

A unique industry, with unique companies and unique news

elements



In this issue:

- **Brexit NO DEAL, 31 October 2019 - Is your company ready?**
- **Trends in cyber attacks**
- **Flame and Gas detection**
- **Innovators race to find sustainable polymer-based materials**
- **Energy optimisation without the need to commit capital**

2020

Save the date!

Chemicals Northwest Awards

19 March 2020

@the Hilton

Manchester Deansgate

We are delighted to announce that the next Chemicals Northwest Awards dinner will be taking place on the 19th March 2020 at the Hilton Manchester Deansgate.

Further details to follow



Chemicals 
northwest 

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RISK & HAZARD MANAGEMENT

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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:

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

We wish to welcome on board Ian Cranshaw who was appointed Operations Manager at Chemicals Northwest in succession to John Roche. Ian will combine the role with his position as Head of International Trade at the Chemical Industries Association. Working alongside Alex, Ian will work with CNW members to ensure our region offers everything possible to allow chemical businesses to maintain and grow investment and that CNW meets the needs of member companies.

The next programme of CNW events has been launched following the summer break, places are available at the events and we welcome our members to get involved and attend. We are also delighted to launch the 2020 Chemicals Northwest Awards which will take place on the 19th March 2020 at the Hilton Manchester Deansgate. Further details of the awards and the official launch will follow in future elements magazines and via the CNW website. For further details of upcoming events that CNW are running please see page 23.

As this edition of elements was being finalised, we are delighted to announce a new event to the CNW calendar. This event in conjunction with The Hartree Centre focuses on how Artificial Intelligence (AI) and Data Science can assist the membership of Chemicals NW with their regulatory responsibilities. This event is initially open to members of Chemicals Northwest and is taking place on the 6th November at the Hartree Centre. Further details can be found on our website.

Back in June, CNW were delighted to partner with RPS for a Flame and Gas detection event. The advice and guidance on this subject can be found on pages 27 and 28.

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.



Brexit NO DEAL, 31 October 2019

Government statistics suggest there are 240,000 companies regularly exporting from the UK. The majority of those companies only trade with the EU and so understandably will not be completely familiar with the documentation required when selling their goods or services internationally. Government is now investing an additional £2.1 billion into preparedness and no deal planning. The message to companies is to Get Ready, and so the question for your business is, are you ready to continue to trade seamlessly with key customers and partners?

The below notes on VAT, Customs and Simplified Import Procedures are hopefully informative. I expect thought that they might raise as many questions as provide answers! So please drop me a note on cranshaw@cia.org.uk and I'll look to share additional information that hopefully puts the information into context. Do also review the full data sets or Technical Notices at <https://www.gov.uk/government/collections/how-to-prepare-if-the-uk-leaves-the-eu-with-no-deal>

VAT Update

If the UK leaves the EU without a deal, the government's aim will be to keep VAT processes as close as possible to now. However, there will be some changes that will inevitably affect your business.

In a no deal scenario, postponed accounting will be introduced for imports from the EU and Rest of World

- You will not need to register to use postponed accounting. Simply make the appropriate entry and provide your VAT registration number on the customs declaration.
- An online monthly statement will show the VAT that has been postponed. This will provide the evidence to declare/ recover import VAT on your VAT return.
- Postponed accounting won't be available for postal goods of £135 or less.
- Postponed accounting won't be available for non-VAT registered businesses.
- For exports, businesses no longer need to complete EC sales lists, but will need to review the rules in individual member states that apply for import VAT.
- The UK would stop having access to certain EU VAT IT systems – but a new UK VAT registration number checker will be available.



English EN

European Commission > Taxation and Customs Union > Business > VAT

Taxation and Customs Union

Home Business Citizens Customs Taxation Online services

VAT



National information

The application of VAT is decided by national tax authorities but there are some standard EU rules, explained on this site.

