



Celebration of Success

Showcasing winning examples
of good practice from the

**2022 Chemical
Industry Awards**

CIA

**CHEMICAL
INDUSTRIES
ASSOCIATION**



About the Awards

Once again this year's Awards were made by Year 10 students at Bridgewater High School, Warrington as part of their GCSE Design course. This was made possible through the generous sponsorship of Solvay.

The Chemical Industry Awards are the premier accolades for the UK chemical industry. This year we held the event at the Royal Armouries Museum in Leeds with over 350 nominees and guests.

The case studies contained within this "Celebration of Success" brochure are all from winning entries and showcase excellent examples of good practice from the UK chemical and pharmaceutical industry, across a wide range of areas.



Celebrating the best of UK Chemical and Pharmaceutical Businesses

It was great to return to 'business as usual' in June and host our first physical Awards ceremony since 2019. Despite the sombre backdrop of post-Covid issues; the dreadful war in Ukraine; ongoing supply chain challenges and energy price escalation, we received the most entries for over 10 years with attendees welcoming the chance to get together again and celebrate the enormous contribution the chemical and pharmaceutical sector makes to the UK society and economy. One of the many signs that the sector is resilient and relatively confident about the future.

This year saw a particularly high number of entries for the Young Ambassador and Sustainability Awards, sponsored by Scientific Update and ERM respectively. Yet again, the Young Ambassador candidates were outstanding with any one of those shortlisted being capable of being a great ambassador for the industry. The exceptionally high number and quality of Sustainability Award entries – introduced last year – also demonstrated that companies are committed to achieving Net Zero and are developing more sustainable products and processes, as well as helping their supply chain on their sustainability journey.

The winning entry case studies showcased here are representative of many other success stories stretching across our industry. We can all be proud of the innovative way in which new products and processes are developed and how manufacturing is carried out to the most stringent health, safety and environmental standards, as well as the huge amount of competence and talent shown by those relatively new to the industry.

I would like to thank all our sponsors and judges for their generous support for these Awards. They are recognised experts in the topics they sponsor and judge and have freely given their expertise and experience during the judging process to ensure these Awards are fair and challenging.

Apart from showcasing the best of UK chemical and pharmaceutical businesses, I hope these case studies will inspire your own work and encourage you to apply for the 2023 Awards which will take place at the Kimpton hotel, Manchester on 15 June.

For further information on the Awards see www.ciaawards.co.uk



Steve Elliott
Chief Executive, CIA





EASTMAN

Company of the Year Award

Winner: Solutia UK Ltd (a wholly owned subsidiary of Eastman Chemical Company), Newport
Sponsor: Chemical Industries Association

This Award is given to the most outstanding CIA member company of the year, which has demonstrated growth to its business and sustained contribution to the UK chemical industry.

Solutia UK Ltd is a wholly owned subsidiary of Eastman Chemical Company - a global specialty materials company that, for more than 100 years, has developed and produced a broad range of products found in items people use every day. Eastman exists to enhance the quality of life in a material way, working with customers to deliver innovative products and solutions whilst maintaining a commitment to safety and sustainability. As a globally inclusive and diverse company, Eastman employs approximately 14,500 people around the world and serves customers in more than 100 countries.

Newport is a mature site, having been established back in 1949. With a long and successful history of chemical manufacture, it has been rejuvenated since the acquisition by Eastman in 2012 and the subsequent investment of \$100M for a new plant producing heat transfer fluids. The plant, part of Eastman's Speciality Fluid and Energy business unit, has gone from strength to strength under the leadership of Site Manager Pauline Brookes, achieving production records alongside the refurbishment and upgrade of existing assets. Most recently the start of Therminol 72 facility, an ultra-high temperature liquid phase heat transfer fluid having excellent thermal stability.

The Therminol® brand is the top selling synthetic heat transfer fluid in the world.

- It is predominantly used in large industrial heat recovery applications
- It is also used in some specific blends which are ideal for use in solar electricity plants

S2075 is the other Eastman operation at Newport, which is used in the manufacture of Saflex®

- Saflex® is an interlayer used by laminated glass manufacturers
- The purpose of the interlayer is to improve the strength and solar/UV control of the glass
- Used in automotive and architectural applications, e.g., photovoltaic cells, car windscreens.

With existing annual production of over 120,000 tonnes, Eastman is one of the largest exporters in the South Wales region. Every day the team strives to meet the Eastman corporate expectation of demonstrating a zero-incident mindset regarding safety, ethics, compliance and an inclusive workplace. The site continues to be a key employer in the area, having introduced more than 10 additional roles this year to enhance service delivery and technical specialism, as well as providing additional opportunities for Interns and Apprentices.

Embracing the principles of continuous improvement, the site also maintains a range of certifications including ISO 9001, 14001, 45001, 50001. The site continues to demonstrate excellent performance with asset integrity. During the pandemic it took only a single deferment for critical inspection, whilst maintaining full occupancy on the plants.

As a site they are extremely proud and honoured to receive multiple awards and this achievement has been recognised by Mark Costa, Eastman Chairman of the Board and CEO.

'Congratulations, Newport team, on receiving the prestigious Responsible Care Award and the highly coveted Company of the Year Award from CIA. That is an amazing double accomplishment, and one that I am sure puts you in rare company. Recognitions like these do not happen by accident – they require an unwavering commitment to excellence and teamwork. The Newport site is a shining example of what can happen when we commit fully to a zero-incident mindset.'



