invention, it is much more than a simple “Keep off the grass” sign. It is a monetisable asset, and one whose value to its owner should be continually assessed as part of a review of its owner’s property or patent portfolio.

To find out more from WP Thomson, including how IP could benefit your work, please visit <https://www.wpt.co.uk> or contact Stuart Forrest at [sfo@wpt.co.uk](mailto:sfo@wpt.co.uk)





# Page Executive Talent Trends 2024: “The Expectation Gap”

After the pandemic, a convergence of factors resulted in transformative change in workplace dynamics, with people thinking more holistically about the value their job gives to their lives.

Finding people strategies that work for all is becoming more challenging - something we call “The Expectation Gap”.

On one hand, workers have a list of expectations stretching beyond competitive salaries and flexibility. On the other, employers are facing significant pressures, making it harder for both sides to meet in the middle.

We spoke to 50,000 workers for our 2024 Talent Trends survey, to uncover how people are really feeling and the critical insights employers need to know.

- Whilst wage growth is slowing globally due to economic pressures employers are facing, workers still expect higher salaries to keep pace with the rising cost of living and feel valued for their contributions
- Flexibility has become a flashpoint as employers grapple with implementing hybrid working models that meet both business needs and employee preferences
- With five generations now in the workforce, maintaining a dynamic and inclusive culture where everyone can be their authentic selves is more complex than ever
- AI is no longer a concept rooted in the future. It's already affecting people's daily working lives and career decisions, adding another layer of complexity to the talent market

## Salary

The rapid wage growth we saw after the pandemic – driven largely by skills shortages in many sectors – is now slowing. However, this isn't deterring workers in their desire for higher salaries. This is our first mismatch of expectations, with wage demands increasingly out of sync with the economic reality many employers face.

Rather than settle for stability, employees who are unhappy with their current salary are willing to change role. It's not a small fraction of the workforce, either. Some 2 in 5 people are unhappy with their current salary, and a majority of those are actively job-hunting, intending to move within the next six months.

## Flexibility

Many employers are struggling to find a hybrid model which works for everyone - all while recognising that, for employees, work-life balance is not a 'nice to have', but a 'need to have'. Job-hunters expect hybrid practices to be clearly outlined - these are prioritised in job searches and when considering whether to stay in current roles.

For employers who are looking to get people back into the office – to reap obvious benefits around collaboration and culture - the biggest challenge is incentivising the behavioural change. Attempting to force the issue through new policies can drive attrition. Some 53% of people who told us they were coming to the office more this year are also active job seekers.

## DE&I

One in five of our participants said they'd been discriminated against at some point in their career, with 9% stating they had experienced it within their current role.

Discrimination based on age was most frequently experienced. This was most prominent at opposite ends of the age spectrum, with those over 50, followed by those in their 20s, most likely to have experienced age discrimination.

Gaps were also notable in how different demographics perceived existing steps to tackle inequality. Only 35% of women said they were satisfied with the work being done to close the gender pay gap, compared to 49% of men.

## AI

The days of AI being a concept of the future are gone. For many, it is already felt in their day-to-day lives.

While AI tools are not fully implemented yet, as many as 33% have already used a form of AI at work – whether using Generative AI to create content, or tools to complete sales forecasting or sentiment analysis.

When it comes to AI maturity, employers are only slightly further along than their employees, suggesting widespread uncertainty about how to proceed. Many companies may be struggling to implement AI strategies in general.

## Bridging The Gap

These are complex issues that require an effective people strategy. The full Talent Trends report contains additional information and actionable insights on how to bridge “The Expectation Gap”. It can be downloaded at

[www.pageexecutive.com/talent-trends](http://www.pageexecutive.com/talent-trends).

Page Executive helps companies in the Chemicals sector to hire Board- and Director-level roles. For further information visit [www.pageexecutive.com](http://www.pageexecutive.com)

# Boosting chemical production efficiency with clamp-on ultrasonic flow measurement

Clamp-on ultrasonic flow measurement represents a significant technological advancement in the monitoring and control of liquid flows within industrial pipes. This method is particularly beneficial in industries dealing with corrosive or highly sensitive materials, such as the chemical industry.

By employing ultrasonic waves to measure the rate at which fluid flows through a pipe with transducers clamped to the outside, this technology offers a completely non-intrusive solution, avoiding direct contact with the medium. This feature is crucial in preventing equipment degradation and ensuring the safety and integrity of the measurement process.

## Challenges in methionine production

DL-methionine is an essential amino acid used extensively in animal feed. At the world's largest DL-methionine production complex in Singapore, advanced chemical processes are leveraged to meet considerable demand. Methionine, derived from substances like acrolein, methyl mercaptan, and hydrogen cyanide, is vital for many animals that cannot synthesise this amino acid naturally. The production process involves handling highly corrosive chemicals, which is why robust and reliable flow measurement systems are essential.

## The transition to ultrasonic flow measurement

At the Singapore methionine plants, existing wetted inline flow meters were struggling with the harsh conditions, leading to plant shutdowns for maintenance. This challenge led to the exploration of alternative measurement technologies that could enhance reliability and reduce operational disruptions.

Plant operators turned to Emerson's Flexim clamp-on ultrasonic flow measurement, as this technology offers several advantages that are crucial when it comes to handling

corrosive chemicals. Firstly, because it's entirely non-intrusive, with sensors mounted on the outside of the pipe, this configuration eliminates any risk of the system components being degraded by the corrosive fluids, ensuring longevity and reducing maintenance costs. Additionally, this approach doesn't disturb the flow, or create potential leak points, therefore system integrity and safety is upheld.