Check basic VAT rules in each EU country

Tax information Communication database

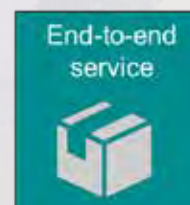
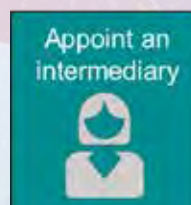
If you want to understand how postponed accounting will operate please sign up for alerts to guidance updates on GOV.UK

Customs Update

Customs Declarations

Customs declarations will be needed on UK-EU trade in a no deal scenario.

Businesses will need to decide how they want to manage the declarations process:

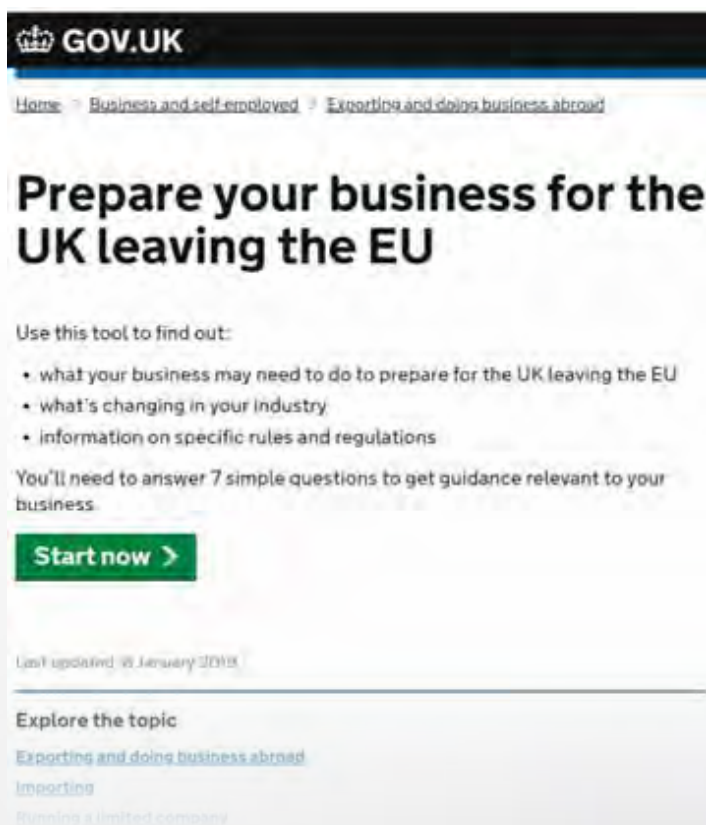


HMRC is working to ensure that as many businesses as possible have the capability to make customs declarations on day 1.

More 'no deal' guidance is coming soon

The full range of information on customs, VAT and excise after EU Exit, and more technical guidance for stakeholders, will be on GOV.UK and other comms channels. Please continue to review.

- Is your company ready?



GOV.UK

Home > Business and self-employed > Exporting and doing business abroad

Prepare your business for the UK leaving the EU

Use this tool to find out:

- what your business may need to do to prepare for the UK leaving the EU
- what's changing in your industry
- information on specific rules and regulations

You'll need to answer 7 simple questions to get guidance relevant to your business

Start now >

Last updated 18 January 2019

Explore the topic

- [Exporting and doing business abroad](#)
- [Importing](#)
- [Running a limited company](#)



HM Government

Partnership pack: preparing for changes at the UK border after a 'no deal' EU Exit



Simplified import customs procedures for no-deal

HMRC have announced that businesses will be able to use simplified customs declarations and postpone payment of duties under a Transitional Simplified Procedures (TSP) scheme if there is a no-deal Brexit (but there will still be additional information needed for controlled goods). The measures will apply to most businesses importing from the EU at roll-on-roll-off-ports. The measures would come into place from 31st October and be reviewed after 3 to 6 months. Businesses will be given 12 months' notice if they are to be withdrawn. These transitional simplified procedures reduce the amount of information you need to give up front in an import declaration when the goods are crossing the border and also by deferring the payment of duty.

There are key actions for traders:

1. Register for Economic Operator Registration and Identification (EORI) number if you haven't done so already at www.gov.uk/hmrc/get-eori
2. Check the guidance to see if you qualify and check which ports TSP applies to: www.gov.uk/hmrc/eu-simple-importing
3. If tariffs apply to the goods that you import and you want to use TSP you will need to apply to defer any duties payable (HMRC will provide further details on this) and have a financial guarantee for any duties deferred.

