

A unique industry, with unique companies and unique news

elements

In this issue:

EU REACH: how's life after the Registration deadlines?

- Changes to IR35
- New innovation support initiative
- Digitalisation and cyber security



2M Group of Companies

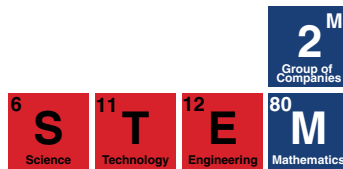
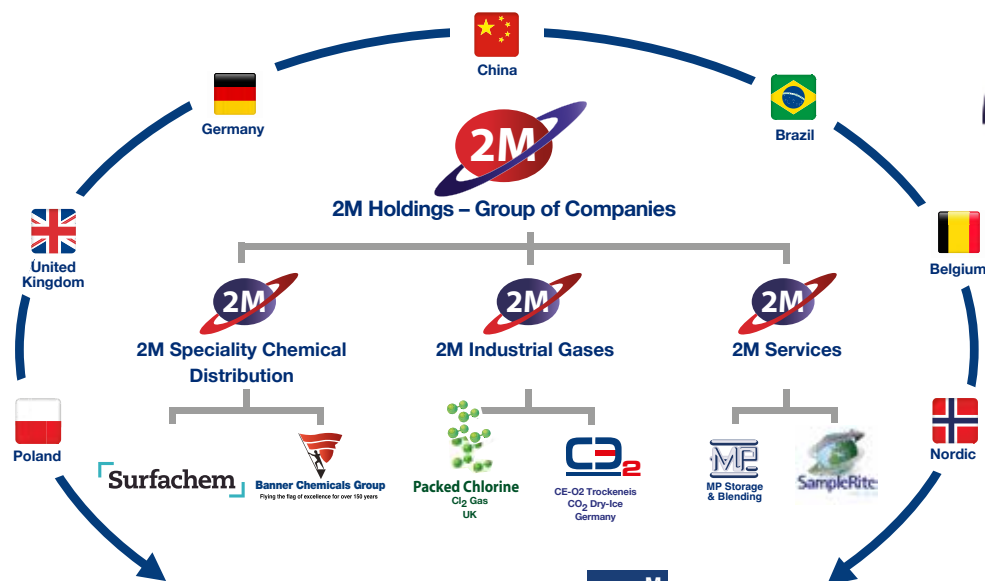
International Branded Chemical Distribution and Related Services Companies

The Queen's Award for Enterprise

International Trade 2019

Northern Powerhouse

Export Champions Award 2019



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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? See over for details or please contact:

Alex Abraitis - Member services and events manager
alex.abraitis@chemicalsnorthwest.org.uk or visit:

www.chemicalsnorthwest.org.uk/membership/membership_benefits/

2019 - 2020 rates

Micro corporate membership	(1 - 10 employees)	£434+VAT
Standard corporate membership	(11-100 employees)	£755+VAT
Large corporate membership	(100+ employees)	£961+VAT

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

After a very successful trip to CHEMUK 2019 we are delighted to welcome some more new members into the network. See pages 27 onwards for details of our newest members.

CNW were also delighted to partner with RPS for a Flame and Gas detection – new British Standard guidance ...Is your business ready? event on the 12 June. This interactive, knowledge-sharing workshop was very well received. The write up on the event can be found in the next edition of elements.

We continue to hold our REACH and Brexit groups, both topics closely overlap so we will continue to update members on the latest developments going forward. We were delighted to welcome some fantastic speakers to our recent REACH and Brexit events and valuable updates were given on the latest political and economic developments.

CNW members can also benefit from discounted rates to the previously “sold out” REACH: current landscapes and emerging issues conference being held on 1 October 2019 in London. This is a joint event between CIA and REACHReady and promises to be a very interesting day. For further details please see our website.

Our breakfast events continue to run with new members and existing members giving company overviews and relevant updates for the industry.

As we continue into 2019, we thank you all for your support and look forward to working and engaging with all our members going forward. As always we welcome any feedback you wish to give and any ideas you may have for improvements.

Alex Abraitis - Chemicals Northwest

About us...

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

With around 160 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 CNW awards programme we are privileged to witness the many achievements made in our local 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. Up to 300 guests from across the industry gather on the night and everyone can see for themselves the amazing achievements made by our people and organisations.

"Focus 50" - This recently named series of seminars and networking events is becoming ever more popular.

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



Breakfast Networking - Chemicals Northwest is gaining a growing reputation for high quality breakfast networking events. With no specific theme, delegates are encouraged to make new contacts and some will make short pitches about their company, its products and services plus news announcements! The breakfast meetings have proved to be very popular and currently run on a 2 monthly basis attracting an average of 40 people each time. New contacts can lead to new opportunities and new business. All are welcome.

Common Interest Groups - Chemicals Northwest's **REACH** group has followed closely the developments within this complex and long term piece of legislation. The initiative allows the sharing of experience, best practice and knowledge between manufacturing, supply chain and support service providers, all with a keen interest in REACH. The group meets three times a year and now has a membership of over 50 companies.

CNW started the **Brexit** user group straight after the referendum in 2016 and it is gaining more and more support from membership. Whilst there is still uncertainty, many businesses will be looking to the future impacts, so we are enabling all interested parties to meet and discuss in more detail their common issues and concerns. Up to date information, expert insights and reports form the basis of each agenda, which will run parallel to the national work carried out by CIA.

elements magazine - CNW produces an informative quarterly magazine called elements which contains the latest round up of member news, specialist features and 'spotlights' on new member companies. This is a great opportunity to establish an association between your organisation and important sector issues, by contributing free editorial and press releases. Companies who do business in the chemicals sector may also wish to look at advertising options. The CNW sector directory is now integrated into elements.

Website - Visits to the CNW website have almost doubled in the past 12 months. The website is regularly updated with industry news and the events programme. Companies are increasingly using it for enquiries and advertising. There is an efficient "e-shot" function which allows direct messaging to our contacts list. Viewers of the directory pages can search the whole of our supply chain providers to find where to buy products and services.

LinkedIn - The Chemicals Northwest LinkedIn group was created in the latter half of 2010 and has an ever increasing membership, with over 1300 members now connected. The group provides the opportunity for chemical industry professionals to share ideas and knowledge.

Twitter - The CNW Twitter account is growing, so to hear about the latest news from CNW and the wider sector, why not follow us.

In addition we'd be happy to re-tweet any news or updates that members themselves tweet.





**Future
Forum**

Making
tomorrow
happen

CIA | Chemical
Industries
Association

What is the Future Forum?

Future Forum is a network of people working in chemical and pharmaceutical businesses located in the UK.

Members are either at the start of their career or keen to broaden their skills and voice their opinions on behalf of the UK chemical industry.

Why join?

If you're a professional working in the chemical industry – get involved!
Joining Future Forum offers a number of benefits:



Forum Connect

Monthly e-newsletter keeping you informed about the latest news, events and policy developments.



Get your voice heard

Get involved at the heart of CIA's policy making and lobbying activities.



Advice and guidance

Information for you and for those following in your footsteps.



Networking and events

Expert speakers, skills sessions and the opportunity to meet with other industry professionals in a relaxed environment.

You can be in any profession in a chemical or pharmaceutical business to join – plus membership is **free!**

**Join
TODAY!**

You can join by registering at www.cia.org.uk and going to 'My CIA' to sign up to the CIA Future Forum mailing list. You'll then start to receive the Forum Connect – meaning you'll be kept up to date with Forum news, opportunities and details of our upcoming events!

FutureForum@cia.org.uk



www.cia.org.uk

Northern Powerhouse Missions programme

The new trade missions programme through to March 2020 is currently being finalised, and offers companies a great opportunity to explore new markets, supported by experienced international trade advisers.

India - Oct 19

Visiting Mumbai and Delhi. The mission will focus on life sciences, advanced manufacturing and digital innovation.

ASEAN - 30th Oct - 8th Nov 19

Visiting Thailand, Malaysia and Indonesia, the mission will coincide with showcase opportunities, business matching & networking being organised ahead of the ASEAN Summit in Bangkok on Nov 4th, and focus on Education, Infrastructure and Transportation.

SEMA Show 2019, Las Vegas - 5th - 8th Nov 19

SEMA is one of the leading automotive speciality products trade events in the world with numerous opportunities for UK companies to promote their products and services.

Food Hotel China (FHC) Shanghai, November 19

Food & drink sector mission to this key exhibition <http://www.fhcchina.com/en/>. Delegates will be able to showcase products on a rota basis on a shared NPH stand, and participate in briefings and networking events.

MEDICA, Dusseldorf - 17th - 19th Nov or 19th - 21st Nov 19

Trade mission to Medica, the world's largest medical technology and life sciences exhibition. This mission is ideal for businesses in the medical sector wanting to showcase their expertise and innovative products.

Smart City Expo World Congress, Barcelona - 19th - 21st Nov 19

The event will focus on five main tracks touching on the most pressing issues facing cities: Digital Transformation, Urban Environment, Mobility, Governance & Finance, and Inclusive & Sharing Cities, and feature an extended exhibition area.

NPH Mission to Business of Design Week (BODW), Hong Kong - 2nd - 7th Dec 19

Asia's leading event on design, innovation and brands. The conference, exhibition (DesignInspire), satellite and pop-up events, attracts industry leaders, professionals and academia from all sectors. The mission is open to designers, industry professionals, & academic providers from all fields of design.

Consumer Electronics Show (CES 2020) Las Vegas, USA 7th - 10th Jan 2020

The mission will visit CES International 2020, a platform showcasing developments in Technology, Business, Wireless, Printing, Consumer Electronics, Business Technology, Content Creation, Digital Imaging, Consumer Technology and Computer Hardware.

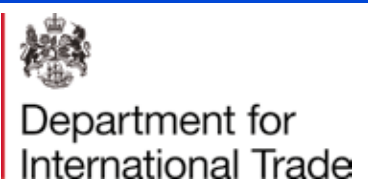
Arab Health – 27th – 30th Jan 2020

Arab Health is the largest medical exhibition in the Middle East where industry professionals and market leaders from all over the world come together to do business. This trade mission offers Life Sciences companies a tailored programme of activity with key decision-makers, potential business partners and networking opportunities.

Gulfood, Dubai - 16th - 20th Feb 20

Gulfood is the premier trade event in the global food and hospitality business calendar and could be your gateway to win new business in established, evolving and emerging markets. The tradeshow is an unmissable event with over 5,000 exhibitors from five continents.