## Technical specifications and calibration

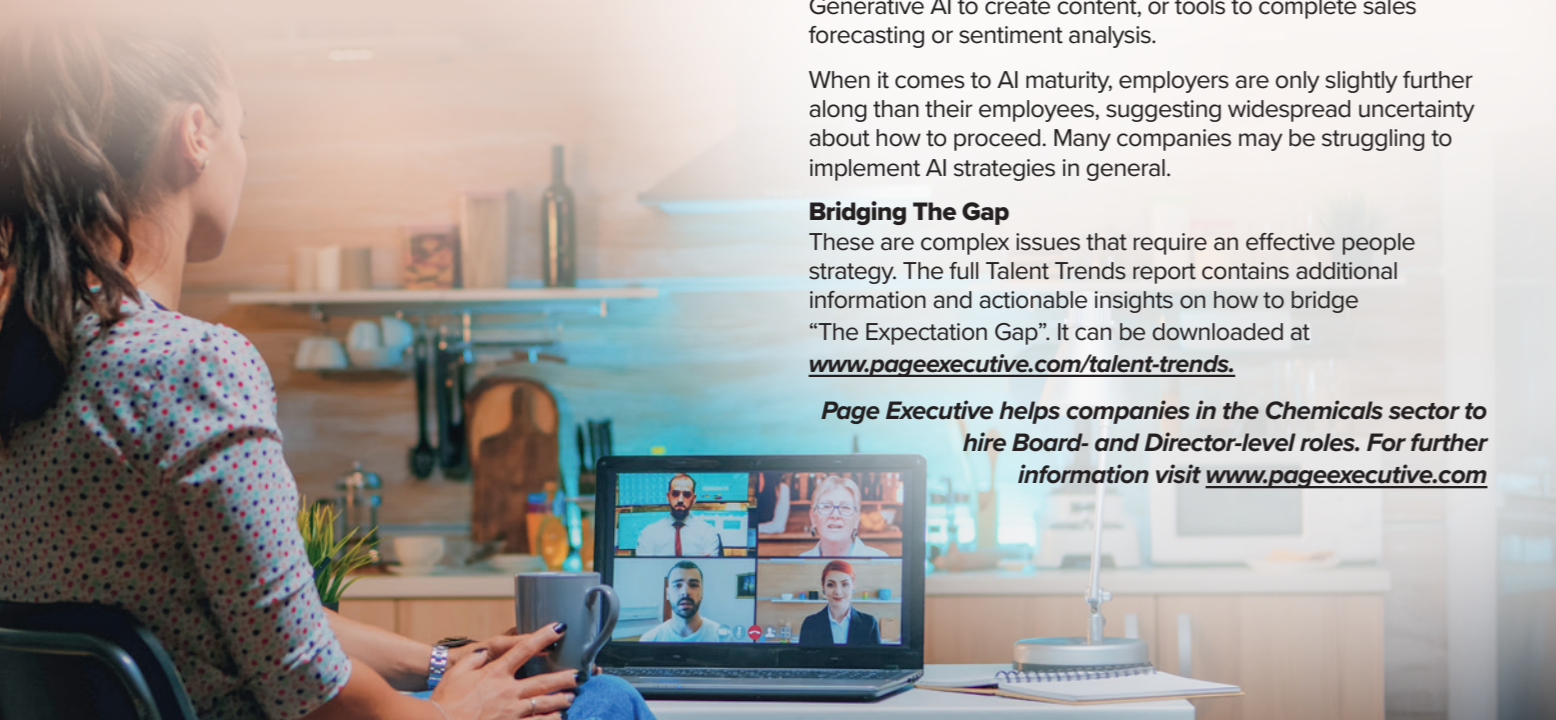
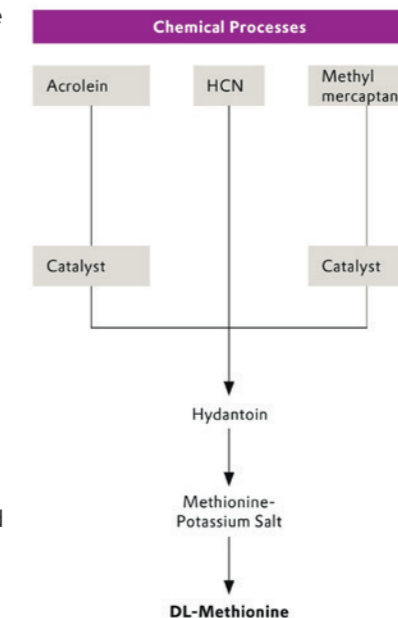
Scepticism about the accuracy and potential drift of ultrasonic flow meters was addressed through the comprehensive pre-calibration of devices. The system uses matched transducers and incorporates integrated temperature compensation to ensure precise and stable measurements. The added feature of Advanced Meter Verification (AMV) allows for regular checks against reference data without disrupting the production process, further ensuring reliability and accuracy over time.

## Operational benefits and long-term impact

Convinced by the capabilities and benefits, the company equipped its methionine production lines with several Flexim systems. This transition to clamp-on ultrasonic flow measurement has successfully eliminated the need for plant shutdowns due to meter failures, underlining the technology's impact on improving operational efficiency and reducing costs in chemical processing environments.

This all goes to show that for industries dealing with similar challenges, adopting non-intrusive ultrasonic flow measurement can be a truly transformative decision.

**To find out more about the real-world benefits of clamp-on ultrasonic flow measurement in the chemical industry, for permanent mains-powered installation, or battery-powered rental meters available from 1 week to longer duration options, contact Simon Millington – [www.emerson.com](http://www.emerson.com) | [flexim-uk@emerson.com](mailto:flexim-uk@emerson.com) | +44 (0)1606 781 420**





21st & 22nd May 2025 The NEC, Birmingham, UK

PRE-REGISTER FOR FREE ENTRY!



# CHEMUK 2025

## GROUP OF EVENTS

1 EXPO 5 SHOW ZONES 500+ EXHIBITORS 150 SPEAKERS & PANELS



### The UK's largest EXPO for the Chemical, Laboratory & Process Industries

New for  
2025!  
FORMULATED  
PRODUCT  
SHOW



# CHEMUK Expo records a 17% increase in visitors for the 2024 edition!

CHEMUK 2024 opened its doors on Wed 15th & Thu 16th May at the NEC in Birmingham to a record attendance of 4641 visitors (excluding exhibitor staff) over the two days, representing an increase of 17% from the 2023 edition. The total two-day attendance (visitors plus exhibitors) was 6677.

CHEMUK show founder, Ian Stone, sums up the positive response to this year's event: "Standing in the hall mid-morning on the first day was electric! So much volume and energy in the hall with our biggest concentrated audience ever, from literally every corner of the sector."

"I think the seniority of attending technical, scientific, supply chain, and business visitors rocketed to a whole new level this year, one visitor badge after the next from the biggest names across the sector."