The Chemical Industries Association and Chemicals Northwest are working flat out to understand the impact of a no deal scenario on our sector. Please do join us at the Brexit User Group Meeting, Sci-Tech, Daresbury on 3rd October 2019. During the afternoon I will share an update on Brexit and advice on how you might prepare your business ahead of Brexit. I will cover wider issues such as Trade Remedies, Continuity of EU FTAs and the proposed Zero Import Tariff policy. The latter issue of unilaterally removing almost all import tariffs has met with some concern from UK manufacturing companies but chemical companies that routinely import raw materials and feedstocks, often from countries including China, India or the US, the prospect of being able to do so without paying tariffs offers a real competitive advantage.

Ian Cranshaw, Operations Director - Chemicals Northwest



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.



RISK & HAZARD MANAGEMENT



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Who we are

RAS Ltd is an independent firm of risk specialists established in 1993. We are founded on a set of simple principles: recruit the best people in the industry, only work in our areas of expertise, and work with our clients, not for them.

It's an approach that has seen us grow from being a handful of specialists in the North West to a rapidly developing company working with the leading companies in the oil & gas, pharmaceuticals and specialist chemical sectors across the world. Our team have worked on some of the biggest and most influential projects in the industry, and continue to expand their specialist knowledge.

We're proudly independent. Our independence gives us the freedom to do what's right for our clients without being slowed down by corporate structures and consultancy models. That's not to say that we don't have our own methodology and risk models – we do – but we approach every single project differently, and don't provide uniform services 'off the shelf'.

We also work closely with a number of specialist consultancies when the need arises, to ensure we provide best practice advice. We're quick, efficient and cost-effective. Why not put us to the test?

What we do

Everything we do is about managing risk in three areas: safety, business and environment.

As you'd expect, we work to internationally recognised standards.

We have particular capabilities in accident risk in the oil & gas, pharmaceutical and chemical sectors and work with the key industry players.

Because we specialise in these core areas, our clients can be certain of up-to-date knowledge and an undiluted focus on the specific risk challenges of their business.

A lot of organisations initially come to us with a regulatory compliance need, but they come back for support on wider risk issues. Our entire approach is about adding value to your business. By understanding your challenges we can provide best practice advice – and by sharing our past experiences and knowledge, we can help you better manage the risk within your organisation.

How we work

Every report, strategy or project we undertake is bespoke to our clients' needs and unique set of circumstances. Only when we understand your challenges fully can we provide best practice advice and apply our skills and creative thinking to problem solving.

Often, we find this leads us down a different path than was expected. We don't see ourselves as suppliers, we see ourselves as partners. Not in a clichéd 'we'll hold your hand' way, but more in a pragmatic, practical way: one that's all about giving you the tools and knowledge to manage your own challenges.

As your risk partner, our job is to make sure you are protected and your best interests are looked after. Which is why we question everything and don't work in isolation, looking at a project holistically to see how it impacts on the entire organisation. It's the only way we can confidently say 'we've got your back.'

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W www.ras.ltd.uk



Safety Risk

Our safety risk assessment and management expertise covers risk identification techniques such as HAZIDs and HAZOP, predictive modelling advice and the facilitation of risk management techniques, particularly in the demonstration of 'ALARP'. The area of Control of Major Accident Hazards (COMAH) is a particular specialism within the company.

Environmental Risk

Our services in the Environmental Risk area range from the assessment of the risks related to the environment in relation to Major Hazards, based on our Source, Pathway, Receptor risk assessment model, through to the preparation of Environmental Permits (PPC in Scotland) – full applications or variations of existing permits – particularly in relation to planning for new developments.

Business Risk

It could be argued that all risk – whatever its label – can be defined as 'Business Risk'. Ultimately, whatever risk is being considered, whether safety, environmental, commercial or financial, if it's not understood and managed effectively, it becomes a risk that affects the whole organisation.