The Chemical Industries Association (CIA) is the organisation that represents chemical and pharmaceutical businesses throughout the UK.

Our activities are split between lobbying and provision of advice and services. Our policy agenda stretches across the economy and competitiveness; our products and the way we work; health, safety & environment and employment issues.

We represent all sizes of chemical and pharmaceutical businesses, of which approximately 70% are overseas headquartered. This illustrates the increasingly international nature of the industry.

Livent

Skills Award

Winner: Livent Lithium UK Ltd, Bromborough
Sponsor: Cogent Skills



This Award is to recognise the employer that has undertaken the most to contribute to the acquisition of skills by the company's workforce through working towards the Cogent Gold Standard.

Livent Lithium (UK) Limited is a lower tier COMAH site based in Bromborough, Wirral, employing 65 people, producing organo-lithium and inorganic lithium compounds for the crop protection and pharmaceutical markets.

In its 2021 Environmental Social Governance (ESG) programme the Livent Corporation identified 'investment in its people' and 'human capital management' as two key elements to its successful implementation and the retention of talent. The Competency Management System (CMS) project was 'sponsored' by the Site Director, overseen and supported by functional leaders and built from the ground up by Operations supervisors.

In the supporting procedure for the CMS the purpose is stated as 'the structured and systematic training and development of all its employees on an ongoing basis to enable them to perform their duties effectively, safely and without risk to the environment', but fundamentally the project's purpose was to answer some very simple questions of their Operations team; what do they have to do? How good do they have to be? Where are they on that journey? How do we know? How do they retain those skills and knowledge?

In developing the CMS, it was vital that, whilst making it their own, Livent was aligned with industry norms and stakeholder expectations, as such they drew inspiration from both inside and outside the chemical industry drawing upon sources such as the Cogent Gold Standard concept and the NHS revalidation program.

The product of the CMS is about 35 Competency Standards for routine manufacturing tasks. A further 14 competency standards address core knowledge (internal) for basic chemistry, environmental management, emergency shutdown, safety systems and process safety license to operate modules.

Additionally, Livent created knowledge-based exams for their manufacturing processes and had them accredited by City and Guilds.

Key to the success of the CMS project was ownership of those involved. The Site Director sponsored the project; providing resources and, most critically, time for those involved to succeed. The functional leads supported the project to ensure that its architecture and structure would meet the needs of all internal and external stakeholders, but vitally important was much of the content; the 'what' and the 'how' was developed by its users, and by the Operational staff that would deliver and receive the training provided. If people believe and own something, then success is highly likely.

The benefits are certainly hard to quantify but Livent met the needs of the business in a record busy period and have done so without harm to person or the environment. Now with a clear pathway for current staff and new starters, Livent can see the competency level make up of a shift team (ensuring that they have the right level to operate safely) which is viewed daily, and PSPIs are in place linked to competency providing oversight to the Site Leadership Team.

Livent has met (are meeting) the Competency Challenge via the implementation of its competency management system. Aligned with industry norms but built and led by the operations team, Livent has created a system that ensures it knows and can demonstrate 'what an operator needs to know' and how 'good' an Operator must be.



Cogent skills

for science industries

Cogent Skills is a group of companies comprised of Cogent Skills, Cogent Skills Services, Cogent Skills Training, NSAN and SIAS. Collectively these companies' purpose is entirely focused on skills and supporting the skills needs and ambitions of individual employers and their employees. Cogent Skills is sector-based working with companies from across the science industries embracing Life Sciences, Industrial Sciences and Nuclear.



Reputation Award

Winner: Centre for Industry Education Collaboration and Johnson Matthey, York and Royston
Sponsor: Chemical Search International

This Award is given in recognition of an organisation who can demonstrate excellence and innovation in the building and/or enhancing of its reputation and that of the chemical Industry.

The Centre for Industry Education Collaboration (CIEC) is a unique organisation, offering support to STEM companies to develop effective and exciting outreach activities for primary-aged children whilst supporting teachers to deliver excellent science lessons in school.

As part of the CIEC's flagship Children Challenging Industry (CCI) programme, since 2002 CIEC has partnered with Johnson Matthey, initially with their site in Billingham, and in 2014 with the site in Royston.

The CCI combines tailored training for industry partners and primary school staff with fully resourced problem-solving classroom activities and interactive site visits to industry, and has been robustly evaluated since 1996. This evidence base has enabled them to refine, innovate and expand the programme to ensure the needs of 21st-century schools and companies continue to be met.

Johnson Matthey has been one of CIEC's most significant partners in this refinement, innovation and expansion process. These innovations enable children to learn about connections between their school science and industry, whilst also sharing positive stories about the impact that Johnson Matthey has locally and globally. These free publications are used in classrooms across the country and are fundamental to ensuring that the CCI programme remains relevant in the current industrial and educational climate.

The CCI programme is a win-win-win-win for all stakeholders:

Pupils: 9-11 year olds engage in exciting practical problem-solving science in their classrooms, all set in industry contexts/stories whilst covering core science curriculum concepts and skills. Advisory teachers provide science equipment for 35 children in each class and carry out 5-6 hours of science activities across a 3-week period. Children explore viscosity, filtration, mixing and making new 'ingredients' which leads directly to them appreciating how the Johnson Matthey site near their homes uses this science to create products that help 'clean the air'.