### Minister Alan Mak represents the UK Government at CHEMUK 2024

Visitors to CHEMUK were invited to an exclusive pre-recorded address by Minister Mak, Minister for Industry and Economic Security at the Department for Business and Trade, and Minister for the Investment Security Unit at the Cabinet Office.

The address was supported by a comprehensive UK Government footprint at the show, with several government departments exhibiting this year, including the Department for Business and Trade, the Department for Environment, Food and Rural Affairs, the Health and Safety Executive, the Home Office, and the Department for Energy Security and NetZero.

### CHEMUK Group of Events

CHEMUK redefined itself this year with the introduction of several sub-brands: the Chemical & Process Engineering Show, the Chemicals Supply Show, the Chemicals Management Show, and the Chemical Laboratory Show. The organising team was delighted to see not only an increase in the number of visitors but also an increase in the quality of visitors, which they largely attribute to the introduction of these more focused show zones.

### The CHEMUK 2024 Conference covers the big issues

Reflecting on the enormous CHEMUK 2024 speaker programme, Ian Stone comments, "CHEMUK24 was our most comprehensive conference programme to date and certainly our best attended, with standing room only at so many of the keynotes and panel programmes.

The 'drop-in' nature of the CHEMUK conference stages carries so much appeal, giving instant access to senior figures, expertise, technology, innovation, and the most topical and lively debates around the BIG issues affecting and influencing the sector,

whether Sustainability, UKREACH, Decarbonisation, Future Skills, Digitalisation, Bio-based Transition, Scale-Up and so much more."

### CHEMUK 2024 Partner support continues to underpin CHEMUK's growth

The 2024 show welcomed several key new partners to the show this year who brought invaluable content and member groups to the show. The new partnering organisations included the British Plastics Federation, IMechE, ScotCHEM, CICA (Chemical & Industrial Consultants), and the CHCS (Chemical Hazards Communication Society).

The show's success was underpinned by the continued support and input provided by their longstanding partner network, comprising the CBA, BCA, BASA, BVAA, BPMA, BioVale, BCMPA, BADGP, CPI, CCUK, IBioC, GAMBICA, NEPIC, SIA, InnovateUK KTN, Chemicals Northwest, UKLA, and the UK & Ireland Spill Association, to name a few.

### IChemE at CHEMUK 2024

The IChemE brought together a fantastic programme of content that included two keynote addresses by current President and CEO, Nigel Hirst, and Yvonne Baker OBE. In addition, visitors were invited to a feature panel discussion around sustainable production.

### The Chemical Business Association's 'Chemical Supply Chain in Action' feature zone is a massive hit

The Chemical Business Association team pulled out all the stops to present their 2024 feature zone, which represented some of the key support services and mechanics of the UK chemicals supply chain.

This was all in addition to the CBA's keynote address by CEO Tim Doggett and two panels entitled, 'Transitioning into the Digitally-Enabled Age' 'How equipped is your Chemical Supply Chain?', and 'Achieving & Demonstrating Sustainability in the Chemical Supply Chain'.

### CHEMUK 2025: Looking ahead

In 2025, CHEMUK will introduce 'The Formulated Product Manufacturer Show'. Ian Stone talked through his vision for 2025, 'CHEMUK is all about providing a single destination where all strands of the chemical industries converge through its individual show stream brands, and 2025 sees the introduction of a brand new '5th stream' with the "Formulated Product Manufacturer" show. Aimed squarely at the downstream consumer and industrial formulated product industries.

### DATES - CHEMUK 2025

Wed 21st & Thu 22nd May 2025  
Venue: NEC - National Exhibition Centre, Birmingham, B40 1NT

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



21st & 22nd May 2025 REGISTER FREE AT [WWW.CHEMICALUKEXPO.COM](http://WWW.CHEMICALUKEXPO.COM)

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Elements Summer 2024 27



# Human Factors in the Chemical and Process Industries

## Modular human factors training

Would you like to develop your understanding of human factors in the chemical process industries?

Are you looking for practical guidance, tools and approaches to help you manage human factors effectively at your organisation?

Sign up for our human factors training and take your human factors understanding to the next level.

Training is available online and face-to-face in Manchester, UK. It can also be delivered in-company.



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Managing Human Factors	Managing Human Failure	Strengthening Organisational Performance	Human Factors in Design

Complete individual modules or all four depending on your training needs. Visit our website to see scheduled online and in-person dates. Spaces are limited – early booking is advised.

“Human Factors in the Chemical and Process Industries has given me the confidence to lead the human factors agenda at a top tier COMAH site.”

Ian Taylor, SABIC UK Petrochemicals

Secure your spot – register today

[www.icheme.org/human-factors](http://www.icheme.org/human-factors)

# Business of Science Conference 2024 explores the future of science

The 8th Business of Science Conference took place at The University of Salford in May to explore the future of science. Presentations and panels explored the next big things in science and innovation such as AI, engineering biology, and space, as well as how we can best support an emerging generation of scientists. From the discussions on the day, one theme stood clear – collaboration is a powerful tool to progress us into a better collective future.

Since its inception in 2016, the Business of Science Conference has been bringing together the brightest minds from across the science and innovation ecosystem for a day of exchanging invaluable insights and building relationships.

This year, the day saw keynote speakers including Ijeoma Uchegbu, Chief Scientific Officer at Nanomerics and Professor of Pharmaceutical Nanoscience at UCL; Damian Kelly, Vice President Innovation & Technology Development at Croda; and Dr. Andrew Bourne, Executive Director at EPSRC. They began the day by sharing valuable perspectives from academia, business, and the public sector.

Professor Ijeoma Uchegbu shared how her team at UCL and Nanomerics are using molecular envelope technology to tackle central nervous system diseases through the blood brain barrier. Damian Kelly explored how Croda is using smart science to improve lives while working towards a sustainable future. Dr Andrew Bourne tied off the keynote speeches by sharing how UKRI is facilitating academic and industrial collaboration.

Following the speeches, the speakers sat down for a panel discussion. The group explored the importance of in-person collaboration in a post-COVID world. Prof. Uchegbu emphasised the critical role of face-to-face contact in building relationships in her industry to progress her innovation. Dr. Bourne noted how initial in-person interactions can support long-term project progress but caveated that for international collaboration Zoom can make progress happen much quicker, and without the environmental burden of international travel.