Innovators race to find sustainable polymer-based materials

Polymer innovation, a branch of materials science, has been instrumental in the development of many of the products and technologies we use every day. However, mounting concern about the environment, has put polymeric materials, or plastics, in the spotlight.

There has been significant work going on in the field of polymer science in recent years. Much of it has focused on finding alternative methods of plastics reuse and recycling. A number of interesting research projects are underway globally. In a study underway at Massachusetts Institute of Technology, fine plastic flakes are being exposed to small amounts of gamma radiation, before crushing them down and mixing them into concrete. This process helps to make concrete more durable at the same time as helping to reduce waste to landfill.

Other alternative uses for waste polymers are aiming to capitalise on their main attributes – lightweight, strength and rigidity, leading to the creation of bespoke materials.

An example of this is the growing popularity of wood-plastic composites (WPC), which are made from a mixture of wood fibre and thermoplastics, including polyethylene and polyvinyl chloride. These materials are used extensively for applications such as decking, railings, fencing and benches and are sustainable in that they can be made from recycled plastics. Although biodegradability is a consideration, a WPC reaching the end of its useful life can be re-fabricated into new materials, avoiding the need to dispose of it completely.

For a long time now, polymer manufacturing has been intrinsically linked with the petroleum and fossil fuel industry. When crude oil is distilled, various by-products are made, which often find their way into plastic materials. From an environmental perspective, such processes are not sustainable – they rely on the use of rapidly-depleting fossil fuels, release carbon emissions into the environment and the end product is hard to recycle.

In a bid to address these problems, innovators have begun to focus on drop-in or bio-plastics. These products are made from fermented starches, found in materials such as banana skins or peanut kernels.

One such bioplastic is floreon, a specially-formulated

compound that is added to standard bioplastic polylactic acid in order to create a material that has a sustainable origin and a range of end-of-life options. The bioplastic polylactic acid is produced using renewable crops such as corn, tapioca roots, starch or sugarcane. A fully-degradable and compostable polyester blend is added, to produce an environmentally-friendly plastic that can be used to manufacture drinks bottles for example.

The developers of floreon have protected their R&D investment by filing patent applications that include claims related to the material blend; articles such as bottles made from the compound and specific methods of manufacture or polymer processing. For example, the latter includes injection moulding. To date, patents related to this technology have been granted in Europe, Australia, China and Canada.

In contrast to some bioplastics, which are compostable and biodegradable, drop-in bioplastics are fully-recyclable. This means that instead of requiring specialist, dedicated recycling facilities, drop-in plastics can be fully integrated into conventional recycling streams, requiring less investment in end-of-life processing facilities.

Compatibility with existing recycling facilities forms a key part of the polymer industry's push to drive innovation towards a circular economy, with closed recycling loops. Recycled plastic has a reputation for being lower quality than virgin plastic and so its popularity with consumers has suffered. Innovators are aiming to change this perception by creating an advanced material that once nearing the end of its life, can be recycled readily into something of equivalent quality.

With so much innovation activity going on globally, intellectual property is playing an increasingly important role in protecting inventions, allowing them to be commercialised effectively. To compete effectively, innovators should ensure they have an IP strategy in place that is aligned with their business strategy and seek multi-layered rights where appropriate.

Dr Joanna Thurston is a partner and patent attorney at European intellectual property firm, Withers & Rogers. She specialises in advising clients in the chemicals and biopharma industries on how to protect their innovations.



How STEMpathetic is your workforce?

Word on the street is, today's young talent are missing some basics. What can we do to address this 'soft skills gap'?

The latest group of young people to enter the workforce are ambitious. 81% of Generation Z aspire to be leaders and 32% believe they'll be managing employees within the next five years. But there is a concern that they are largely underprepared for this kind of responsibility – lacking the 'emotional quotient' to navigate corporate politics, team-building and leadership.

Bruce Tulgan, author of *Bridging the Soft Skills Gap: How to Teach the Missing Basics to Today's Young Talent*, suggests these kinds of soft skills are critical, but they're declining across every industry.