Primary teachers (key to engaging and motivating generations of children): Through CPD for primary teachers in school who observe the advisory teacher deliver classroom sessions, teachers increase their own understanding of Johnson Matthey, in terms of the science it uses, products it makes, people who work there and potential career opportunities for children in their care. This knowledge, and the extensive range of CIEC publications for teachers equips them to raise career aspirations and awareness of Johnson Matthey for many years to come.

Children talk about the CCI classroom activities and site visit a great deal beyond the classroom, and especially to their parents and primary carers. These positive conversations with family are crucial to each child's career aspirations as they start to make decisions about what they might do when they leave school, or, more often, what they decide they 'don't want to do'.

Johnson Matthey staff receive training, ongoing support and refresher training from their local CIEC advisory teacher, to enable communication of science and engineering ideas, processes and concepts to children in an age-appropriate, engaging and interactive manner. Impact on these staff includes increased confidence and ability to communicate their work with a range of audiences, cross-team working which breaks down invisible 'silos', an increased pride in their work and enhanced management skills.



Founded in 2000, Chemical Search International specialises exclusively in retained executive search, talent acquisition and management consulting services for the global chemicals value chain and related sectors, including advanced materials, green energy, sustainability, and the bioeconomy. Our consultants are based in Europe, the Americas and Asia. All are highly experienced sector professionals, guaranteeing we will better understand your business and be able to deliver quality solutions, faster. Our clients range from technology spin-outs to multinationals on a global basis.



GSK Innovation Award

Winner: Libra Speciality Chemicals Ltd, Irlam
Sponsor: GSK

This Award acknowledges the successful use and application of innovation within a business or across a supply chain to achieve tangible business results with clear societal impact.

Libra Speciality Chemicals Ltd is a UK-based chemical manufacturer, providing innovative products to a global customer base, including several Blue Chip multinationals.

Through 2021, during extremely uncertain and challenging COVID-19 times, Libra designed, installed and commissioned a novel multi-million pound, AI-driven plant to produce low salt Coco Amido Propyl Betaine (CAPB). This cutting-edge innovative investment enables Libra to efficiently and sustainably produce 20,000tpa of low salt CAPB, which is predominantly targeted at supporting the rapidly growing demand for "sulphate free" products within cosmetic, personal & household care, agrochemical and oil & gas markets.

The innovative technology installed comprises a high efficiency, large scale multi-membrane system to remove salt from the standard CAPB product, which naturally contains c5.5% salt. The system design enables a reduction of the salt content in a batch of 54,000 kg CAPB from 5.5% to <0.5% in less than 24 hours.

A key strategic design requirement of the overall system was to ensure absolutely minimum water consumption and wastewater streams, for sustainability and as part of the company's drive to Net Zero. To achieve this, a unique aspect of the overall plant design was the inclusion of a specially designed, multi-step, high pressure reverse osmosis (RO) system that effectively purifies and recycles the valuable water resource within the whole system. This RO recycle system has dramatically reduced the consumption of water from >5 tonnes of water to <1 tonne of water per tonne of low salt CAPB produced.

The scale, and specifically the resource efficient design, adds to the uniqueness of the Libra low salt CAPB plant. It is also 100% automated, driven by AI to ensure maximum efficiency, optimal production output and consistent product quality.

Libra has already secured technical approvals and multi '000 tonne commercial supply contracts with several customers, including the #1 global personal care company, to supply low salt CAPB into Europe, North America and Asia. The "green" credentials of this process technology were a key aspect in achieving this supply position. Libra is also working with a major player to upcycle the only "waste" stream from this process, which is a 5% brine solution. This brine solution can be effectively used as a feedstock for other surfactant formulations, thus resulting in a "zero waste" and a "green" production process.

Libra has recently further enhanced its low salt range by producing a >98% dried version of its low salt CAPB. This opens up even more global sales opportunities with what is a completely new, 'waterless' product to market.

Overall, this is a fabulous example of process/product innovation and technical excellence delivered by an entrepreneurial UK business. Libra has delivered a world class novel system with a timeline from concept to commissioning of just over 12 months. The potential for further exploitation is very apparent as the surfactant markets continue to move further towards "sulphate free", thus offering even more mainstream opportunities for low salt CAPB to be used widely as a primary surfactant.



GSK's purpose is to unite science, technology and talent to get ahead of disease together. We aim to positively impact the health of 2.5 billion people over the next 10 years. Our bold ambitions for patients are reflected in new commitments to growth and a step-change in performance.

Our Montrose site produces a wide range of active ingredients for some of GSK's most important medicines. Every day, an estimated 30 million people take a medicine that includes ingredients from Montrose.



Sustainability Award

Winner: Celtic Renewables Ltd, Grangemouth
Sponsor: ERM

This Award is for companies or operating units that have recognised how to make their business more sustainable in the future and have demonstrated how they are contributing to the sustainability of the sector and/or wider society. This should be exemplified by reference to the UN Sustainability Goals.

Celtic Renewables was born from an innovative research idea to address a global challenge. The company has scaled its patented process technology from its initial laboratory research to the point where the technology can be rolled out as an industrial process to exploit the large global commercial opportunity.

Celtic Renewables' first commercial scale plant in Grangemouth takes unwanted low-value co-products from whisky production (draff and pot ale), combines these with reject potatoes and converts them into Acetone, Butanol and Ethanol (ABE) and other sustainable products, using the proven process known as ABE Fermentation. This scalable process is applicable to a wide range of other biological wastes and residues, many of which incur commercial and environmental costs of disposal.