Express your interest in any of these missions by emailing: events@tradenw.org





RISK & HAZARD MANAGEMENT



"We cannot solve our problems with the same level of thinking that created them." Albert Einstein

Understanding and facilitating the effective management of risk is our core business. Our expertise covers the full range of risk assessment and management services across:



Safety Risk



Business Risk



Environment Risk

Only when the risk facing an organisation is well understood can it be effectively managed. Key to the successful identification, assessment and management of risk is engagement with the right people, using the right processes at the right time. We believe we are different to many of our competitors and our approach is distinctive, we don't always walk the well-trodden path but look at each client's particular risk context and develop a tailored solution, working in partnership with our client.

We work across all aspects of risk, from Quantitative Risk Assessments and Predictive & Consequence modelling, through to the 'softer' risks which may affect an organisation's reputation.

What is the value of the environment?

Climate protests, the war on plastic, pollution tax. Media has shown us that concern for the environment is rapidly increasing, and it's not just ecology and the economy that bear the brunt of environmental damage; there are links between the environment and human health, both physical and psychological, too. Justifiably, the environment is a hot topic, and it goes without saying that we should be doing our best to protect it, but how can we make sure our arrangements for managing major accident hazards are up to the challenge?

The very purpose of assessing risk is so we can understand how we should manage it. The ALARP principle requires operators to implement control measures that will reduce risk to a level that is 'As Low As Reasonably Practicable'. In the context of health and safety risk, this is relatively easy; there are prescribed methods for risk assessment and the value of a life is a defined figure. Thanks to this, quantifying whether a suggested measure for improvement is justified via cost-benefit analysis provides a clear and reasoned argument for why it should (or shouldn't) be implemented.

While industry is making great steps towards a consistent approach to environmental risk assessment, the 'so what' part of the risk management process is yet to catch up. When applying the ALARP principles, the 'practicable' part is often straight forward – some measures cannot be physically achieved in a particular context, or are obviously disproportionate. The 'reasonable' part is a different story. Unlike safety risk, where justified spend calculations provide a clear-cut method for assessing further measures, environmental risk encompasses such wide ranging and variable parameters that it is somewhat overwhelming to think of all the aspects that must be taken into consideration.

There are a huge number of variables associated with the cost of a major accident to the environment. The magnitude of the incident and the types of environmental features affected make a huge impact on the scale, and therefore the cost, of recovery. On top of this there are economic consequences, via loss of revenue and fines (which are uncapped if the responsible party is prosecuted under criminal law). Not to mention the extensive possibilities for consequences depending on the context, such as loss of tourism and recreational areas, disruption to other industries and loss of natural

resources like timber and fresh water. It is clearly very difficult to come up with a value that can be used in justified spend calculations.

Not only does this uncertainty fail to help us estimate our costs, but it also prevents us from defining a maximum cost for any one event to use as a conservative baseline. No two past incidents can truly be compared as environs differ and the nature of fines means that factors such as organisation size, history of compliance and willingness to take recovery action all create a unique outcome. In fact, two identical events at the same location can result in vastly different consequences depending on the time of year.

The result of all this is that the approach to justified spend calculations vary significantly across industry, creating a great deal of inconsistency. A one-size fits all method simply won't work for a concept with so many variables, but on the other hand, we can't apply a blanket requirement to accept all measures either. With increasing pressure on industry to prove that the environment is at the forefront of decision making, we need to find a compromise that allows us to properly justify where we see a suggested measure as unreasonable.

We don't have a definitive solution, but it is something we have been encouraging our peers in industry to help us to explore. Perhaps it is time to consider if cost-benefit analysis really should be the determinative factor in ALARP demonstrations, or maybe we can tailor an approach that uses broad categories and defined modifiers that provide enough consistency to compare the relative costs of measures. There can be no one-size fits-all, but we can all agree that consistency is the key to demonstrating the commitment of our industry to the environment.

Authors; Rob Ritchie, Aimee Russell and Jennifer Hill
enquiries@ras.ltd.uk





Supporting sustainably safe and profitable operations.

Most would agree that good business performance is linked to good operational and process safety performance, built on sound practices and procedures.

At HFL Consulting, we provide a unique blend of leadership, management, consulting, engineering and training services, that makes us the natural partner of choice for many of the UK's most prominent chemical manufacturing and chemical using companies.

Find out more about how we can help improve your performance.

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People Plant Process Productivity

'Keep Calm and Carry on'

Following a highly-recommended visit back to the IWM after the CNW Awards, this well-known message seems as pertinent to us all in the UK today!

Whatever your political views, we are in a situation that surely none of us want 'for the UK'. Being in limbo, seen not to be able to organise, plan, compromise, lead, be open-minded or welcome talent from within our political system. Our respect and stance is weakened if we like it or not, although there is a wave of grit and determination to succeed in the Chemicals industry. Companies are being agile, adapting to this market to succeed, striving for growth as niche leading-edge innovators or dominating their arena as one of the market leaders. Many are finding it tough, many are more positive than they expected after the Referendum.

As specialist Search consultants within the Chemicals sector and hearing how this is translating into individual business strategies, RMG asked diverse Chemical sector contacts how this has been influencing their 'talent acquisition' and 'succession plans' and their current favoured market outcome. Surely the latter question any

Government should be asking our UK wealth-providers now.

If you wish to take part in RMG's 2-minute Recruitment Brexit Questionnaire, visit our website quickly <https://www.rmg-uk.com/blog/keep-calm-carry-on/> RMG will feedback anonymous results to participants and to the Brexit CNW group.

It is reassuring to know our Chemical industry spokespeople are being proactive advocates to Government, (looking to lead, strategize and continue to encourage skill talent into the UK etc!) and through such as the CIA and UK Chemistry Council are stating commercial reality and trying to support all our futures. (As the UK Chemical sector is such a significant part of the UK Economy, surely it is common-sense for any Government to listen to what our businesses need for the future, and pay heed to what they say.)

RMG is a CNW award-winning specialist Search consultancy, a partner to the Northern Powerhouse and proud to work within the UK Chemicals industry across its wide and diverse spectrum.

Anita Caldwell, Principal Search Consultant, Chemicals

Manchester Metropolitan University, science and engineering employer offer

Our employer offer is an invitation to industry to collaborate with faculty in order to provide invaluable experience to our students, which will contribute towards developing the employees of the future. Here are some ways in which you can work with us.

Industrial placements

Whatever your business employment needs are, we can provide a tailor-made solution through our dedicated placement scheme. We currently work with over 1,000 companies throughout the UK, and we would like to offer you the opportunity to join our highly successful scheme. Placements offer cost-effective recruitment that can provide a pipeline of fresh talent into your business.

Industry Projects and work experiences

One popular form of collaboration is the setting of a project or problem, where students work collectively over a period of time and then present their findings back to the employer. This gives the employer a great insight into the skillset of our students, as well as providing an opportunity to work with our students using the campus facilities. We also encourage employers to offer short-term work experience to complement our

range of Professional Development modules where students are expected to undertake work experience, which is specific to their degree programme.

On-campus Events

- Engage with our students at our Graduate job, placement, and part-time jobs fairs. These opportunities encourage organisations to attract and interact with students, as well as raising organisational profiles on campus.
- Guest Lectures are delivered in core lectures, to smaller groups, or through our informal 'In Conversation with' events.
- Meet the employer speed-networking events: meet motivated and driven students on campus at our speed networking events. These faculty-specific events give our students the chance to ask questions and get an insight into what it's like to work for your organisation, as well as helpful hints and tips for application processes, all whilst raising the profile of your organisation on campus.

If you would like to find out more, please contact Work Experience and Placement Development Manager (Science and Engineering) j.white@mmu.ac.uk Phone +44161 247 6431

EU REACH: how's life after the Registration deadlines?

The registration deadlines for pre-registered “phase-in” chemical substances under the European Union’s (EU) Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation presented for the chemicals industry a wide range of demanding tasks requiring substantial expertise from scientists, consultants, lawyers, and others. The transitional phase of REACH ended on 31 May 2018, and companies of all shapes and sizes are now engaged in a wide range of ongoing compliance activities. This column addresses certain important REACH-related activities being undertaken by numerous entities in the ongoing post-deadline era, and provides comments on their significance.

Dossier Updates

REACH Article 22 requires companies to update registration dossiers “without undue delay” in case of a change in the registrant’s status or identity, changes in substance composition, changes in annual quantities, new identified uses or uses advised against, new information regarding risks of a substance, and changes in classification and labelling. REACH registrants face obligations for continuous engagement, and the European Chemicals Agency (ECHA) evaluates closely whether registration dossiers are REACH-compliant. Following relief from the demands of the deadlines, chemical companies are devoting increased resources towards ensuring that necessary dossier updates are performed timely.

This is great news from a chemical safety standpoint as better information on chemicals facilitates their safer regulatory management.

Management of dossier and substance evaluation

In accordance with REACH Title VI, ECHA performs compliance checks for registration dossiers. A significant proportion of submitted registration dossiers are considered non-compliant by ECHA due to invalid read-across arguments, illegitimate “opt-outs,” or incompleteness. ECHA requires updates for non-compliant dossiers to bring them into compliance with REACH requirements, and these updates oftentimes require additional testing to be performed. ECHA is keen on ensuring compliance of registration dossiers, and many companies that registered phase-in substances are actively following ECHA’s dossier evaluation process and performing necessary updates. These efforts can be

challenging for chemical companies and consultancies due to limited resources, ECHA’s short timeframes for response, and the need to coordinate with co-registrants.

Substance evaluation is also an important matter for REACH registrants. Member States are evaluating chemical substances under the Community Rolling Action Plan (CoRAP), which currently lists 375 substances. Member States are evaluating several important chemicals in 2019, and product stewardship teams are following closely these measures due to their potentially significant commercial repercussions (e.g., identification as a substance of very high concern, restrictions). Many entities are busy, in 2019, due to substance evaluation-related needs for suitable correspondence with Competent Authorities and completion of additional testing.

The ongoing efforts of regulatory authorities and industry in the evaluation procedures improve chemicals management and contribute importantly towards Europe’s achievement of its ambitious goals pertaining to environmental, health and safety.