Throughout the day, delegates attend various breakout sessions with topics ranging from industry approach to Net Zero, navigating career opportunities for students, and considerations for successfully commercialising science and innovation. These sessions were hosted by experts at organisations like the Royal Academy of Engineering, Innovate UK, and British Water.

One popular discussion was on STEM skills and talent retention. This panel was comprised of Prof. Nic Beech, Vice-Chancellor of the University of Salford; Rhys Morgan, Strategic Projects Director, Skills and Inclusion, Royal

Academy of Engineering; Séverine Trouillet, CEO of STEM Learning UK; Janine Smith, Director of the GM Business Growth Hub; and Debbie Johnson, Head of Innovation Talent & Skills, Innovate UK. The discussion centred around the need for greater diversity and inclusion, particularly regarding unseen differences such as sexuality and class within the industry. The panellists also emphasised the importance of engaging young people about the opportunities in STEM before they begin making decisions about their careers. The panel shared that this is best facilitated through outreach involving students, parents and teachers, as well as using social media to target students at the appropriate stage.

Perhaps what makes the Business of Science Conference unique is that it brings school children together with professionals to inspire the next generation into STEM careers - a key driver of this is the conference's Innovation Awards. Through the awards, young people from Primary age through to 18+ are offered the opportunity to submit innovations addressing real-world problems and to present them at the conference. This year's winning innovations from budding innovators included an AI-powdered water management system, a self-charging phone and a unique pen design that tackles plastic pollution while supporting people with reduced mobility challenges.

With expert panellists providing diverse perspectives across academia, business, and the public sector, the day proved to be insightful while allowing attendees to build valuable connections. As we look ahead, the themes of communication, community building, and collaboration will continue to drive the activity of the Business of Science Conference, ensuring we foster a vibrant community collectively working towards furthering science innovation for good within the UK.

**The Business of Science Conference shares many thanks to its sponsors and partners for making the event a success.**



## Catalyst to receive funding from Arts Council England

Nearly 70 museums and libraries across England will benefit from a £33 million boost through the latest round of the Cultural Investment fund, which includes 26 projects that will be funded under the Museum Estate and Development Fund.

The funding will support important upgrades to museums and public libraries – such as vital repairs, renovations and the development of digital infrastructure – which will ensure they can continue to be assets to their communities and improve the visitor experience.

These critical infrastructure projects will help boost access, maximise income generation opportunities and increase visitor numbers at treasured organisations across the country.

Catalyst Science Discovery Centre and Museum in Widnes, is delighted to announce that they have been awarded £312,499.00 from the MEND fund. This funding will be used to completely replace the flat roof of the fourth floor, glass-walled Observatory Gallery, a project that will be delivered in partnership with Halton Borough Council. Additional work to increase insulation at roof level will greatly improve the environmental performance of the museum.

Darren Henley, Arts Council England chief executive said: 'Museums make a huge contribution to the lives of people in towns and cities

across England. The investment in the physical fabric of their buildings helps to make sure that our museums are able to carry on serving their communities for years to come. We're excited to be delivering the next round of the programme on behalf of the DCMS because we know the positive impact this investment has on helping museums make a real difference across the country'.

Hugh Dowding, Chair of the Trustees at Catalyst said: 'Catalyst is housed in a Grade II listed building, and these essential works to protect the fabric and longevity of the property are beyond the scope of our day-to-day maintenance budget. This MEND grant and a percentage of match funding from Halton Borough Council will enable Catalyst to carry out its usual activities to ensure a high quality experience for visitors'.

**For further information about Catalyst, images and interview opportunities, please contact Meryl Jameson, Marketing Manager, Catalyst Science Discovery Centre and Museum, Mersey Road, Widnes WA8 0DF. Email [meryl@catalyst.org.uk](mailto:meryl@catalyst.org.uk) [www.catalyst.org.uk](http://www.catalyst.org.uk)**



## Catalyst heads towards a brighter future with new CEO



Catalyst Science Discovery Centre in Widnes, is delighted to announce the appointment of a new CEO, Nikki Burton Mallott.

Nikki, joins Catalyst from Knowsley Safari where she was Head of Learning and Discovery. With over 10 years' experience in Conservation Education, she was responsible for the operational and strategic control of the learning, conservation and research teams at Knowsley Safari.

Welcoming Nikki to Catalyst, Chair of Trustees, Hugh Dowding said "Nikki was appointed due to her combination of a very open and friendly personality, her successes in teambuilding at Knowsley, and her real understanding of what attracts and satisfies visitors. I and the Trustees welcome her to Catalyst, we look forward to working alongside her in the future and we are very confident that she will be a great acquisition as our new CEO."

New CEO Nikki said "I am delighted to join the Catalyst team and support their mission to engage communities with science and heritage. I am joining at an exciting time where plans for growth and development are in full swing and I look forward to being a part of the next stage in Catalysts journey'.

## spotlight on new member

### Indaver Solvents

#### High-quality and sustainable recycling of solvents

Indaver Solvents, formerly known as BIP Chemical Holdings, and now part of the environmental group Indaver, offers you sustainable and high-quality recovery solutions for your waste solvents.

#### Strategically located, close to our customers

At its site in Middlewich, Cheshire, with direct access to the M6 motorway, Indaver operates a solvent recycling plant where both hazardous and non-hazardous solvents are processed. Indaver offers large-scale recovery solutions there and can support you with lab analyses, pilot scale trials and recycling on a commercial scale.

#### A need for the industry

The treatment and recycling of organic solvents is an important topic in the chemical and pharmaceutical industry as large amounts of solvents are generated annually. In most cases, solvents require strict hazardous waste management. High-value solvents, in most cases, are suited for material recycling applications. Lower value solvents can serve in other applications across varying industries whilst still retaining the R-Code for EA returns.

#### Ecological and economical benefits

The key benefits of solvent recycling are significant:

- reclamation and return of treated solvent (toll manufacture)
- alternative supply from the virgin solvent market for the supply of solvent
- waste previously sent for incineration can now be recycled
- CO<sub>2</sub> avoidance and overall lower environmental impact
- recycled solvents are valuable raw materials for industry
- direct contribution to the circular economy
- overall lower costs

#### Focus on recycling & manufacturing

With different technologies such as pervaporation, fractionation, and distillation and own recycling facilities across Europe Indaver provides a recycling alternative for solvent waste that today is being used and/or exported for thermal treatment. We continuously invest to raise the efficiency, capacity and sustainability of our recycling plants so we can manage, handle and process your more complex flows.