The ABE process uses bacterial fermentation to produce these chemicals that have global demand with broad usage in many consumer products and industrial processes. Currently almost all acetone and butanol globally are derived from the processing of fossil fuels with all its negative environmental impacts. Celtic Renewables wants to change this situation and use resource efficiency to produce the same chemicals which directly displace the fossil fuel equivalents.

Being able to state that a key component of any product or process is derived from this low carbon sustainable manufacturing process is a game changer for businesses, with immediate benefits from significant greenhouse gas savings and the associated ESG credentials. The products have a premium value due to their provenance. Moreover, the originators of the input materials to the process will also gain both economic and environmental benefits, thereby enhancing their brand and product positioning.

The proposition is a "win-win" solution providing environmentally advantageous disposal routes for unwanted residues (like those from the whisky industry) and creating new sustainable sources of "need" bio-based chemicals and other products, which is applicable on a global basis. By using biological residues from other industries the acetone, butanol and ethanol produced through the process have a considerably lower carbon footprint than their fossil fuel-derived equivalents, with initial GHG savings achieved of over 70%.

The fundamental commercial driver for the Celtic Renewables' business opportunity is the sale of the three chemicals: Acetone, Butanol and Ethanol. Due to their 'green credentials', these high-quality bio-solvents command a significant premium over their fossil fuel equivalents which drives strong commercial performance of both current and future plants. Additionally, costs of production will reduce due to economies of scale from larger plants and process optimisation.

It is a key imperative to seek solutions to decarbonise the chemicals sector which is currently almost wholly dependent on oil and gas for its raw material. The Celtic Renewables' solution is a great example of a sustainable circular economy model and provides a timely and effective solution for the industry. The Chemical Industry Sustainability Award provides a fantastic opportunity to increase the company's reputation with customers and stakeholders, which extends its business network and helps to roll out deployment of the technology and commercial proposition on an international basis.



ERM is the largest global pure play sustainability consultancy. We partner with the world's leading organizations, creating innovative solutions to sustainability challenges and unlocking commercial opportunities that meet the needs of today whilst preserving opportunity for future generations. We work with 70 of the largest chemical companies and help our clients to enter new markets, deliver capital projects, seek sustainable operational excellence and develop asset retirement strategies.



Diversity and Inclusivity Award

Winner: GSK, Montrose
Sponsor: Dow Chemical

This Award is for the company or operating unit that can best demonstrate that it embraces the principals of diversity and inclusivity in all aspects of its business. This Award is designed to promote good practice in diversity and inclusivity and recognise the business benefits of having a diverse and inclusive workforce.

GSK knows it can best deliver its priorities of innovation, performance and trust when everyone is actively included. GSK Montrose has accelerated the Modern Employer agenda which is split into 'Feel Good, Keep Growing, Be You' with leads for each pillar. GSK also runs three employee resource groups (ERG): Women's Leadership Initiative, Talnet (Talent Network) and Spectrum (LGBTQ+ and allies). All leads come together as a committee with active sponsorship from the Site Leadership Team members to provide an active programme of events across site open to all staff.

GSK Montrose has focused on three areas to meaningfully accelerate I&D:

- **Gender balance:** Significant improvements in gender parity have been made, with 28% females with 0-10 years' service, vs. 13% females in the 10+ years' population. Female presence is now well ahead of UK industry averages across the site: 50% of process engineers (vs 8% UK average) 57% of operational and logistics senior leadership (vs 14%). The Women's Leadership Initiative organises monthly events including networking, guest speakers and workshops (topics including stereotypes and bias). Both genders actively celebrate International Women's Day with staff pledging to "break the bias", and International Day of Girls and Women in Science.
- **Talent pipeline:** to proactively manage an ageing workforce, GSK is actively seeking to bring in new talent from a range of backgrounds to ensure it has a strong workforce for the future success of the site including strong links with local education providers. To complement the apprentice and graduate programmes, Talnet organises mentoring and bi-monthly learning sessions.
- **LGBTQ+ and ethnic diversity education:** 'Let's Talk' sessions have provided opportunities for staff to 'ask me anything' to increase understanding and learn how to be a better ally to minority groups. External training opportunities such as Work Pride (hosted by myGwork) increased knowledge of LGBTQ+ issues. Staff have participated in a diverse-reverse-mentoring programme as mentors and mentees. The site recognises LGBTQ+ days, prominently flying the relevant flags and educating staff as to their meaning and the challenges faced by minority groups.

In 2021 the site set a formal objective for all staff to participate in a Modern Employer activity to actively encourage engagement. Everyone completed inclusion and diversity training covering bias, stereotyping and hidden disabilities. Leaders and key talent have completed the Insights Discovery assessment to better understand their personal style and to learn how to effectively work with others, respectful of differences.

The site launched the 'Montrose Matters' motto as a site identity on its internal and external communications with the aim of both promoting the identity of Montrose as a site within global GSK and reinforcing the connection to each other as well as the local community. Montrose site matters to its patients, to the company, and to the town as a large employer offering high-quality jobs and through its charitable work. This has strong resonance with staff and supported connection and inclusivity across the site community.



Dow (NYSE: DOW) combines global breadth; asset integration and scale; focused innovation and materials science expertise; leading business positions; and environmental, social and governance (ESG) leadership to achieve profitable growth and deliver a sustainable future. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company in the world. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated, science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer applications. Dow operates 104 manufacturing sites in 31 countries and employs approximately 35,700 people. Dow delivered sales of approximately \$55 billion in 2021. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow @DowNewsroom on Twitter.