Cost reconciliation, new Co-registrations, ECHA decisions, and legal updates

Many Lead Registrants (LR) are currently performing cost reconciliation for substances registered ahead of the final registration deadline, including hiring external accountants, ensuring fair and transparent cost distribution, and issuing reimbursements to co-registrants. Due to Implementing Regulation (EU) 2016/9 and recent case law, non-discrimination in cost sharing under REACH is better than ever. Managing data compensation equitably under REACH is more difficult for LRs than previously, and the robust rules are keeping industry occupied. In addition, LRs are now assisting post-2018 Letter of Access requesters in completing their registrations.

Due to ECHA’s seemingly insurmountable workload for the final registration deadline, decisions on certain matters were delayed. ECHA is currently issuing decisions for ongoing contentious issues such as LR disputes, and these decisions require prompt action and coordination by LRs and co-registrants (e.g., forming one registration in accordance with the “One Substance, One Registration” principle). As Substance Information Exchange Forums (SIEF) became non-operational on 1 June 2018, many attorneys have completed modifications to LRs’ “SIEF Agreements” to support compliance. Lawyers continue to negotiate contracts facilitating substance co-registrations to ensure the state of the art is reflected in these documents.

These activities support the proper functioning of REACH and advance its crucial goals.

Brexit preparation

Numerous companies have, this year, followed Brexit-related developments and implemented programs for post-Brexit REACH compliance. While a detailed discussion on these measures is beyond the scope of this article, it is clear that well-informed and comprehensive plans will support post-Brexit market access across Europe.

Discussion

Life after the deadlines remains busy and interesting in the EU REACH space. The transitional years under REACH were vital in gathering information on chemicals and developing a solid foundation for achievement of the regulation's goals. The end of the registration deadlines marks the start of a new chapter under REACH, rather than the end of the REACH era. REACH compliance activities are expected to continue for many years to come, and that is a positive sign for chemical safety in Europe.

Author: Zameer Qureshi, Legal Consultant to Acta EU

Catalyst opens new History Makers gallery!

On Friday 17th May, Catalyst was thrilled to officially open the Baker Gallery, a new exhibition which celebrates the work of local chemist Dr Harry Baker, a pioneer in the development of chlorine production at the Castner Kellner factory in Runcorn, on the site now owned by INOVYN.

The gallery has been funded by AIM BiffaAward under a scheme called History Makers which enables museums to recognise remarkable people that helped to shape our world.

Guests at the opening included members of the Baker Family, Chris Tane CEO of Inovyn, members of AIM, invited guests and year 5 pupils from Weston Point Community Primary School who worked with the designer of the gallery to research the life and work of Harry Baker. They produced a newspaper which was given away at the event and created a song which they performed at the opening ceremony.

Dr Diana Leitch, Chair of Trustees and Acting Director of Catalyst said "It's almost 3 years ago that we had a dream

to create a gallery dedicated to a local history maker and we hope that when you see the gallery you will understand its significance. Catalyst is very much about the past, present and the future, and the future is the young people that we inspire.

We chose to work with Weston Point Community Primary School particularly because they are right next door to where Harry Baker worked from 1897 for the rest of his career, and where 122 years on, chlorine is still produced today, which is incredibly important."

Emma Chaplin, Director of AIM, the Association of Independent Museums, said "It is fair to say that most of us had not heard of Harry Baker when we received the application from Catalyst but we were blown away by the passion and the huge connection to the site and the community. You've set the bar really high for other History Makers and from our point of view, it's great that we can showcase you to other museums across the country and that BiffaAward can show how landfill tax money is being invested, so, incredibly well done for making such a difference."

You can find out more about Catalyst by visiting the website at www.catalyst.org.uk



Managing operational technology security in a changing business environment

Organizations are seeking to transform their businesses through digitalization, improving work flows and processes, adapting organization culture and changing supply chain relationships. Realizing digitalization requires organizations to create a greater openness between system boundaries.

This openness can be seen through increased connectivity between information technology (IT) within the business domain and operational technology (OT) within the production domain. In addition, the introduction of the Industrial Internet of Things (IIoT)/Industry 4.0 creates an openness beyond traditional system boundaries through connecting sensors and systems within the organization to external cloud-based applications. Although Digitalization can deliver significant value for organizations, it also increases the threat surface which, if not effectively managed, can create significant cyber security risks for industrial environments.

It's time to comply

Ignoring or paying limited attention to cyber security of OT assets is no longer an option for most organizations these days. In August 2016 the NIS Directive came into force as the first EU wide legislation on cyber security. Within the UK the National Cyber Security Centre (NCSC) published 14 high level principles which must be implemented by Operators of Essential Services (OES) through a Cyber Assessment Framework (CAF). NIS compliance is monitored through audits by Competent Authorities such as the Department for Business, Energy & Industrial Strategy and Health and Safety Executive (HSE) for the Oil and Gas Energy sectors. In 2017 the HSE published Operational Guidance Note 86 (OG86) for Cyber Security for Industrial Automation and Control Systems (IACS). The guidance note supports HSE inspectors to assess the cyber security risk of IACS at COMAH facilities within the UK. Owners of COMAH facilities are required to demonstrate their adequacy of cyber security management systems and appropriate countermeasures for IACS within their facilities. In 2018, a second edition of the guidance note was published to which supports inspectors in monitoring NIS directive compliance.

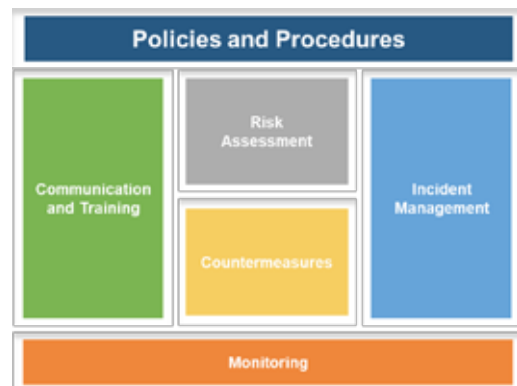


Functional Safety Management & Security; what can we learn?

For organizations who are familiar with functional safety management, they will note that from a risk perspective the fundamentals of industrial safety risk management and security are effectively the same. Essentially both are designed to protect assets from hazards or threats whilst aiming to create safe or secure conditions. There are however, nuances which distinguish them and organizations who currently manage functional safety will benefit from their culture and organizational practices when they begin to develop an OT cyber security organization.

Establishing and Maintaining a Cyber Security Organization

Establishing and maintaining an OT cyber security culture will require continuous management and leadership. To ensure effective management it is essential for an organization to adopt a cyber security framework. A Framework provides a common language and systematic methodology for managing a cyber security program and associated risks. There are many security frameworks available for organizations to consider. One of the most commonly used frameworks is the National Institute of Standards and Technology (NIST) SP 800 framework. It contains several publications which were developed to address and support the security and privacy needs within organizations. Other frameworks for consideration are the Cyber Security for Industrial Automation and Control Systems (IACS) framework (illustrated) or the NCSC Cyber Assessment Framework (CAF).



Cyber Security for Industrial Automation and Control Systems (IACS) Framework

Yokogawa UK's Advanced Solutions consultancy group provides cyber security risk management services to organizations in the UK and Ireland who are impacted by cyber security regulatory compliance. Whether you are an existing Yokogawa customer or not, Yokogawa can provide an unbiased, impartial assessment of your organization OT cyber security maturity. For further information contact their Advanced Solutions consultancy group.

Author: Donal Bourke, Yokogawa UK Ltd, Manager Sales & Marketing (Systems & Advanced Solutions)

<https://www.legislation.gov.uk/uk/si/2018/506/schedule/2/made>
<https://ec.europa.eu/digital-single-market/en/implementation-nis-directive-uk>

Chemicals Industry Gets Ready for Big Changes to IR35 Rules Next Year

On 6th April 2020, HMRC is changing the rules around Off Payroll workers in the private sector (also known as IR35), and there is understandably some concern in businesses across the region.

Millbank has been an established recruitment agency for over thirty years, supplying highly sought white-collar professionals across numerous sectors, including but not limited to the Chemical sector.

In this time, we have seen businesses take advantage of the flexibility of off-payroll arrangements and contract workers enjoying favourable rates of pay, leading to a huge increase in the number of Personal Service Companies (PSCs) in the industry.

This makes the Chemical industry a prime target for IR35 reforms, and in speaking directly to our clients, Millbank have heard the concerns of many of these businesses. Thankfully we were able to consult many of our public sector clients when IR35 rules changed in the public sector in April 2017, and are in an ideal position to help our private sector clients in the lead up to April 2020.

What is IR35 and how is it changing?

- IR35 was originally introduced in 2000 as a means for HMRC to ensure those working via a PSC with equivalent working arrangements to an employee pay broadly the same tax and national insurance contributions as those on the payroll.
- Because the judgement of whether a worker is inside IR35 or not currently falls on the worker via self-assessment, HMRC says there is widespread non-compliance that would cost £1.3 billion by 2023 without changes to legislation.
- The main change to IR35 coming in April 2020 is that the responsibility for determining IR35 status will switch from the contractor (the worker) to the end client.
- This will increase the obligations of private businesses engaging workers via intermediaries such as PSCs.
- Where it is determined that the rules do apply to a worker, the end client will request a PAYE temporary contract or for PAYE and tax deductions to be made from the gross payment.
- This has already happened in the public sector as of April 2017 causing huge disruption to workers and businesses.

What this means for you

If you are a medium or large business engaging with PSCs directly, then you will almost definitely require a partner to help deal with the changed legislation, as effectively you will be regarded by HMRC as the “Fee Payer” and the “End Client”.

Also, you will need to establish a “Reasonable Care” Policy for the engagement of PSC contractors, as suitable processes will then follow to determine whether a PSC falls inside or outside IR35.

If you are engaging with PSC via a supply chain, ensure that you secure your supply chain and they are able to offer PAYE Temporary Worker contracts. This is something Millbank provides and any other reputable employment business should offer.

Finding a partner

Millbank is already working in partnership with clients to prepare for the above. Having sought information and advice from HMRC, our professional body APSCO

(Association of Professional Staffing Companies) and our legal & payroll partners we have a comprehensive plan of action to ensure that the specialists needed are still available and companies still have access to a flexible workforce to deliver projects.

For further advice, please do not hesitate to contact me at james.leon@millbank.com



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The 'inaugural' CHEMUK 2019 2-day UK Chemical Industries Supply Chain Expo & Open Conference, hosted at the YEC in Harrogate on 1st & 2nd May 2019, attracted an enthusiastic industry-wide response, with 2133 visitors plus specialist exhibitor and speaker groups, amounting to circa 2,500 participants.