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**LinkedIn:** <https://www.linkedin.com/showcase/indaver-solvents>

## National STEM Learning Centre

We aim to improve lives through STEM education. We do this by delivering teacher CPD (continuing professional development) in STEM subjects, bring STEM role models into schools as part of the STEM Ambassadors Programme, provide careers support and opportunities for young people through **Destination STEM** and deliver bespoke, long-term support for groups of schools in collaboration with companies.

#### Improving Teaching

Investment in CPD demonstrates long term, sustained investment in teachers of STEM subjects. Our science CPD has been reported to show increase in retention of teachers, improves quality of teaching and reduces attainment and progression gaps.

#### Enrich Learning

Destination STEM provides support, advice, and opportunities to help young people explore pathways into STEM careers, develop their STEM skills, and connect with STEM employers. These programmes show more diverse

young people choose progress in STEM, improve STEM skills and reduce aspiration and opportunity gaps.

#### Find out more

#### STEM Ambassadors

Award winning volunteering programme linking STEM professionals with young people to broaden horizons and raise aspirations for STEM and into STEM pathways. Chemistry Ambassadors is a cohort of STEM Ambassadors specialising in chemistry with dedicated resources and training available to equip volunteers to showcase the place of chemistry and the chemical industry in everyday life.

#### Find out more

#### Social value

Elements of our work have been assessed to give a social value measure. Allowing companies who work with us and invest in our approached access to strong evidence of social impact.

#### Find out more



#### Contact:

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# Supplying to the Chemical Industry

Knowing your local supply chains is important, and suppliers of expertise, solutions and great products are right here in the northwest. CNW members have a strong association with and many years of experience supplying to the chemical industry. The companies listed in this directory cover a wide range of products and services. They have established customers in the sector, with proven track records. Many will be well known, long-standing firms and there will also be new and innovative businesses that you may not have heard about. Effective supply partnerships, delivering success for all! For more details, the websites for the listed companies and organisations can be found at:

<https://www.cia.org.uk/chemicalsnorthwest/Membership/Our-Members/>

## Chemicals Distribution, logistics & chemical handling

### 2M Holdings Ltd

Chemical distribution and related services of sample management, storage and blending. Provision of AdBlue, Samsol products, packed chlorine and TRIKLONE & PERKLONE chlorinated solvents. Markets served include: automotive, precision cleaning, coating, oilfield & refineries, flavours, fragrances, surfactants for personal care, household and industrial cleaning and pharmaceuticals.

### Actikem Ltd

An ISO9001 certified business, specialising in a range of chemical processes and manufacturing services, including mixing, storage and re-packaging. We provide toll and custom manufacturing services for SMEs as well as blue-chip organisations, and supply customers with on-tap production facilities, offering them potential cost-savings and greater flexibility.

### F2 Chemicals Ltd

As a specialist in the handling of fluorine gas, F2 Chemicals Ltd offers a variety of organofluorine products all manufactured at our Preston plant. Our primary product is a range of high specification perfluorocarbons, such as octafluoropropane and perfluorodecalin, under the Flutec tradename, used in applications including medical, tracers, plasma-cleaning, cooling and cosmetics.

### Hibiscus

Hibiscus is one of the UK's leading manufacturers of chemical labels and hazard communication compliance software. For over 40 years they have specialised in providing high-quality labelling solutions for the chemical and hazardous goods industries and are renowned for their knowledge of industry legislation and for the durability and excellent performance of their products.

### Hosokawa Micron Ltd

Integrated powder processing technologies including: size reduction, air classification, mixing, drying, containment equipment such as gloveboxes and downflow booths. Contract processing services for 1kg to multi-tonne lots. Remote monitoring solutions that include: condition monitoring, analytics for improving product quality and energy efficiency and on-line diagnostics for predictive maintenance and improved plant availability.

### Indaver Solvents Ltd

Part of the international environmental group Indaver. Indaver Solvents offers comprehensive in-house and end-to-end solutions for industrial (non) hazardous solvent waste and recycling requirements. They support with lab analysis, pilot scale trials, and recycling at commercial scale. With their Cheshire-based solvent recovery installations, combined with bespoke fine chemicals manufacturing, they provide continuous, sustainable and high-quality recovery solutions to the Chemical and Pharmaceutical industry. Find out more here - Solvent recycling - Indaver

### Kanon Liquid Handling Ltd

Design and manufacture of drum, IBC and container filling systems ranging from fully automated robotic systems to simple manual machines. Full range of marine, road and rail tanker loading/unloading and safe access equipment. Distributor for Mann-Tek couplings, with repair facility and 'return to base' option.

### Keyser & Mackay

Keyser & Mackay is a market oriented agent and distributor of chemical raw materials and industrial equipment, acting as an intermediary between customers and suppliers. Keyser and Mackay NV has their headquarters in Amsterdam, Holland and has been active since 1894. With over 125 years' experience, the company's success today is down to reaping the benefits of all those generations of staff that have been or still are working for it. Today, the group has offices in the Netherlands, Belgium, France, Switzerland, Germany, Poland and Spain, and has started another chapter with the recent entry into the UK market.

### Klüber

Global manufacturer of over 2500 speciality lubricants for virtually every industry, Klüber Lubrication high-performance speciality lubricants and effective lubrication management programs enable customers to achieve their operational efficiency goals, increase reliability, and lower the total cost of ownership across assets.

## Education, training & skills

### Catalyst Science Discovery Centre

An independent charitable trust playing a pivotal role in promoting science across the Northwest. Catalyst works in conjunction with industry partners to excite young people about all STEM subjects and careers available within the science sector. Companies can also sponsor a local school to visit and attend industry days.

### Centre for Industry Education Collaboration

CIEC supports companies in making credible and sustainable links with primary schools, in order to inspire the next generation of scientists and engineers. We train STEM professionals to improve their communication skills, and develop industry-focused activities for use directly by teachers or by ambassadors visiting schools.

### Chemistry with Cabbage

We work with students of all ages, demonstrating through practical experiments, the relevance of chemistry in solving problems. Research shows that children make career choices very early on, so capturing their imagination early is important. Chemical companies are welcome to support our hands-on work in primary schools.