Chemical Industry Service Provider Award

Winner: Axiom Engineering Associates, Stockton-on-Tees
Sponsor: Centre for Industry Education Collaboration (CIEC)



This Award is to recognise the contribution service providers make to the success of the UK chemical industry. The Award will recognise innovation and outstanding delivery of services, for example, engineering, IT, legal and training to the chemical or pharmaceutical sectors.

Axiom Engineering Associates Ltd is an award-winning engineering consultancy providing asset management services, uniquely positioned to support its clients to effectively manage their plant at every stage in their assets' lifecycle. Axiom achieves this through the use of its three complementary engineering disciplines of UKAS-accredited Inspection & Non-Destructive Testing (NDT), Materials and Mechanical Engineering expertise.

Understanding the needs of the chemical industry, Axiom has reinforced its reputation as a leading problem-solver in integrity management. Existing innovative technologies from Axiom have delivered improved, data-driven integrity management to the chemical industry during a period of unprecedented challenge. With many chemical companies driving the digital agenda, Axiom's internal capabilities have continued to evolve with the upgrading of its digital asset lifecycle tool, Axea: the Asset Management Database (AMD), the company's own data management software. The value of the data and know-how held by Axiom's Axea on plant degradation comes to the fore when businesses need to adapt their approach in adverse circumstances.

The fiercely challenging industrial landscape in 2021 meant that many aspects of site-based activity in the chemical sector were not able to operate as before. The AMD became a valuable tool in supporting owners of plant equipment in the UK to understand, adjust and minimise risk in their approach to managing their plant assets. Large, labour-intensive events such as maintenance shutdowns/turnarounds have been unworkable in the age of social distancing. This led to a requirement for operators to postpone much of the scheduled inspection of critical plant – activities considered key to minimising operational risk.

Taking such a course of action requires a robust assessment of risk, and Axiom's AMD, Axea, has proved to be an invaluable digital tool in this process:

- To support decision-making to safely postpone and reschedule inspections of plant equipment where the case can be made.
- To benefit from historical benchmark data, damage prediction and monitoring to postpone in a safe and fully-compliant manner.
- To deliver risk-informed asset management strategies have reduced inspection scope by up to 80%.
- To build long term relationships with our clients as valued partners.
- To produce meaningful insight used by many producers of gases, detergents, plastics and pharmaceuticals across the chemical industry to remain online and maximise production of these critical items in the fight against the pandemic.

Although there are similar tools available, Axea is the only system that has been specifically designed and developed by plant managers and inspection professionals who understand the requirements of asset management integrity. Used in over 40 manufacturing facilities globally, this platform has now been identified as a class-leading software solution.

Demand for use of the AMD significantly increased as plant operators identified the tool as key to the delivery of effective lifecycle integrity management systems. Client feedback has been provided and, on occasions, unprompted to verify the increase in efficiency, time and cost-savings made by use of the AMD. Above all, clients comment that Axiom stands out amongst its competitors to deliver what they promise: maximising assets – minimising risk.



CIEC has provided educational outreach support for the STEM-based industries since 1988. We do this via tailored partnerships with companies, deploying a range of robustly evaluated approaches:

- Children Challenging Industry programme
- science lessons for teachers that tell a company's story
- career-oriented resources for teachers
- training for STEM professionals to become effective communicators to young people
- other tailored provision.

Through these approaches, we increase children's and teachers' awareness of STEM careers and industries and inspire the scientists and engineers of the future.

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Manufacturing and Resource Efficiency Award

Winner: Libra Speciality Chemicals Ltd, Irlam
Sponsor: SLR Consulting



This Award is to recognise the company or individual operating unit that can demonstrate world class manufacturing performance or the most successful improvement to its manufacturing performance involving demonstrable excellence and/or significant improvements to resource efficiency within the manufacturing process.

Libra Speciality Chemicals Ltd is a UK-based chemical manufacturer, providing innovative products to a global customer base, including several Blue Chip multinationals.

Libra commenced the commissioning of its in-house designed multi-million pound betaine (amphoteric surfactants) plant in March 2019. The original installed capacity was 32,000tpa and during 2021 further investment saw that capacity expanded to 52,000tpa by the installation of two additional new large batch reactors. A new 100,000 litre capacity tank farm was also installed to support the business development.

In addition, 2021 saw Libra install a "flagship" in-house designed multi-million pound high tech membrane system to enable the production of 20,000tpa "green" low salt surfactants.

These large capital projects delivered during 2021 supported a 15% manufactured output increase 2021 vs 2020, and will deliver a 43% further increase in 2022, with yet more for the future. The recent four years at Libra have seen a dramatic 65% manufactured site volume increase.

Even during the times of high uncertainty due to COVID-19, Libra has bucked the industry trend and continued to invest heavily in new technology, process plant and people to support and sustain the continued growth.

Libra's betaine plant is 100% automated, AI-driven, requiring only one operator per shift. It has almost zero waste streams and the RFT level for 2021 was >97%. The minor amine waste stream that does exist is captured and the amine within that stream is recovered and fed back into the front end of the process, thus reducing actual waste to virtually zero. The control system and system diagnostics support and enable technical process optimisation. This plant gives Libra the very best quality and lowest cost position for betaine across Europe.