Event founder, Ian Stone, MD of organisers' UK Industry Events comments, "We've been delighted with the incredibly enthusiastic reception to the CHEMUK event, validating the concept of bringing the industrial chemicals, and related chemical user & formulation industries together 'annually', with the further addition of key sector-supporting groups, to create a unique industry setting with a very special dynamic"

Comprehensive Sector Supply Chain Expo

Bringing together attendee groups from all segments of the industrial chemicals, formulated products, as well as from biochemical & process industries, CHEMUK 2019 provided visitors with a diverse showcase of 170+ specialist exhibitors showcasing latest plant, equipment, supply chain materials & services supporting the chemicals industries, driving operational performance, efficiency, future-proofing, safety, compliance and more.

Key exhibitor streams featured at CHEMUK 2019 included:

- Chemicals, Ingredients, Raw Materials
- Plant, Process, Flow & Control
- Health, Safety, Environment, Regulatory
- Logistics, Storage, Handling & Fulfilment
- Laboratory, Research & Development
- Operations & Business Performance
- Skills, Training, HR & Recruitment ...and more

Leading global suppliers, sector leaders, government bodies & expert industry contributors....

The CHEMUK 'free to attend' speaker programme presented 70+ expert speakers discussing the big challenges and opportunities affecting the UK's chemical industries, and providing invaluable sector intelligence, best practice and innovation 'takeaways, guiding crucial next steps for attendee groups.

Centre stage were critical themes such as process innovation, improvement & intensification, sustainability & responsible care, digitisation, new technology, plant & supply chain management, process safety & regulatory landscape, global trade and Brexit uncertainty, sector skills... and much more.

Sector-specific' focus included Cosmetics, Personal Care Products, HI&I Cleaning & Biocidal Products, Adhesives & Sealants, Polymers & Resins, Lubricants, Pharma & Healthcare, Paints, Inks & Coatings and more, as well as 'breaking markets'.

The two continually running 'open' stages allowed visitors an exciting opportunity to listen to topical contributions from key industry bodies including Chemical Industries Association (CIA), Chemical Business Association (CBA), UKLA, BCMPA, BioVale, PRA, TSA, IPA, SHAPA, BASA, BPMA, BADGP, OCCA, CCUK and IfM.

Government body contributors included a feature DIT session highlighting sector growth opportunities, plus plenary keynotes from both BEIS and Defra addressing UK chemical sector industrial strategy and the crucial topic of 'EU Exit'. Just some of the major global business names contributing to the programme included Siemens, BASF plc, AstraZeneca, AkzoNobel, Brenntag, Accenture... and more. Reflecting the event's strong 'sector skills' coverage, the 2019 event saw Royal Society of Chemistry hosting its 2-day RSC Skills & Careers Clinic, providing visitors with access to products and services to enhance their professional development or receive a personal consultation with an RSC Careers Management Specialist.



CHEMUK 2020 moves to Manchester! Growing to 250+ exhibitors

To cope with demand for floor space, and to support an expanding speaker programme,

CHEMUK 2020 moves to the 'EventCity' venue in Manchester, doubling its footprint. This positions the event in the heart of the North West chemical industry region, whilst still providing easy access to other key Northern, Midlands & nationwide industry groups & clusters.

Commenting on the new CHEMUK venue, organiser Ian Stone notes, "The move to Manchester brings CHEMUK 2020 directly into the North West chemical sector, the largest chemical cluster in the UK as well as providing excellent communication links to build a truly national as well as international event. **We will continue to build the strongest possible collaborations with industry-wide bodies and are delighted to welcome 'Chemicals Northwest' as a headline industry partner to CHEMUK**"

Dates for your diary

CHEMUK 2020 confirmed dates are:

- Wed 13th & Thu 14th May 2020, 'EventCity', Manchester.
- Entrance & Parking will be FREE/Registration opens late 2019

Full details can be found on the CHEMUK website – www.chemicalukexpo.com

Into the breach: new whitepaper questions how far we need to go when it comes to containment risk

One of the UK's leaders in chemical and biochemical engineering design has published a new whitepaper looking into the lengths manufacturers and researchers need to go to when assessing containment risk. BPE's paper investigates what's required when it comes to high potency materials users meeting risk reduction obligations. It focuses on the company's work with a high potency biological facility, which had recently been subject to a routine inspection by the Health and Safety Executive.

The report of the body's Biologicals Investigation Group found areas for improvement in risk reduction and BPE was called upon to lend its process safety expertise. Gary McRobbie, life sciences consultant at BPE and author of the whitepaper, said: "The layers of protection that were currently in place to prevent a breach of primary containment resulting in a release likely to cause an infection of laboratory staff were considered insufficient to meet the required risk target.

"The principle cause of the shortfall in protection was due to reliance on containment being provided by the cabinet extract fans within the facility. Also, the reliance on a pressure alarm. Neither of these were considered to have sufficiently high integrity." BPE used SWIFT and LOPA approaches to make engineering and maintenance recommendations to improve the level of containment. This formed the basis of an action plan. Gary explained:

"The action plan and the record of the SWIFT and LOPA Analyses formed part of the overall Basis of Safety File for the high containment laboratory for presentation to the regulatory authorities.

While the whitepaper focuses on an example with biological materials, BPE says that the ideas and processes are of significance to non-biological and chemical manufacturers. Gary says: "There are lessons we can all learn and apply across a variety of sectors. Ultimately, it's about looking at every angle and brainstorming every possible hazardous scenario. People should be thinking about applying a structured 'what if' technique before they even begin LOPA activities."

BPE's SWIFT 'what if' technique involves:

- Systematic examination
- Questioning to discover deviations
- Encouraging personnel to think imaginatively
- Identifying hazards and assessing the appropriate course of action

The whitepaper, entitled 'LOPA & High Containment – The Basis of Safety Methodology' goes on to explore the technique and case study in detail. BPE is making the whitepaper available to anyone for free as part of its mission to share best practice with the industry. The company is looking to hold an event later in the year, bringing together people from across the process engineering world to explore and discuss the topics highlighted.

To get hold of a copy of the latest whitepaper and any others visit <https://www.bpe-ds.com/about-us/bpe-whitepapers/>



Making things Smarter: Digitalisation on a Shoestring



In the mid-2000s some companies explored concepts for factories of the future. They integrated ideas of process equipment, skills and automation based on sensors and data. The promise was far greater control – in the widest sense – of ability to serve the supply chain. Since then the data revolution has taken hold and the government has grappled with the question; how can the UK exploit the potential from digitalisation? The result is the Made Smarter initiative and a new project in the Northwest aims to assist SMEs in their digitalisation journey.

Where to start?

Many companies perceive digitalisation as too expensive or complex. Fifty-nine per cent of companies cite high investment and operating costs as another major obstacle. Three-quarters of firms consider missing digital skills as the key hurdle to their Digital Transformation. Industrial digital technologies (IDT) relevant to manufacturers include robotics and process control automation, industrial Internet of Things, data & systems integration, cognitive computing & artificial intelligence and mobile devices & wearable technologies and of course, skills.

In a new programme being led by The Institute for Manufacturing, Shoestring is specifically designed for SMEs. Working with partners including Raspberry Pi and Siemens and a cluster of manufacturing SMEs it is exploring off-the-shelf non-industrial digital technologies that can be implemented 'on a shoestring'. While in its early stages it seeks to offer the latest insights and engagement methods to help manufacturers adopt the most appropriate industrial digital technologies for their specific needs. The first workshops have already started to produce options for companies to select impactful technologies, but we want more SMEs from the Northwest to be part of it.

The Shoestring approach is to help SMEs implement digital solutions to improve productivity. Solutions must be accessible, pragmatic, useful and affordable be based on low-cost components and account for regulations, safety and security. But faced with this menu of choices, what steps should a company take to develop focused and resource-efficient plans?

- Assess your priorities for automation and digitalisation.
- Rapidly scan which IDTs can deliver against your priorities.
- Take the opportunity to step back and consider ways of delivering even more value and services in your supply chains.

The IfM is among leaders in the field for considering ways to make things smarter with its mission to Manufacture a Better World. It understands the challenges of SMEs through supporting SMEs in supply chains such as Sharing in Growth for nuclear and aerospace and Prisms (Practical & Innovative Solutions for Manufacturing Sustainability).

Case Study: SME manufacturer producing flooring wanted to introduce robotics and process control and skills to support the introduction of IDTs. IfM assessed

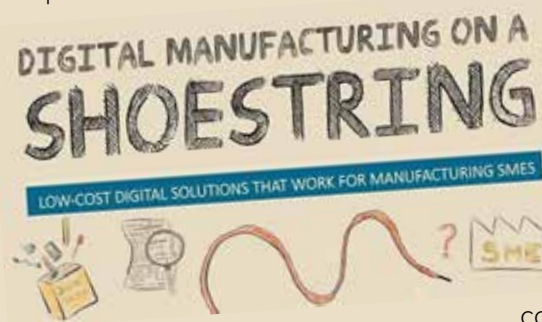
the firm's priorities and practices through its prioritisation process, a whole-business diagnostic and action planning tool to help the firm to understand its strengths, weaknesses and opportunities for digital technologies and draw up an action plan to address them. Then using IfM's business strategy process, the

company produced a fresh strategy

with an emphasis on innovation and adoption of new technologies. Importantly, by examining how the firm competes it re-positioned the firm to deliver better innovation, service and efficiency.

Automating the box – the factory - is one answer to the digitalisation challenge. But if only new sensors and controls were the results, while there'd be some productivity gains, it falls short of the full potential of digitalisation. Consider redesigning your manufacturing offer to the market. Use digital technologies to create much more value in the supply chain moving beyond selling tonnes to selling effects or results. Thinking strategically about the digitalisation is an opportunity to enable greater leaps for businesses and supply chains. IfM ECS has carried out hundreds of strategy workshops for a wide range of companies, industry sectors and government agencies. Now part of the NW Pilot for Made Smarter, IfM seeks to deliver new results for companies in the process industries.

Please contact IfM's Industrial Associate in the Northwest, Rob Munro to discuss your digitalisation approach or to join Shoestring Email rjm240@cam.ac.uk or call +44(0)7896 128 878



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E.ON awarded major contract by DS Smith in the UK

DS Smith and E.ON have today announced the signing of a major agreement to construct a state-of-the-art combined heat and power (CHP) facility at Kemsley Paper Mill in Kent (UK), confirming that optimising or renewing an existing CHP plant can reduce both carbon emissions and production costs to energy-intensive industries in the UK.