### IChemE

The leading professional qualifying body for chemical, biochemical and process engineers.

### National STEM Learning Centre

We aim to improve lives through STEM education. We do this by delivering teacher CPD (continuing professional development) in STEM subjects, bring STEM role models into schools as part of the STEM Ambassadors Programme, provide careers support and opportunities for young people through Destination STEM and deliver bespoke, long-term support for groups of schools in collaboration with companies. [Find out more.](#)

## Engineering products & services

### AM Technology

AM Technology are experts in continuous manufacturing solutions for the chemical and pharmaceutical industries with their patented Coflore flow reactor technology suitable for a wide range of chemical processes, including multiphase reactions with slurries, from grams to kilotons.

### Addison Project

Addison Project is a Multi-Disciplined Engineering Project Management & Design organisation, established in 1997, with offices located in Cheshire, Lancashire and Teesside. We have an in-house team of engineers and designers circa 130 people, catering for mechanical, civil, structural, EC&I, process engineering and a full range of CDM services.

### Beamex

Beamex helps its customers to find a better way to calibrate, according to the most demanding requirements of process instrumentation. Beamex offers a comprehensive range of products and services – from portable calibrators to workstations, calibration accessories, calibration software, industry-specific solutions and professional services.

### CDR Pumps UK

A leading independent Pump manufacturer. Since opening our doors 60 years ago, we have gone from strength to strength bringing you a company that has the product, service and knowledge to support the chemical, nuclear and pharmaceutical industries on a global scale. And small enough to give you the individual care and attention you need yet big enough to support multi-site, multi-national blue-chip chemical companies. Our global manufacturing facility in Milan is strategically located to support our customers across the world.

### Dron & Dickson

Dron & Dickson are recognised market leaders in the supply and maintenance of hazardous area electrical equipment. Our Engineering Services and Wholesale divisions offer bespoke solutions incorporating the very latest industry standard and safety legislation.

## Know your supply chains

## Engineering products & services

### Flexim Instruments UK Ltd

We support UK clients with their measurement, commissioning, verification & maintenance needs. Offering clamp-on flow metering of liquids & gases; SIL 2 for safety critical duties; mass flow or concentration measurement options from outside the pipe; virtually zero maintenance; no cost escalation with exotic pipe, pressure or temperature; no outages for commissioning or maintenance; zero leak paths

### Laker Vent Engineering Ltd

Supply, fabrication and installation of process and utility piping systems. Project management, detailing, procurement, on and off-site fabrication and installation of pipework and coded welding. Associated steelwork supporting and mechanical installation of plant and equipment. Testing and Handover. Pipework and steelwork is fabricated to specific customer-needs and conforms to all appropriate ISO, BS EN and ASME standards and specifications.

### Langfields

Langfields are specialist fabricators of process plant equipment for the Hydrogen, Waste to Energy, Pharmaceutical, Petrochemical, Chemical, Nuclear and other process industries.

### Lokring UK

Lokring UK offer technical engineering support and sales for Lokring technology across the UK. The Lokring "Cold Weld" pipe and tube joint reduces the need for hot work, NDT inspection and reduces on site resources. Code compliant with ASME B31. Lokring is a Safer, Faster, Lower Cost replacement for site welding and flanged fabrication.

### Manntek AB

Supply of safety dry disconnect and safety breakaway couplings. Comprehensive range of specialist dry quick release couplings to suit 99% of known chemical applications. Bespoke solutions with a size range of ¾" to 8" nb. Dry disconnect couplings are made to NATO standard Stanag 3756.

### METTLER TOLEDO

Mettler Toledo manufacture & service weighing, analytical and inspection equipment used throughout the product cycle from Research & Development, through Scale-Up & Production to Quality Control, Storage & Despatch. We work with our customers to understand and achieve their business goals, including key areas of safety, quality, productivity and sustainability.

### MCE Group

Offering valve service and overhaul in our state-of-the-art service workshops, or on site, using OEM parts, from single valves to complete outages. European distributor for ValTechnologies, providing severe service, zero-leakage isolation valve solutions, setting the standard for the next generation of valves for the chemical industry.

### O'Hare Engineering Design Ltd

Innovative, Detailed, Working Solutions. O'Hare Engineering Design Ltd. are providers of 3D laser scanning, mechanical and pipe design solutions. With over 18 years' experience, we know that accuracy is fundamentally the most important element in every engineering design project, so our client focused approach uses the latest technology to provide an effective solution that is sure to hit the brief, every time.

### Perry Process Equipment Ltd

Buying and selling of high quality used processing plant and equipment. Savings of up to 70% on the cost of process equipment, full mechanical and electrical refurbishment and equipment immediately available from stock. Centrifuges, dryers, evaporators, filters, heat exchangers, mills, mixers, reactors, separators, tanks.

### Pumptec Engineering Services

Specialises in supporting the chemical industry in the inspection, repair, overhaul and fitting of all types of rotating equipment. Our highly trained engineers can support your routine maintenance, call outs and shutdowns. Our Wirral based machine shop can complete overhauls on your pumps, fans and mixers.

### ProDecon®

Providing industrial service solutions to the Oil&Gas, Chemical, Power, Pharmaceutical and Industrial sectors. Specialising in hazardous hydrocarbon and chemical environments. ProDecon® has a unique range of technical expertise, that enables us to support customers with restoring process performance and providing maintenance risk management through bespoke industrial cleaning solutions.

### SABSCO (Steam and Air Blowing Service Company)

John F Hunt Regeneration are a trusted partner for brownfield demolition, remediation, water treatment and enabling services. As part of the John F Hunt Group, we have the scale and financial stability to provide a complete works package no matter the size of the scheme.

### Studley Engineering Ltd

A multi-disciplined mechanical and electrical engineering contractor, providing a comprehensive service to the process industries in disciplines including: steelwork, welding, maintenance, site services, pipework, tanks and vessels. Over time we have gained an enviable reputation as a reliable, responsive, motivated contractor that delivers safe, high quality, cost effective work.

### Swagelok Manchester

Fluid system solutions, products, training and services. Supply of over 7000 fluid system components including; fittings, hoses, tubing, regulators, equipment servicing and custom fabricated solutions. Provision of practical information, know-how, tools and speciality services needed to purchase, manage and apply them successfully.