The installation of a 20,000tpa bespoke high efficiency membrane system for reducing salt in betaines from c5.5% to <0.5% for novel surfactant formulations was completed during 2021. Libra's low salt betaines are being increasingly used by several customers, including the #1 global personal & household care multinational company, to produce environmentally sympathetic and "sulphate free" personal care products.

The newly installed membrane technology is specifically designed to ensure maximum resource efficiency, sustainability and strategically helping our drive towards Net Zero. This new installation has already received "green" accolades for its design, low resource utilisation and sustainability principles. The water consumption from this process has been absolutely minimised by clever design and use of multiple reverse osmosis systems which enable recovery and recycling of water within the system. The water consumption has been dramatically reduced by >5 times compared to a straight through process.

Libra has also been selected by the same #1 global personal & household care multinational company to collaborate as industrial partners on a key project related to the real-time measurement and control of microbes in manufactured surfactant products. This 2-year multi million-pound project has recently been granted full support from Innovate UK. This is another great vote of confidence in Libra from a major player and reinforces the growing reputation and success of Libra in the global surfactant market.



SLR is a global leader in environmental and advisory solutions: helping clients achieve their Environmental Social Governance (ESG) and sustainability goals.

A team of over 2,300 talented professionals bring together a leading offering of strategic advice and technical solutions from a network of over 100 offices in Europe, USA, Latin America, Canada, Asia-Pacific and Africa. Working on diverse and challenging projects, SLR specialises in the energy, mining and minerals, infrastructure, built environment, manufacturing and industry, financial services and power sectors.





Health Leadership Award

Winner: Solenis UK Industries Ltd, Bradford

Sponsor: Centillion Technology

This Award is for recognition of the company that has achieved excellence in health leadership demonstrated by improved or optimum sustained health programme performance and a healthy workforce and workplace. The key characteristics of effective health leadership include senior management commitment, employee engagement and evidence of a culture of proactive health risk management and wellbeing support initiatives that align with sustainable development goals and metrics.

Throughout the Coronavirus (COVID-19) outbreak Solenis, like other businesses, faced a range of issues and workplace health and safety was key as the virus spread quickly within the local communities. Solenis' aim throughout was to ensure teams continued to follow the COVID measures to "help to reduce the spread of the virus, keeping ourselves, our colleagues and our families safe."

COVID Measures

A series of measures were developed and promoted as soon as the pandemic started. These included COVID-19 risk assessments, cleaning, decontamination and waste management, vulnerable person's risk assessment, homeworking procedures, adequate ventilation and return to work risk assessments. Solenis introduced workplace temperature testing, which included a drive through station, and Lateral Flow Testing (LFT) which was initially carried out on site and, more latterly, private tests were bought and distributed to staff.

Occupational Health (OH) completed telephone assessments for all staff who tested positive with COVID-19, before their return to work. This prevented staff from returning to site too early, preventing further spread of the virus whilst providing support to staff mentally and physically. As government guidance changed, the site team was swift to update measures including the return to work criteria, to ensure compliance and reduce unnecessary self-isolation.

Experience proved that OH involvement had been important in the armoury for supporting employees with long COVID. The team had been involved at the beginning of diagnosis and provided ongoing assessments and tailored support to the individual employees experiencing long COVID. Working with the company, the team also provided practical advice to management regarding temporary workplace adjustment, flexible working and phased return. As a result of early OH intervention and support from the company, the majority of long COVID sufferers returned to work successfully.

To ensure all employees were aware of these important measures, communication played a vital part, with weekly questions and answers and monthly briefings in place.

The control measures to reduce the infection, i.e. isolation, contact restrictions and economic shutdown imposed a complete change to the psychosocial environment that the workforce faced. These measures had the potential to threaten their mental health significantly and include anxiety, loneliness as well as exacerbation of existing mental health symptoms.

The site introduced a stress policy, delivered training sessions for all people managers and organised stress awareness sessions for staff. People managers also completed workplace stress risk assessment in relation to the changes as the results of COVID. Information related to mental health management was published via internal newsletters and the EAP counselling helpline was also promoted to teams.

Mental Health First Aiders were trained to provide mental health support to all staff and OH supported staff with stress/mental health symptoms to enable them to remain at work or return to work early.

The Senior Leadership was fully committed to supporting the teams through the pandemic carrying out COVID audits and visiting areas where possible. It's been a journey that has brought teams together to keep everyone safe and at the same time protecting the business.



Centillion Technology Ltd. is a leading flow chemistry company, with applications for formulation and synthesis of small molecules through to cutting edge gene therapies. We accelerate the pathway from concept through to market using sustainable on demand manufacturing capability applicable to both the laboratory and production plant.

Centillion Technology, committed to providing solutions that improve health and welfare through Flow Chemistry.

Flow Technology solutions - Inspiring Ingenuity™



INEOS Responsible Care Award

Winner: Solutia UK Ltd (a wholly owned subsidiary of Eastman Chemical Company), Newport

Sponsor: INEOS



This Award goes to the company or site which has excelled in Responsible Care by demonstrating leadership and a creative approach.

Solutia UK Ltd is a wholly owned subsidiary of Eastman. Eastman is a global specialty materials company that, for more than 100 years, has developed and produced a broad range of products found in items people use every day. Eastman exists to enhance the quality of life in a material way.

The Newport site has previously won this award four times, so it is an honour to do so for a fifth time. It shows the site's commitment and sustained safety performance.