The facility will replace the existing CHP and extend E.ON's partnership at the site with DS Smith for the next 20 years. The new facility has been specifically designed to set the standards in efficiency, sustainability, reliability and will enable a carbon reduction of 36,000 tons per year which is the equivalent of 30,000 medium-sized cars driving 10,000 kilometers a year.

Once complete, it will have an electrical capacity of 75 megawatt (MW), generating steam and power for DS Smith's production processes at its flagship Kemsley Mill site. With 830,000 tonnes of paper manufactured at the mill every year, the partnership will further improve resource efficiencies and contribute to DS Smith's corporate goal of reducing carbon emissions by 30

percent by 2030. E.ON will finance, build and operate the CHP and with the two-year construction phase starting this year, the facility is planned for commissioning in 2021. Colin McIntyre, CEO for DS Smith Paper and Recycling Divisions: "Embracing world-leading innovation to minimize our environmental impact is a key corporate goal for DS Smith. Partnering with E.ON to develop a state-of-the-art solution to meet our long-term energy requirements is a vital element to achieve this ambition and we expect to see a 36,000 tons per year carbon reduction from improved efficiency at the new facility. We are looking forward to construction beginning later this year as we are delighted with the benefits the new plant will bring to our business, as well as the opportunity this gives us to continue our strategic partnership with E.ON."

Anthony Ainsworth, CEO E.ON Connecting Energies: "Generating steam and power on-site, where it is needed, gives energy-intensive industries such as the paper and chemical industries the benefit of a highly efficient energy solution that improves their operations. We want to help our customers reach their carbon reduction goals and show that sustainability and profitability can go hand in hand with the right solution tailored to their business needs."



United Rentals acquires BakerCorp

On 31 July 2018, United Rentals, the world's leading comprehensive rental solutions company, acquired BakerCorp.

BakerCorp are very excited about the opportunities this creates for both companies, their valued customers, suppliers and employees. For more than 75 years, the BakerCorp team of dedicated employees has tirelessly worked to build a business and a brand that represents the highest levels of safety, service and solutions in the market.

As BakerCorp evaluated their next chapter, it was clear that United Rentals was a great fit because of their shared values and unwavering commitment to serving customer

needs. United Rentals is investing in supporting our growth by providing new opportunities to our customers, suppliers and employees.

Building on their strong reputations as value-added and solutions-driven service providers, the combined organisation will be even better positioned to deliver a wider range of services and products to clients in the United States and Canada. In Europe they will continue our current rental operations, but under new statutory names. Their new statutory name in the UK is 'United Rentals UK Limited', however they will continue to use BakerCorp as the trading name and will be referred to as 'BakerCorp, a United Rentals® Company'.

PROCESS HAZARDS INVESTIGATED

Process Safety

Process safety is a vital part of any operation but the knowledge and expertise to achieve it may not always be available in house. At Kindlow Safety Services your process safety is our number one priority. We understand that it is necessary to control hazards and potential hazards such as dust explosions, thermal decomposition and runaway chemical reactions in order to achieve safe operating conditions. Our dedicated team have decades of experience originating from industry and can provide expert knowledge and advice to support you in achieving your safe working parameters; whilst our fully equipped laboratory can provide the test data required to meet legislation.



TESTING

Our fully equipped laboratory can perform a full range of process safety testing including:

- Chemical reaction hazards
- Runaway reactions
- Dust explosion testing
- REACH
- Aerosol safety testing

CONSULTANCY

Based on decades of science and experience our experts can offer specialist consultancy and advice to assist with your process.

TRAINING

Tailored training courses designed to increase your staff's skill levels and breach any knowledge gaps.



Science-industry-government collaboration to develop proposal for major new innovation support initiative to assist local materials-chemistry based industry

Industry, local government and science are joining forces to improve productivity and jobs growth in the North West, led by the Science and Technology Facilities Council's (STFC) Hartree Centre, based at Sci-Tech Daresbury.

The "Mersey Basin" collaboration has won £50,000 seed funding from the Government's Industrial Strategy to help develop a full bid for the project, which will help support the take-up and deployment of Artificial Intelligence (AI)-enabled tools, techniques and processes in the sub-region's Advanced Materials business base and supply chain. Successful projects will receive funding of £10 - £50 million. Other partners include the University of Liverpool, IBM Research, the Henry Royce Institute, the University of Manchester and the Alan Turing Institute.

The project focusses on the M56/M62 corridor, stretching from the Liverpool City Region, Cheshire & Warrington through to Manchester, which has a high concentration of materials-based companies and significant numbers of small-and-medium sized companies. It is intended that this service targets firms of different types, from SMEs to major corporations, to undertake Materials Chemistry-based innovation faster and cheaper.

The region includes world-class facilities in new materials, digital manufacturing, high performance computing and artificial intelligence, and the project will make these assets more accessible, at scale, for the benefit of regional companies. Our vision is to establish Liverpool City Region, Cheshire and Warrington and Greater Manchester as a world-leading innovator in the exploitation of Artificial Intelligence to drive innovation in Materials Chemistry. This promises to deliver a step-change increase in the economic activity and competitiveness of multiple Materials supply chains in the Mersey Basin - and wider - by 2025.

"The Mersey Basin project wants to link these assets in a better way, to help companies improve the use of new techniques to boost productivity and create jobs," said Alison Kennedy, Director of STFC's Hartree Centre.

"The initial seed corn funding will be used to further map and engage companies in the targeted industry sectors, to identify what specific innovation-led interventions would most effectively meet their future business growth needs."

The project would use artificial intelligence tools to improve both the design and production process of complex materials. It would benefit materials sub-sectors such as: sustainable solutions in Fast Moving Consumer Goods and packaging; smart coatings and sensors; energy; medicines/biofilms, and; advanced manufacturing.

Funding is provided through UK Research and Innovation's Strength in Places Fund, established as part of the Industrial Strategy. The Mersey Basin project will submit the final bid in late 2019.

The consortium is consulting with businesses within the region to gain feedback and refine the proposition. If you would like to input to this process please contact Katharine.Robertson@stfc.ac.uk for further details.

Over the last couple of months, CNW have been busy engaging with businesses and members on our most recent events.

CHEMUK 2019

The team at Chemicals Northwest attended CHEMUK 2019 in Harrogate on the 1st and 2nd May. We were delighted with the response from this event and pleased to see some of our member companies exhibiting at the event and giving keynote presentations. This inaugural 2 day UK Chemical industries supply chain expo was so successful that the date for 2020 has already been set, CHEMUK 2020 will be held at Event City in Manchester on the 13th and 14th May and CNW are delighted to be headline industry partner of this event. To read the write up on the event and for details of the 2020 event please see pages 16 and 17.

Brexit User Group meeting

The 16th May saw the CNW Brexit Group form once again, the group heard presentations from Benjamin Wells from the Department for Business, Energy and Industrial Strategy (BEIS) and Anita Lloyd from Squire Patton Boggs. Ben gave an update on the current position of BEIS and advised the group that the Government will continue to update their advice to business via the gov.uk/euexit website, giving advice on how people should prepare to exit the EU.

Anita gave a presentation updating the group on the background to the EU withdrawal act which “converts the existing body of EU derived environmental law into UK law on Exit day”. Anita gave an overview on particular regimes which will be affected (REACH, Trans frontier shipment of waste, Environmental permitting, EU ETS, Product approvals/CE marking). Further details of the next Brexit meeting are available on the CNW website.

Summer breakfast

The 5th June breakfast event, held in the Innovation Centre introduced 5 very interesting speakers and new members to the group. The event opened with a presentation from Andy Brazier from AB Risk Limited, Andy gave an overview on his specialism as a risk consultant specialising in human factors and process safety.

REACH User group meeting

Our REACH User Group meeting met on the 6th June. Alun Williams from DEFRA gave the group the latest updates and recent engagements from DEFRA. This included the newly launched Chemical Strategy which was launched in June 2019. Alun also noted more detailed guidance for the group regarding REACH in the EU Exit context here www.hse.gov.uk/EUExitREACH and <https://echa.europa.eu/>

Mark Pemberton from Global MSDS Ltd updated the group on REACH for Polymers and recent developments.

Charlotte Chase from ReAgent Chemical Services gave an update on ReAgent celebrating its 40th Anniversary with a move to a brand new factory in Runcorn. The new factory is over three times the size of the existing facility, therefore allowing more space to accommodate larger mixing vessels, an off-road storage yard, new quality control testing lab, and an increased water ring main. This new factory, along with new members of staff has helped to facilitate their ever-expanding business.

Trevor Gauntlett gave an overview and update on the Chemical Industry Consultants Association (CICA).

Chris Hill from Millbank gave a company introduction on the services that Millbank provide. Millbank have been delivering a quality service of skilled candidates since 1985 within some of the most important sectors in the UK economy.

Alan Sookrah from Yokogawa UK Ltd was the final speaker discussing how Cyber security has become a significant factor in the overall risk management for industrial installations, process plants and critical national infrastructure. Cyber security vulnerabilities and threats now pose a real risk for safety and business continuity with the advent of new technologies. Creating a robust and sustainable cyber security policy helps organisations defend themselves from both organized industrial cyber-attacks and common internal threats.



L-R Alan Sookrah, Andy Brazier, Trevor Gauntlett, Chris Hill, Charlotte Chase

Mark described the current schemes for registration and risk assessment of polymers and EU plans for introducing measures for registration of polymers of concern under REACH from 2020.

The event concluded with a presentation from Graeme Towell from Dr Knoell Consult Ltd, Graeme spoke about dossier updates which included new test standards and new requirements for IUCLID 6 and the likely need for additional testing.

If any of our members wish to talk to us about holding joint events please contact alex.abraitis@chemicalsnorthwest.org.uk

The Five Building Blocks for Digitalisation in the Chemical Manufacturing Industry

Ian Elsby, Siemens Digital Industries Head of Chemicals, explores new Siemens' research into the challenges and opportunities facing the chemicals sector with the advent of Industry 4.0.

Earlier this year Siemens Digital Industries, the Siemens business leading on the adoption of Industry 4.0 technologies in the UK, commissioned a piece of in-depth research specifically focused on chemical manufacturing. We interviewed over 30 experts from across the chemical industry and asked them about the digitalisation opportunities and challenges within the sector.