### Yokogawa

Yokogawa is a leading provider of field instrumentation, safety systems, industrial automation and digital transformation solutions. IIOT, OT Cybersecurity and Alarm Management are specific areas of focus for Yokogawa's Advanced Solutions team with a number of major projects currently being delivered across Europe.

## Engineering project management & energy

### Atlas Copco Rental UK

Provides temporary cost and energy efficient solutions for long- or short-term demands, planned maintenance or unexpected emergencies. Our engineers design the most suitable temporary installation, utilising our fleet of state-of-the-art equipment which includes 100% oil-free Class 0 and oil-injected compressed air at medium or high pressure, generators for power, and nitrogen. Quality of service, environmental care and personnel safety are guaranteed by our triple ISO certification.

### AXIOM

A multi-award-winning, asset management solutions provider, supporting the chemical, pharmaceutical, oil & gas, bulk storage, power, renewables and related industries. With integration of their Materials, Mechanical, Inspection, Process Engineering and Process Safety Services, Axiom are uniquely positioned to identify and mitigate key through-life risks across the entire asset life cycle.

### Graham Hart (Process Technology) Ltd

Delivering high integrity heat transfer equipment for over 45 years. The company has a strong emphasis on Chemical/Process & Mechanical Engineering backed up by an advanced manufacturing facility.

### IKM Consulting

With 25 years of civil & structural engineering and environmental consulting experience, IKM's portfolio in high-hazard and regulated industries is extensive. With offices in Runcorn and Grangemouth, IKM specialises in consulting services around asset integrity, secondary & tertiary containment, asset infrastructure inspections, environmental risk assessments and COMAH compliance.

### John F Hunt Regeneration Ltd

John F Hunt Regeneration are a trusted partner for brownfield demolition, remediation, water treatment and enabling services. As part of the John F Hunt Group, we have the scale and financial stability to provide a complete works package no matter the size of the scheme.

### Otto Simon Ltd

Diverse engineering consultancy and project delivery organisation. Initial consultations, technical and commercial due diligence and front-end design and definition. Feasibility studies through design, supply, erection, and commissioning services using in-house and licensed technology. Services for complete plants or upgrades. Procurement, construction management, start-up and operation & maintenance expertise.

### PM Group

PM Group is an employee owned, international project delivery company operating across Europe, the USA and Asia. We have a 50+ year track record in project management, process design, process safety, facility design and construction management for leading multinational companies.

## Engineering, IT & process consultants

### Gexcon UK Ltd

Safety and risk management and advanced dispersion, explosion and fire modelling. Unique expertise and shared knowledge on how to prevent explosion accidents. Carrying out accident investigations and dedicated facilities for physical testing. Ventilation and dispersion modelling also available. Hazardous area classification and quantitative and qualitative risk analysis and assessment.

### OpenPSM

OpenPSM® is a cloud-based software solution, developed to help businesses manufacturing or handling hazardous chemicals meet the requirements of modern risk-based process safety legislation. Providing a unique framework allowing you to log and assess every aspect of your company's process safety management programme, OpenPSM® necessarily supports engagement from shopfloor to boardroom, allowing everyone with an active part to play in process safety to have relevant information to hand.



## Engineering, IT & process consultants

### Siemens Digital Factory & Process Industries and Drives

Productivity and efficiency requirements continuously increase in the field of process automation. A comprehensive range of process automation and Drives products as well as an award-winning range of training and support services.

## Environment, health & safety risk management

### BakerRisk Europe Ltd

Dedicated to help predict, prevent and mitigate hazards and explosions, fires and toxic releases. Specialising in process safety and risk management, we help clients understand their risks and offer cost-effective risk management solutions. Success is delivered through proven knowledge and experience, innovative research and unique engineering capabilities.

### Chemical and Industrial Consultants Association

An association of independent consultants with extensive experience, many having worked in the chemical industry, across various fields. Provision of technical and business advice on almost every aspect of chemical manufacture, development, marketing and management.

### RAS Ltd

Expertise that covers the full range of risk assessment and management services across; safety risk, business risk and environmental risk. Carry out Quantitative risk Assessments and Predictive & consequence modelling, through 'softer' risks affecting an organisation's reputation.

### RPS Group

Provision of specialist consultancy to help those with responsibility for health and safety achieve compliance. With particular expertise in the chemicals sector, we provide support from plant development through to operation. Core services include: ATEX/DSEAR, asbestos, BowTie analysis, CDM, COMAH support, fire safety engineering, functional safety, hazard identification, Legionella, occupation health and risk assessment/analysis.

### SLR Consulting

A unique blend of leadership, management, consulting, engineering and training services is offered to the chemicals industry. A forerunner in sustainable process safety management combined with proven business improvement capabilities enables delivery of practical solutions to promote safety and efficiency in design, operation and maintenance of complex hazardous facilities.

## Facilities, finance and other business services

### Department for Business & Trade

Operational support for British exports as well as facilitating inward and outward investment activity. Support is given to first-time exporters or established exporters requiring more help with accessing more difficult markets or putting strategic alliances in place. Access to expert advice, trade services, training and events.

## Pen Underwriting incorporating OAMPS

Specialist Insurance services to high hazard manufacturing and haulage industries. Motor fleets, property, liability and transit policies. We help clients minimise risk through proactive risk management and a range of training and response services to assist companies in planning for and dealing with incidents and emergencies.

### Sci-Tech Daresbury

We are a national science and innovation campus, and enterprise zone providing a range of office, laboratory and workshop accommodation for technology companies (from a desk to large laboratory and office units). Companies have access to a range of facilities covering material analysis, virtual design & simulation, and rapid prototyping.

### STFC Innovations Technology Access Centre

A unique, fully equipped space for innovation, research and development. Providing flexible access to laboratory space, "hot labs" and scientific equipment. Ideally suited to start-up companies, smaller and medium size enterprises and R&D team from established companies.

### TW Languages Ltd

Provision of a professional and reliable multi-lingual translation service delivering high quality translations. We specialise in business, technical and scientific translations into 250+ language combinations. We provide certified translations for legal purposes. We are full members of the ATC & EUATC and ISO 17100 Translation Services certified.