Eastman strives for safe, reliable, operations onsite and has an interdependent safety culture where people look after each other and are empowered to stop work and follow up or challenge as required. The site has a mature safety culture which has been developed over many years but because of workforce changes, this is a target that will never be completely achieved - it is something people need to work on every day, and the company can never be complacent.

Within Eastman, a Zero Incident Mindset started as safety, now extends across all functions and applies to all activities, every day. Eastman is recognised as one of the world's most ethical companies (Ethisphere). It expects customers and suppliers to operate in a similar manner to themselves and this is part of the terms and conditions of work. Eastman wants to look after people who come to the site, so aims to hold a safety conversation with every new person that enters through the gates, centring on its basic safety expectations.

A volunteer group of members from across the site makes up the Safety Focus group who coordinates the annual HSE week and provides representatives to attend the Leadership HSE meeting and the Department HSE meetings.

All non-resident contractors have a face-to-face meeting with a senior manager on site following their site induction, this reiterates the importance of working safely at the site. Typically, 5-10 per week are carried out. The Newport site integrates resident contractors into site safety initiatives and communications.

Eastman Newport is a longstanding member of Barry Industrial Complex Responsible Care cell with bi-monthly meetings and sharing of best practice and openly communicate safety related issues to promote wider learnings across different industries, as well as a member of the South Wales CIA Responsible Care Cell which is attended by HSE and NRW.

Regulators invited to regular site Community Liaison Panel meetings are also recipients of community communications.

At Newport lower severity incidents and near misses are investigated regularly to learn as much as possible from these events. The site also chooses to inform regulators early of any changes and report incidents which are below classification threshold, promoting a good working relationship with them.

Eastman's wheel of wellness program, introduced in 2015, continues to encourage employees to take ownership of health. Activities include yoga on site, a site gym and sauna, cycle to work scheme and local charity runs. The site also has several employees trained as Mental Health First Aiders.



Responsible care: continuously improving health, safety and environmental performance



INEOS products help people enjoy longer and healthier lives. But it's not just what we make that matters, it's how we operate; building confidence and trust, by safely contributing to the sustainable development of local communities and of society as a whole.

INEOS businesses have put in place roadmaps to net zero by 2050. We have 183 sites in 31 countries, employing 25,000 people, with one vision - to continually improve safety, health and environmental performance and a commitment to Responsible Care. It means we're not just making a difference today but for future generations too.

INEOS is proud to sponsor the Chemical Industry Responsible Care Award, which encourages members to highlight superb examples of their commitment to continuous improvement across all aspects of safety, health, and environmental performance and to engage with all stakeholders.



Special Responsible Care Award for Process Safety Leadership

Winner: Johnson Matthey, Royston
Sponsor: Axiom Engineering Associates Ltd

Johnson Matthey's two PGMS UK Sites (Platinum Group Metals), Royston and Brimsdown, transitioned to top tier COMAH in 2017 and since then there has been a huge focus on developing the sites' process safety systems to ensure their major accident hazards are understood and they have effective control measures in place to prevent these major accident hazards from being realised.

Demonstration of the sites' commitment to Process Safety is evidenced by the ambitious Process Hazard re-validation programme which commenced in July 2017, the site leadership committed significant resources (budget and people) to re-validate and document the basis of safety of all of its high-risk processes over a five-year programme.

To make this transition, the team of process safety personnel has worked tirelessly alongside the Operations staff across both refining sites to make them safer. Some of the major achievements over the last three years are:

1. Undertaking over 50 detailed hazard studies
2. Updating 600 P&IDs across both the Royston and Brimsdown sites to ensure they are accurate prior to undertaking risk assessments and plant modification work.
3. Closure of over 450 Process Safety related improvement actions
4. Revalidation of all DSEAR risks assessments (Royston & Brimsdown)
5. Completion of all 95% of Pressure Relief valve calculations at the Brimsdown site (works on-going at Royston)
6. Identification of over 500+ additional Process Safety critical equipment items from the hazard study programme
7. Implementation of a Loss of Primary Containment (LOPC) reduction programme with improved data analysis to ensure the sites fully understand the root causes of LOPCs to develop inherently safe solutions.

The result of all this work has significantly reduced the risk profile to protect not just the 600 people who work across both sites, but also visitors, neighbours and the environment.

'We are extremely proud of our achievements over the last five years' said Hamid Khan, Head of Engineering for PGMS EUROPE. 'This award win is fantastic news for our UK PGMS sites, it validates and further supports our belief that our priorities have been right over the last five years. Through implementation of our PHR programme, we have been able to continuously challenge our basis of safety and set new standards for our operating plants.'



Responsible care: continuously improving health, safety and environmental performance



Axiom Engineering is an award-winning multi-disciplined engineering consultancy providing pragmatic, value-adding Asset Management solutions to the operators of chemical and pharmaceutical sites. We are committed to excellence and supporting you across the UK and globally from our regional offices in the UK industry hubs of Teesside, Humber, North West and Grangemouth. Our people and services are uniquely positioned to identify and mitigate key through-life risks across the entire asset lifecycle, supporting you, our valued partners.

www.axiomengineeringassociates.co.uk



Young Ambassador Award

Winner: Izzy Sloan, GSK, Ulverston
Sponsor: Scientific Update

This Award is to recognise an outstanding young person who is demonstrating communication skills and leadership associated with the chemical industry and contributing to its success.