Informed by the research, Siemens developed a series of five 'building blocks' which capture the different investment streams and actions are required to enable the chemical sector to successfully move towards Industry 4.0.

The first of these is the digitalisation of the physical environment, so that equipment, plant and logistics can be controlled and automated through a digital interface. And while many such feeds already exist in the chemical industry, interviewees agreed a robust audit is needed to identify any gaps.

The second is based around the importance of standardising all data protocols. This is so that digital data feeds can be easily combined, analysed and deployed via common standards.

The third building block is focused on investing in applications and processes enabled by the new, standardised data pool as outlined above.

What was interesting here was a commonly held view among many interviewees that to secure the investment step-up to 4.0, applications which could generate 'reliable ROI' were the ones which got the most buy-in internally.

Interventions which could help mitigate the financial impact of universal manufacturing issues - such as predictive maintenance which can help reduce downtime, predictive quality that can help with batch consistency, and plant monitoring which can reduce 'fixed' costs such as energy, throughput and logistics - were the benefits which got the most traction at board level.

We also found that chemical manufacturers were very excited about the competitive edge offered by mass customisation,

virtual product development and plant design via a 'digital twin' approach, plus the potential offered by AI, AR and VR technologies.

The fourth stage is about companies looking outside of their own business and considering their supply chain. This is where information generated by the digitalisation process is shared with the supply chain to drive even more efficiencies. This benefit was not viewed as being primarily financial, but more as an enabler for improved competitive positioning through enhanced customer service and creating a more agile, responsive structure to meet client demands.

Another advantage of having the entire supply chain plugged in to the data flow is that of improvements to 'track and trace' capabilities. Knowing exactly what ingredients you are handling, and where they come from, allows you to confidently communicate the provenance of your product to customers. The customer piece also informs the fifth building block. This stage looks at how a disappointing digital experience will undermine customer relationships, not build them.

Chemical businesses therefore need to ensure they get the first four stages in place before integrating them with the customer's processes. Further, such integration would drive more digital accountability - internal and with the customer - which can be used to set clearer KPIs and drive competitiveness. Such performance-based contracts were also seen as a natural development of a more service-oriented culture in an industry where customer satisfaction is becoming as important to commercial success as new product discovery.

However, one of the main barriers to this exciting and dynamic Industry 4.0 vision for the chemical industry are understandable concerns around cybersecurity, and the fact that IIoT comes with risks as well as rewards. Siemens is acutely aware of this, and through the development of our own cloud-based operating system called Mindsphere (which has military grade encryption), and our global Charter of Trust initiative which we have developed with our own suppliers and our global industry partners, we are leading the world on this issue.

We also cover cybersecurity from a chemicals' perspective, and our five building blocks towards digitalisation, in much more detail in our research report.

For a free copy visit www.tinyurl.com/siemenschemicals



Royal Visit! HRH the Duke of Gloucester visits to 2M House for the formal opening of Export Champion Headquarters and STEM Education Centre

His Royal Highness the Duke of Gloucester visited UK Export Champions, the 2M Group, on 1 April 2019, to officially open 2M House, a new dedicated Headquarters for the 2M Group and for the 2M STEM (Science, Technology, Engineering and Maths) programme, both of which have grown exponentially in the last few years.

The opening was attended by chemical industry leaders, STEM graduates and UK Government team (DIT). The visit was instrumental in celebrating the successful growth of an export-based business supported by DIT (former UKTI) and supporting STEM.

2M was recently chosen by DIT as an Export Champion, recognising the tremendous growth of the company's exporting achievements. The Group exports to over 90 countries and is the sole owner of world-leading brands of: Perkhone™ EXT (oil & gas product), Trikhone™ (aerospace product) & Surfacr (personal care range of surfactants).

2M's Chairman and CEO, Mottie Kessler MBE said: "His Royal Highness, the Duke of Gloucester's visit sends a very positive message to the chemical industry in the North of England. We may be an island but we are a trading nation at heart and will always be so."

2M Export Director Dr. Maggie Kessler said: "I am delighted His Royal Highness has chosen to show his support for 2M – we are very proud of our export achievements and of our relationship with DIT"

By officially opening the 2M House in Runcorn, UK, His Royal Highness the Duke of Gloucester:

1. Showed support for 2M's efforts to provide STEM jobs and employment skills to young people in the North of England.
2. Helped to encourage young people to choose STEM as future career
3. Celebrated 2M's success in growing a chemistry-based export business out of the North of England

The 2M STEM programme has been running since 2016 and has seen circa 550 young people per year supported in accessing a career in STEM. In designing 2M House, 2M decided to invest in a 2M STEM centre: A designated space within 2M House which includes a chemistry demonstration area, space for presenting to over 40 children and their teachers at a time.

HRH looking at the Export map of 2M, DIT's Export Champions for the North of the UK with (Left to Right: Mr Richie Laws, David Briggs, M.B.E., K.St.J, The Lord-Lieutenant of Cheshire, Mottie Kessler MBE, Dr Maggie Kessler and Mr Andrew Payne) and CEO

2M STEM Demonstration – making hair gel. (Left to Right: Liran Maller, Group Director of HR and 2M STEM Founder; HRH the Duke of Gloucester; The Lord-Lieutenant of Cheshire, David Briggs, M.B.E., K.St.J; Dana Smith, Technical Development Chemist and former Year in Industry Student) and CEO



Millbank

Millbank are specialists in finding contract and permanent employees for a range of blue and white collar roles across key industries including chemical, pharmaceutical, food and beverage, and scientific.

Drawing upon 30 years of heritage working out of the UK's engineering hub in the North West, we have developed an extensive network of contacts who know and trust us, allowing us to react quickly to our clients needs. This ability to source the right personnel quickly means they can be flexible, agile and competitive in their markets.

Our consultants have a background working in engineering roles - many of which we recruit for today. That means we understand the requirements of both clients and candidates within the sector. We have a close history with the local chemicals sector going back to the ICI days, maintaining decades-long

relationships to this day. Our experience and expertise in the chemicals sector are well known by our long-standing clients, including many Chemicals NW members. For companies looking for assistance meeting their recruitment requirements, we provide bespoke permanent and contract staffing solutions - from one-off senior level appointments through to large recruitment process outsourcing (RPO) contracts. We also provide managed services, and partner with leading software providers to complement what we are able to offer clients.

"We needed specific experience of Pilot Plant work at short notice, who would be available for the whole project for continuity. Millbank delivered on our demanding deadline and enabled us to prove a new capability in collaboration with our international teams." – Project Manager, international chemical manufacturing company



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Comeca UK Limited

COMECA UK Limited is part of the global COMECA Group that offers a diversified and complementary portfolio to meet the needs of traditional, specific, global and turnkey solutions to more than 130 countries covering;

- Low & Medium Voltage switchboards (OEM)
- Intelligent Motor Control Systems
- Automation, Monitoring & Control Command
- Packaged Substations
- Power electronics, Energy conversion
- Cabling solutions
- Electrical solution for HVAC
- Installation & Commissioning Services
- Gemstart refurbishment and retrofit
- Modernisation and upgrade of third party equipment

As a multi-brands and multi-technologies player, COMECA UK Limited is a major contributor in all sectors ranging from Oil & Gas, Chemical Process, Manufacturing, Nuclear Energy & Power Generation and Infrastructures through to Commercial buildings and Transport

sectors, working harmoniously with major suppliers in the electrical industry, providing customised solutions to Engineering companies/Contractors (EPCs), installers and end users.

Comeca UK Limited is strategically located in North Staffordshire and has recently expanded its operations by opening two new manufacturing units dedicated not only to its extensive involvement in our existing large Nuclear projects, but also focusing on modernising, refurbishment & retrofit solutions using best manufacturing techniques, from engineering, design, build through to full FAT witness testing procedures to ensure a quality product is delivered on time and on budget. COMECA UK Limited is proudly certified for ISO9001 Quality Management Standards & ISO14001 Environment Management Standards.

COMECA UK Ltd MANAGING Director, Mr Graham Reynolds says "COMECA UK Ltd are experiencing real growth in the UK electrical manufacturing sector, supporting service industry and providing excellent job opportunities, with plans for further expansion in the pipeline"



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F2 Chemicals Ltd

As a specialist in the handling of fluorine gas, F2 Chemicals Ltd. offers a variety of organofluorine products, manufactured at our Preston plant.

Our primary focus is a range of high-specification perfluorocarbons, such as octafluoropropane and perfluorodecalin, under the Flutec tradename. Boiling from -37°C to over 200°C, these fascinating gases and liquids are resistant to strong acids and bases, and also to strong oxidisers and reducers; they are thermally stable to around 400°C.

They see use in diverse heat transfer applications from Organic Rankine Cycle power systems to cooling the detectors in the Large Hadron Collider at CERN.

They are routinely used as tracers in oil field mapping, leak detection (for underground cables and storage tanks) and air-flow tracking. They are used in the medical arena too, including as a

tamponade during retina re-attachment in the eye, as part of an ultrasound contrast imaging agent and, utilising their ability to dissolve gases, for liquid breathing.

Our Selective Direct Fluorination technology has facilitated the production of fluorinated intermediates, most notably in the production of V-FEND for Pfizer, where a two-step process, fluorination of a beta-keto ester, followed by cyclisation replaced multi-step, resource-intensive route to a 5-fluoropyrimidinone sub-unit.

Last year we commissioned a new pressure distillation unit for the manufacture of 99.99+% octafluoropropane, allowing us to produce over 100 tonne per year of this material for use in the semi-conductor industry for plasma-cleaning. Earlier this year we brought two new fluorine cells on line, increasing our fluorine production by a third.

As a small company, F2 Chemicals Ltd. offers a customer-focused approach to sales and project development, and is happy to work with customers throughout their development process.



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Zulu Joint Integrity Ltd

We are an established specialist joint integrity management and training provider with a strong track record of supporting the chemical, oil & gas, petrochemical, power generation, steel making and process industries with our joint integrity management and training/competency assessment services.

Since its original formation in 2009, Zulu Joint Integrity Ltd is rapidly becoming the leader in its field of delivering best practice solutions to highly hazardous areas of asset plant in terms of regulatory compliance, industry guidelines and best practice.

Operating throughout mainland UK, Europe and the Far East, we work in partnership with our clients to identify, define and deliver to achieve a leak free start-up of plant.