## Laboratory products, testing and services

### Scymaris Ltd

We offer high quality and cost-effective ecotoxicology, environmental fate, and chemistry services to the global agrochemical, pharmaceutical, industrial chemicals & animal health industries. Our state-of-the-art laboratory is equipped with controlled temperature rooms, freshwater and seawater testing facilities and is accredited to work according to GLP and most Global regulatory requirements.

### XCellR8 Ltd

A world leader in animal-free testing. Our GLP accredited laboratory provides groundbreaking in vitro safety tests for the chemical and personal care industries. We are passionate about delivering testing strategies that are both scientifically advanced and ethically sound. Our award-winning work is recognised at a regulatory level by the OECD and ECHA.

## Legal & patents

### Appleyard Lees LLP

Patent and trademark attorneys. Aim to obtain the best possible patent protection for clients. Experience of product clearance against competitor patents and in due diligence for mergers and acquisitions. Advice on licensing issues and collaboration agreements relating to IP.

### Bawden and Associates

A legal firm providing professional services across all IP matters. Drafting and prosecution of patent applications, handling opposition and appeals in the EPO and in litigation in UK and international courts. Business led and strategic approach to generate assets of real commercial value.

## Mathys & Squire LLP

Mathys & Squire LLP is a full-service intellectual property law firm with industry-leading expertise in patents, trade marks, design protection and IP litigation and including a dedicated chemistry team of highly experienced attorneys holding higher degrees and research or industrial experience who are passionate about innovation in the chemical field.

### Squire Patton Boggs (UK) LLP

Global legal company providing legal, regulatory and advocacy assistance to the chemical and performance material industries. Expertise that emphasises areas that mean the most to industry such as environmental, mergers and acquisitions, commercial finance, construction, litigation, IP, public policy and international expansion.

### Withers & Rogers LLP

A leading UK and European intellectual property law firm with five offices including London and Munich. We offer a range of IP services including obtaining UK, European and worldwide patent or trade mark protection, the handling of contentious matters, advice surrounding licensing arrangements and issues including validity of patents and "freedom to operate".

### WP Thompson

Intellectual property attorneys providing high quality advice to start-ups, SMEs or FTSE 100 companies. Team of experienced IP attorneys specializing in chemistry and life sciences, with first degrees and PhDs in these fields. Securing the most appropriate, cost effective and commercially valuable protection for your intellectual investment and innovation.

## REACH and chemicals services

### CIRS

CIRS Group was established in 2007 and is a leading product safety and regulatory consulting firm. It utilizes its technical expertise, resources, and international network to provide comprehensive compliance services including chemical notifications and registrations, global GHS compliance, laboratory testing, R&D, and data services across multiple industries globally.

### Dr Knoell Consult Ltd

An independent service provider for the chemical and related industries. Globally the Knoell group has over 450 employees covering all aspects of regulatory compliance for industrial chemicals, agrochemicals and biocides: e.g., strategic planning, dossier preparation, exposure assessment, SDS preparation, and from REACH to K-REACH!

### GlobalMSDS

A complete safety data sheet/literature and regulatory service for your entire product communications in any language, style and format required. Hazmix is a new 'pay as you go' web-browser product that is setting a new standard in SDS authoring. A Solutions service that also provides technical advice.

### Intertek Regulatory Services

Health, environmental and regulatory services for implementation of chemicals management. Worldwide registration of chemicals, food contact compliance and notification, global chemicals compliance, design/optimisation of toxicological and eco-toxicological studies, hazardous substance management, EU cosmetic and biocidal products compliance, classification & labelling, SDS consulting.

## Know your supply chains

## REACH and chemicals services

### WSP in the UK

Recognising that chemical companies face a wide range of regulatory challenges, WSP's centre of excellence can assist companies with chemical compliance and safety obligations. The team's role is to facilitate a company's route to compliance in areas such as chemical registration

(including EU and UK-REACH), supply chain management, GHS/CLP and DGSA, amongst other safety related services.

### Yordas Group

Yordas Group is a leading provider of scientific, environmental, human health and global regulatory consulting services. They offer chemical regulatory support, expert scientific services and support on chemicals management and product stewardship, global hazard communication, hazard and risk assessment, analytical and (eco)tox testing.

## Recruitment

### Adepto Technical Recruitment

A specialist engineering, manufacturing and scientific recruitment consultancy that focuses upon the provision of permanent staff and contract resource to the Chemicals industry. Established in 2015, Adepto has quickly become the partner of choice for many blue-chip and SME manufacturers, engineering companies and consultancies due to our deep knowledge of the industry, credibility and professionalism.

### Handley James Chemical

Mid to senior level appointments solely within the Chemical Manufacturing space. Over 30 years search experience. The company was built on the success of Stuart Tomkinson's successful 11-year recruitment career primarily within the chemical manufacturing arena. Focusing on providing the best talent in the chemical industry. We work closely with you, to understand your business, your culture and exactly what you are looking for from a recruitment partner.

### Page Executive

The executive recruitment division of PageGroup – provides a range of search, selection and talent management solutions. We focus on Board- and Director-level assignments, both on a permanent and interim basis, and have a strong track record of successfully partnering with the Chemicals sector.

### RMG

RMG is an award-winning headhunting consultancy with a difference - we make it our business to search and understand who's who in the Chemicals and STEM sectors and have the know-how to find talented people who will deliver lasting impact and add financial value to your organisation.

### SRG

SRG are industry leaders in Science, Engineering and Clinical Recruitment. We empower individuals and businesses to power the future of STEM. With true specialist knowledge, we support a full spectrum of technical roles and talent solutions across the whole product life cycle, from R&D, through analysis, manufacturing, and engineering to market access.





## Preparing for climate change

In addition to the requirement to consider climate change in your management system by April 2024, if you operate under an Environmental Permit, the International Standards Organisation (ISO) published amendments to a number of existing management system standards in February 2024 to include consideration of climate change.

SLR provides technical expertise in the following areas, should you require assistance preparing a climate change risk and adaptation plan:

- Undertaking standard and in-depth climate change risk assessments
- Development and implementation of climate adaptation plans
- Environmental management systems
- Environmental compliance auditing
- Environmental permit applications

“A global leader in full spectrum sustainability solutions, providing clients with strategic advice and on the ground support.”

### Contact Us

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