Izzy currently works as a second year Chemical Engineering Degree Apprentice at GSK in Ulverston and Barnard Castle; she facilitates the manufacturing of antibiotics that help patients worldwide. Izzy's day-to-day job predominantly involves helping solve problems that prevent GSK's primary and secondary manufacturing sites from functioning safely and efficiently. Izzy is working towards her bachelor's degree on day release with the University of Strathclyde, which is consistently developing her technical skills and transferable skills, improving her capability and performance at work.

Prioritising her university work, Izzy always ensures assignments are completed on time and to the best of her ability. This is highlighted through Izzy being placed on the Faculty of Engineering's Dean's List for her academic achievement during the first year of her degree. Being able to work towards her degree whilst gaining five years of work experience through GSK, Izzy has become aware of the endless opportunities this career pathway offers and enjoys sharing this with others to hopefully inspire them.

Among her university studies, Izzy takes on every work opportunity that comes her way. Moving away from home to take on her apprenticeship, Izzy is keen to move across the GSK network to broaden her knowledge of the pharmaceutical industry. She has recently discovered an interest in Process Safety through her most recent degree module and various involvement at work. This led her to attend a Process Safety course at another site in the GSK network to broaden her understanding and enable her to apply the principles learned to her own site. It is unique opportunities like these that Izzy endeavours to experience throughout her apprenticeship.

Alongside work and university learning, a passion of Izzy's is to consistently inform and inspire others to become involved in the chemical industry. Izzy has been involved in a multitude of STEM-related events within the past two years reaching over 1000 people. These events have targeted a variety of demographics from chemical industry employer panels, to hosting work experience students, to influencing other GSK senior managers to take on more degree apprentices. Izzy hopes within the role of CIA Young Ambassador, she can utilise the platform to increase the growth of the chemical industry young talent and develop the young talent already present.

Izzy recognises that although she is only very early on in her career, she is still extremely aware of the importance of the chemical industry from a local to a worldwide basis. She has always had the aspiration of contributing to meaningful change in the world. On a small-scale, she is already beginning to fulfil this aspiration. Izzy now hopes that leading ChemTalent as the CIA Young Ambassador will help her begin to fulfil this aspiration on a much larger scale. Izzy wants to focus ChemTalent on using the members' inexperience as a strength to inspire others to join the industry and hopefully encourage more experienced people in the industry to listen to their voices.



For 33 years, Scientific Update has been at the forefront of delivering world class conferences and training courses for industrial chemists and chemical engineers in chemical development, scale-up and many other specialist topics in organic chemistry, both online and at venues all around the world. We help companies invest in their team and particularly in young people with limited experience in scaling up chemical processes. We are proud to sponsor the Chemical Industry Young Ambassador Award.

www.scientificupdate.com



Nick Sturgeon Unsung Hero Award

Winner: Jackie Casagranda, Solenis UK Ltd, Bradford

Sponsor: Chemical Industries Association

This Award is in remembrance of CIA's Nick Sturgeon and is designed to honour an Unsung Hero who works in or is closely connected to the chemical industry. The Award will be given to an individual who has made a significant contribution to the industry over a number of years.



Nick Sturgeon

I feel so privileged to be named as the Unsung Hero at this year's Chemical Industry Awards – it was a complete surprise and to be recognised for something I enjoy was just amazing.

As an analytical chemist I just love everything chemistry and I feel so lucky that Solenis has such a commitment to educational outreach so I can share my passion and inspire the younger generation – especially the periodic table.

My journey began over 20 years ago, when I took part in a wizard's workshop, from there I was involved in developing the partnership with Children Challenging Industry which led to, what is now, the Solenis Science Lab for Kids. Over the years over 6000 primary aged pupils, 734 teachers and 225 schools have either visited the science Lab or being involved in the mobile science labs we have run – it's just fantastic. We are always looking for ways to improve the offering to primary school pupils – you can see what fun they have being in a laboratory developed just for them.

The senior leadership team and my line manager have fully supported my outreach work and over the years I have had the opportunity to work with teachers, present to students aged from 5 to 18 and go into university to share my love of the chemical industry.

I love to tell stories to our young visitors about the industrial revolution and how Solenis products help to clean our water today. Other stories about how the first computer was as big as a room but about as powerful as today's calculators and about the many inventors over the years – it's just fascinating and I love the "wows" we get from the children – especially when I mention that there wasn't always a TV or Xbox.

Over the years I have had so many role models in my life, and I hope that I have inspired one or two young learners to choose science in further education. One success story was a young man who came for work experience and said that a visit to the science lab had inspired him and he was going on to study chemistry at university.

This is not all about me, I work with some amazing people – our volunteers who work in the lab and with schools and colleges are just fantastic and we couldn't run it without them. Also the team behind organising the events and communicating to everyone involved are brilliant, they set things up and give me the opportunity to do what I love.



The chemical and pharmaceutical industry is fundamental to modern society. Innovation for finding new products and services is crucial for the industry to satisfy the demanding and environmentally conscious consumers. With an immense variety of products, from vital medicines and foods, the construction of buildings, to transport and leisure, the industry truly does have an impact on virtually every aspect of our daily lives.

The industry is unique, linking critical parts of the supply chain – from energy and feedstocks, to advanced materials, fine chemicals, life sciences and consumer products. It is the 'industry for industries', being both its own biggest customer and a provider of materials and technologies to other important sectors such as aerospace, automotive and construction.

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*Responsible Care: continuously
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