We are focused on providing high quality, high value professional services

by optimising our skills and experience. We are committed to providing excellence and inspiring confidence in everything we do to satisfy the needs of our valued clients.

We offer a wide range of joint integrity management and training services including;

- On-site joint integrity audits and site surveys – particularly for COMAH registered assets.
- Design & execution of joint integrity procedures that comply with regulatory compliance, industry guidelines and best practice
- Joint integrity management support for shutdowns, turnarounds, projects and commissioning of new plant
- Independent QA/flange inspection (particularly high criticality rated equipment)
- Flange tagging & flange register/ database management
- Joint integrity training & assessment (ECITB MJ110/MJ111, BS EN 1591-4:2013, ASME PCC-1:2013 appendix A and UK Energy Institute Guidelines)



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Axiom Engineering Associates

Axiom Engineering Associates is an award-winning company specialising in delivering UKAS accredited inspection services, plus mechanical and materials asset integrity services. Acting as the design and inspection authority to many blue-chip companies, working across a broad range of process sectors such as: chemicals, petrochemicals, bulk storage, power and pharmaceuticals.

Axiom has a long heritage of supporting the process sector in the North West and also operates across other major UK chemical hubs such as the NE England, the Humber Bank and the central belt of Scotland. Axiom also has a more global reach extending to Asia and also supports client operations across continental Europe.

Axiom's key differentiator is its Asset Management Database, an integral tool used over numerous client sites. This system allows owners to effectively

manage the integrity of their assets. Its integral workflow capabilities allows stakeholders to be notified and intervene in a timely manner. By applying data analytics, it allows users the plan the long-term life of their assets and minimise lifecycle costs.

Axiom also has a comprehensive mechanical service offering which specialises in: fitness for purpose assessments, rerating, design of repairs & modifications and design reviews. The section has a team of experienced engineers and analysts well versed in pressure systems and structural analysis encompassing: vessels, piping, boilers, fired equipment and steel structures.

With our in-house test facilities, our Materials services deliver support at every stage of an asset's life including failure-cause analysis, welding consultancy, corrosion testing and materials selection.

Axiom's mission to provide outstanding engineering services that maximise our client's assets ensuring they operate profitably with minimal risk whilst protecting their people, the environment and the community.



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Adepto Technical Recruitment

Adepto Technical Recruitment is a specialist engineering, manufacturing and scientific recruitment consultancy that focuses upon the provision of permanent staff and contract resource to the UK and European Chemicals sector.

Established in 2015 and North West based, Adepto is a young company that 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. Our four directors each have around 20 years' experience recruiting engineers, production personnel and scientists specifically in to the North West chemicals sector.

Several thousand new recruitment businesses set up each and every

year and most of them fail in the first 12 months. What has allowed Adepto to flourish, is not that we try to 'reinvent the wheel', but simply that we do the right things extremely well. Our network of contacts is extensive, we qualify our candidates effectively, we understand our client's needs and respond in an efficient, reliable and accurate manner. It sounds easy but you need a lot of experience to do it well!

Our service covers temporary/contract recruitment, permanent staff, niche hire and managerial headhunting, and also project recruitment where we have managed entire multi-hire campaigns for our clients. In an ever changing legislative landscape, compliance is just as important as the ability to supply. We work closely with our clients to make sure that their risk and liability is minimized, on the way to delivering a best in class service.



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Net zero carbon emissions by 2050 – A new industrial revolution?

One of Theresa May's parting shots as Prime Minister has been to put the UK on a path to net zero carbon emissions within little more than 30 years.

The existing target in the Climate Change Act 2008 is to change from an 80% reduction in net carbon emissions by 2050 (against a 1990 baseline), to a 100% reduction. Public interest in climate change is now at such a level that any serious opposition seems unlikely. Although the Chancellor warned that the cost could be £1 trillion, his figures are thought not to fully address the benefit side of the equation.

The reduction target is framed in terms of "carbon", however it actually covers 5 other greenhouse gases as well as carbon dioxide which are accounted for as equivalent to carbon dioxide, based on their global warming potential.

The five-yearly carbon budgets - which currently run until 2032 and provided interim targets - will presumably be revised, even though a very testing interim target is currently set at a 51% reduction by 2025.

The impact on industry is uncertain, and a new industrial revolution is anticipated in order to achieve sustainable

business conditions. Early competitive disadvantage is a concern given that the UK would be the first G7 member to legislate for such an ambitious target. There will be a "review" within 5 years to confirm that other countries are taking similar action, which is perhaps long enough for other major economies to adopt similar targets.

Combustion of coal in the UK has reduced sharply before unabated combustion in power stations ceases by 2025, and 2 weeks of coal-free electricity generation has already been recorded, albeit during relatively benign weather conditions.

Carbon capture and storage, hydrogen and bio-fuels, as well as wind and solar, are expected to play a greater part in achieving the revised target. Achieving net zero will not be cheap in monetary terms, although there will be compensatory factors such as improved energy security and a boost for the low carbon technology industry. The Treasury is to lead a review into how the costs of the low carbon transition should be borne by households, businesses and the public purse.

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Symmetry Law

**Market leading experts with over
25 years experience in environmental law.**

**Our services also include regulatory, nuclear, commercial,
construction, tax & green incentives and litigation.**

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Supply Chain
Charter for Nuclear
Decommissioning
Sites Signatory

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/>

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.

BakerCorp UK Ltd

Provision of rental products for transfer, storage and treatment of liquids. Specialising in liquid management solutions for demanding operations, with focus on the tank, pump and filtration product lines. From a single-product storage project to setting up an integrated multi-product solution. Initial chemical compatibility checks, 'job walks', CAD drawings and rigorous equipment maintenance schedules.

Brenntag UK & Ireland

Connects chemical manufacturers and chemical users in a value-adding partnership through tailor-made distribution solutions. Offers specific application technology, extensive technical support and value-added services (i.e. just-in-time delivery, product mixing, formulation, repackaging, inventory management and drum return handling). High safety standards and strives to make served industries sustainable.

Hosokawa Micron Ltd

Integrated powder processing technologies including: size reduction, air classification, mixing, drying, containment equipment such as glove boxes 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.

Innovative Packaging Solutions Ltd

A top tier COMAH operation offering many handling services: re-packaging of any class liquid chemicals from bulk isotankers, road tankers, IBCs and drums. Decanting, dosing and sampling. Packaging: HT pallets, strapping and shrink wrapping. Labelling of receipts and despatches. Storage services including: inside, outside or temperature controlled.

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 a 'return to base' option.

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.

Education, training & skills

All About STEM

Lots of different projects to bring exciting Science, Technology, Engineering and Mathematics to schools across the region, linking them with business and industry expert volunteers inspiring the next generation of STEM specialists. Building and maintaining relationships with our schools, businesses, industry, colleges and universities so that we can strategically match-make opportunities with need.

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.

EngineeringUK

Not-for-profit organisation promoting the contribution made by engineers to society. We partner business and industry, government and the wider science & engineering community, producing evidence of the state of engineering. Sharing of knowledge and inspiring young people to choose a career in engineering.

Manchester Metropolitan University

Vocational training and applied research. The Division of Chemistry and Environmental Sciences trains undergraduate and postgraduate students in chemical, environmental, pharmaceutical and polymer science and technologies. Continuous professional development, consultation services and contract research facilities.

SEERIH

The Science & Engineering Education Research and Innovation Hub positively influences the experience of young people in science and engineering. Expertise in curriculum and teacher

development, applied research and creation of innovative projects related to primary science and associated STEM disciplines. Inspiring excellence in teaching and learning in science education.

The Outward Bound Trust

An educational charity that uses the outdoors to help develop young people. Experts in the development of early talent and specialising in providing experiential learning and development programmes for apprentices and graduates. Identification, development and change of people behaviours in line with organisational needs.

TTE Training Ltd

Engineering training and apprenticeships focused on whole person development and bridging the sector's skills gap. The learning environment will be one which is welcoming, safe and inspiring, appropriate to the subjects and responsive to the needs of the learner.

University of Chester

Faculty of Science & Engineering offers new degrees in chemical engineering, electronic & electrical engineering, mechanical engineering, natural sciences alongside established degrees in mathematics and computer science. Close links to local chemical companies with student placements and collaborative research projects.

Wirral Met College

Provision of education and training, supporting innovation and development. The College is pioneering SIP traineeship programmes with local employers, preparing young people for science apprenticeships. New STEM Centre opened in 2016.

Engineering products & services

Altrad Services

An international leader in the provision of critical industrial services principally to the energy, infrastructure and natural resources sectors. The multi-disciplinary service includes access systems, insulation, specialist coatings, passive fire protection, engineering services, refractory linings, environmental services, oil and gas storage tanks and heat exchanger replacement and refurbishment.

Chem Resist Group Ltd

Design, manufacture and installation of corrosion resistant process plant. A wide portfolio of thermoplastic process plant, an extensive range of pumps and ancillaries and complete pipework installations, upgrades and repairs. Aggressive and corrosive applications for pumps (1m³/hr to 1000m³/hr, heads to 100m) valves and level controls.

Derwent James Ltd

Providing outstanding safety equipment, consultancy and expertise for your company. Exclusive UK agents for Dopak chemical sampling systems. Over two decades experience in the design and supply of safe manual sampling systems for chemical liquids and gases. Consultancy and supply of mechanical interlocks, lockout tagout and portable valve drives.

Know your supply chains

DHD Cooling Limited

Design, installation and maintenance solutions for industrial cooling. Our service extends to cooling system inspection, testing, service, maintenance and new equipment capability. Regulatory and reliability assessments, thermal performance improvements, turnkey projects and carbon footprint reduction.

Glacier Energy Services

Onsite Machining; design and manufacture of equipment for precision pipe cutting and onsite machining. Heat Exchanger design, manufacture, repair and refurbishment. Welding. NDT services performed by highly qualified technicians. Provision of turnkey solutions in respect of surface and subsea production equipment. Great customer value, highest standard of service and best-in-class HSEQ performance.

HTS Engineering Group Ltd

Process safety and safety instrumented systems, delivered with a high level of engineering and expertise with cost efficiency. Four key engineering services that can be tailored individually or as one complete solution: process control & software engineering, engineering & design, site installation and inspection services.

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.

Lokring Northern (UK)

Special mechanical fitting system that produces a permanent weld equivalent pipe connection, eliminating the need for hot work, NDT and associated health and safety issues. Lokring fittings are code qualified to ASME B31.1, B31.3 and other industry standards. A proven cost saver compared to traditional welding and fabrication methods.

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.

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.

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

Fluid system solutions, products, training and 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.

Zulu Joint Integrity Ltd

We are an established specialist joint integrity management and training provider with a strong track record of supporting the chemical, oil & gas, petrochemical, power generation, steel making and process industries (particularly COMAH registered assets) with our joint integrity management and training/competency assessment services.

Engineering project management & energy

Axiom Engineering Associates Ltd

An award-winning company specialising in the provision of UKAS accredited inspection services, backed up by a mechanical and materials asset integrity section. Acting as the design and inspection authority to many blue-chip companies, working across a broad range of process sectors such as: chemicals, petrochemicals, bulk storage, power and pharmaceuticals.

Clarke Energy

Specialists in the engineering, installation and maintenance of reciprocating engine-based Combined Heat & Power (CHP) plants. Offering ranges from supply of an engine through to turnkey installation of a multi-engine power plant. Our facilities deliver fuel efficiency, dramatically lower energy costs and help reduce carbon emissions. Carbon dioxide can also be recovered.

Comeca Intelligent Motor Control Centres

Comeca UK formerly GEC, Alstom, Areva T&D the exclusive provider of Gemstart and manufacturer of Galaxis Motor Control Centres. Opening of two new manufacturing units in 2018 further enhances our ability to provide full Service and Support for our UK and Northern Europe Install base.

E.ON Energy Solutions

As experts in Combined Heat & Power (CHP) we take the time to understand your core business drivers to shape an economically optimised energy solution that supports your long-term strategy. We're at the forefront of energy markets, driving change in response to global mega-trends, including digitalisation, decentralisation of generation, the de-carbonisation of heat and power, and Industry 4.0.

Fichtner Consulting Engineers Ltd

International engineering and project management. Provision of mechanical, electrical, process and chemical engineering design services. Strong focus on thermal combustion and full range of processes associated with power applications. Recent growth in renewable energy sources such as: solar, anaerobic digestion and onshore wind projects.

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 PROJEN

A multi-disciplined engineering, design and project management business working across a range of market sectors for a diverse mix of clients from SMEs to multinational blue-chip companies. Part of PM Group, a 2,200 strong, employee owned company operating across Europe, Asia and the USA.

WorleyParsons Resources & Energy

A professional services company delivering, concept, prefeasibility and feasibility studies, FEED and Detail Engineering, Procurement and Construction. We also offer a wide range of advisory services. We support the chemicals, hydrocarbons, infrastructure and minerals & metals sectors over their full lifecycle, providing end to end services.

Engineering, IT & process consultants

ABB Ltd

ABB delivers high value consulting and lifecycle services to help companies in the global high hazard industries achieve operational excellence. Offering expertise in: inspection, integrity management, maintenance and reliability, obsolescence management, process safety, project services, late life and demolition, technical engineering, software and technical training. Benefitting customers by reducing risk, optimising cost and improving efficiency.

BPE Design and Support Ltd

Progressive and innovative process engineering consultancy. Extensive process development and scale-up experience and process modelling and simulation is a core expertise. Early stage concept and feasibility studies as well as subsequent design, commissioning and qualification stages. Independent HAZOP chairing, ATEX/DSEAR assessments and SIL/LOPA studies.

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.

HFL Consulting Ltd

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.

Peak42 Ltd

Process control, industrial automation systems and manufacturing analytics. A unique combination of automation projects, consultancy, and performance improvement services delivered by experienced teams. FEED, process control projects, legacy asset replacements, control room and operational technology, modern manufacturing analytics solutions.

Reliable Manufacturing

Reliability-based change management consultancy. A pragmatic approach delivers improved asset availability, reduced operating costs, improved HSE performance and increased employee motivation and satisfaction. Support with implementation of operations and maintenance best practices which facilitate organisational cultural change. A unique range of effective workshops, tools and masterclasses, help get the messages over.

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

AB Risk

Human factors and process safety risk consultancy for process industries. Expertise includes safety critical task analysis, staffing assessments, alarm management, control room design, human factors engineering in capital projects, safety reports. Engineer with extensive human factors experience taking a systems view, assessing complex situations and developing practical and effective solutions.

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.

Facilities, finance and other business services

ChemQuest Ltd

Sourcing and procurement solutions for research and development. Expertise in biochemical, chemical, nanotechnology, cell cultures, equipment, consumables and sundries. Streamlining and simplification of importing and purchasing processes.

Department for International Trade – Northwest

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.

Falck Fire Services UK

A leading, global and dedicated emergency services provider and fire-fighting specialist to high risk industries. Tailored outsourcing contracts and a high quality integrated fire protection system. Incident fire training courses for emergency response teams, including practical scenarios. Consulting services specialising in fire and explosion hazard management.

Grant Thornton UK LLP

One of the world's leading organisations of independent advisory, tax and audit firms. We help dynamic organisations unlock their potential for growth by providing meaningful, forward looking advice. Provision of assurance, tax and advisory services. A dedicated Innovation practice that has an enviable track record of working with successful and dynamic companies to realise their ambitions for growth.

Halton Borough Council

World renowned research facilities such as Sci-Tech Daresbury and The Heath alongside many companies at the cutting edge of science, technology and advanced manufacturing. We oversee capacity in terms of land, buildings, people and business support creating a world class location.

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

Chilworth Technology Ltd

Process safety testing services aimed at helping companies avoid major incidents such as fire, explosion or loss of containment. Combining process safety engineering and management expertise with the use of test data allows us to help clients achieve the most effective and practical approaches to safe and efficient processes.

Envigo

Envigo provides essential research services, models and products for biopharmaceutical, crop protection, and chemical companies as well as universities, governments, and other research organizations. Our business is founded on a dedication to customer service and the expertise and experience of our 3,800 people.

Kindlow Safety Services

Provision of process safety testing and consultancy. Understanding of needs to control hazards such as dust explosions, thermal decomposition and runaway chemical reactions. Fully equipped laboratory and experienced team help achieve your safe operating conditions. Other services include: HAZOP, aerosol safety, REACH testing and process safety training.

Labtex Ltd

Suppliers of leading laboratory products and process scale-up equipment. The list includes: HUBER liquid temperature control systems, DIEHM glass reactors to 100 l, PREMEX and AMAR high pressure autoclaves, POPE wiped film or short path evaporation and distillation, Nutsche filter dryers and many more.

Smithers Viscient

Environmental testing and regulatory services, carrying out environmental, consumer safety contract research and regulatory services. Plant metabolism, aquatic ecotoxicology, avian toxicology, environmental fate, honeybee and pollinator testing, endocrine disruptor testing, residue, analytical and product chemistry.

XCellR8 Ltd

A world leader in animal-free testing. Our GLP accredited laboratory provides ground-breaking 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

Know your supply chains

courts. Business led and strategic approach to generate assets of real commercial value.

E3 employment Law LLP

Specialising in employment law. The resolution of the full range of employment law and industrial relations issues to suit individual businesses. Delivering employment law advice which provides outstanding commercial value.

Marks & Clerk LLP

Intellectual property services, advising start-ups, SMEs and multi-nationals with large global IP portfolios. Comprehensive range of IP services covering patents, trade marks, designs and copyright. Obtaining protection worldwide, portfolio management, strategic and commercial advice, licensing, enforcement, due diligence, valuations and litigation.

RW Legal Ltd

Provision of pragmatic legal advice to companies in the chemical sector. Particular expertise in drafting and negotiating commercial contracts. Managing legal risk through early involvement to save time and resources in the long run. Competitive rates and flexible fees without sacrificing quality.

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.

Symmetry Law

Specialist law practice structured to provide "partner" level experts at "junior" level prices, with a focus on the 'high consequence' end of the spectrum. Legal services include: environmental, safety, regulatory, contracts, tax, construction, green incentives, litigation.

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

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.

Stewardship Solutions Ltd

Provision of chemicals regulatory services to organisations across many industry sectors and throughout the world. REACH and CLP compliance is a primary focus, and REACH registrations programmes are a core strength. The company has achieved significant savings in the costs of REACH compliance on behalf of many of its SME clients. Stewardship Solutions is a REACHReady-approved service provider.

The ACTA Group

Assisting companies with complex compliance issues under multiple regulatory schemes, including N American, EU, S American, Asian and Pacific rim regulatory programmes. Expertise in product approvals, product review and REACH compliance. Provision of REACH registration dossier submission, lead and joint registrations.

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.

Airswift

Provision of international workforce solutions to the energy, process and infrastructure industries. Placing candidates into their ideal role; rehiring a contractor from one project to the next; mobilising people around the world quicker; searching and selecting a senior executive to fill a key position; or implementing an agile workforce strategy.

Millbank

With over 30 years' experience providing recruitment solutions to major clients in the chemical sector, Millbank has an extensive database of experienced candidates and contractors ready to join projects across the region. A true recruitment partner, Millbank offers services ranging from contract and permanent placements through to fully managed services.

Hybrid Search

A search firm that can achieve outstanding results across commercial, engineering, operations, supply chain and procurement disciplines. Consulting practice delivering: team assessments using competency based assessment and psychometric testing, career transition workshops that provide guidance and job market intelligence and talent mapping & pipelining for future talent planning.

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.

Science Recruitment Group

Experts in the recruitment of scientific, regulatory, quality, engineering and technical professional across all areas of the industry. Support in recruiting temporary, contract or permanent staff for your team.

TransitionPlus Ltd

Executive search for science based organisations, talent development, outplacement and career transition support. Experienced chair, NED, coach and business development consultancy. The "Plus" is to ensure that considerable attention and investment is given both before and after the recruitment to ensure that company culture and "fit" are clearly understood.

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Helping members to manage their **Climate Change Agreements**



CIABATA

Key elements of CIABATA's role include:

- Helping new entrants to join the chemical sector CCA
- Working with participants to support their compliance with CCA obligations including collecting and reporting data on performance against targets to EA
- Negotiating with Department for Business, Energy and Industrial Strategy (BEIS) to agree CCA targets for the sector and its participants
- Helping members to manage their Climate Change Agreements and save on energy tax

www.cia.org.uk

CIABATA is the subsidiary company of the Chemical Industries Association, which manages and administers the chemical sector climate change agreement (CCA) with the Department for Business, Energy and Industrial Strategy (BEIS) and the Environment Agency (EA) on behalf of participating members.