Now here at Outward Bound, we don't think it's time to start ringing the alarm bells yet. After all Gen Z are set to be the most diverse, global and educated cohort to date. Initial research shows that they are optimistic and hard-working, looking for jobs which allow them to have a wider societal impact, in which they can collaborate with co-workers, and where their skills and ideas are valued. They may be leading a wave of change in the way our apprentices and graduates operate, but they are doing so for the better – and employers should be snapping them up.

The new rules of the (employment) game

However, we know that young people can struggle when they step into the world of work. And this is in part due to the way that this world is changing. In short, technology has transformed jobs – sophisticated technologies have taken over routine work environments, and our apprentices and graduates are increasingly expected to take on roles with growing diversity and complexity.

As jobs adapt to accommodate new technologies, people remain an organisation's critical asset. Technology coupled with innovative work practices can be a source of competitive advantage for companies that understand the potential and seize the opportunity. This 'collaborative revolution' is essential to remain competitive in a global economy. And what is collaboration without interactions? Employees need to be able to make good decisions, resolve issues and share knowledge effectively and efficiently.

To move with these changes, we're seeing a drive towards developing a 'STEMpathetic' work force: combining scientific and technical knowledge (STEM) with cognitive social skills (have a little empathy, please). Making sure your newest recruits are competent in

both spheres is essential – and this probably requires additional upskilling on the job.

STEMpathetic skills and behaviours

If we look at the behaviours commonly required across apprentice and degree apprenticeship standards in the chemical sector, communication, managing change, teamwork and taking responsibility are up all there. Case and point. Clearly, there is need for our apprentices and graduates to master both technical and soft skills.

We also know that young people themselves are concerned about their capabilities in these areas. 2018 Research by Dell Technologies suggest that Gen Z feel confident in their technical prowess, but that this doesn't necessarily translate into workplace readiness. 52% of the 12,000 GenZedders captured in the study had greater confidence in their technical skills than their non-tech skills. A generational comparison study by Bridgeworks shows that compared to preceding generations, Gen Z are significantly more worried about their face-to-face communication skills and feel they will struggle most with this in the workplace.

The take home message?

New jobs are on the horizon. Technology is allowing more jobs to be created that leverage those essential human qualities: social and critical skills, along with resilience, the ability to collaborate and a 'can do' attitude. This will require employers to think about ways they can incorporate this learning and development into their apprentice and graduate schemes.

STEMpathy is the new in-demand skill set. We must gear up our rising tech-savvy workforce to take on increasingly social tasks – preparing them for problem-solving, teamwork, and communication-based roles. What action will you take?

*Written by John McCarthy,
Client Relationship Manager –
The Outward Bound Trust
<https://www.outwardbound.org.uk/>*



Technology Strategy Toolbox: The innovation leaders' new best friend

Companies are frequently looking for growth, innovation and productivity gains to enhance their prospects over the longer term. For business and technology leaders, making sense of new technologies and effectively and at speed is crucial. Unfortunately, more 90% of strategy fails to some extent. A solution has been deployed that quickly and effectively develops company technology strategy allowing better and more rigorous decisions about investments in new technologies.

For established corporates through to technology start-ups, a pervasive set of questions nags in the minds of innovation and R&D leaders.

- Why do we need to act – what's driving change?
- What will create the most value in our innovations associated with technologies – where will we make money?
- When do we need to act – what's the timetable?

First, let's get the bad news out of the way. It's possible, indeed, probable that your strategy is weakly design or poorly executed. In product innovation firms ranked in the higher levels of performance have better strategy processes, more regular routines and more aligned functions. Let's consider a definition to get onto the same page. What do I mean by a technology strategy?

***"The operational expression of a technology strategy is the set of projects that an organisation wants to implement. Determining a strategy is selecting the projects and the portfolio of projects."* Mayer (2008)**

You could boil it down to the following; essentially, technology strategy is about decision support for technology investments. To be able to define at will the Why, What, How and When technologies are needed and the capabilities to deliver them.

How can innovation leaders respond?

What if, we could turn this frequently poor situation around rapidly? What if... we could deploy a set of agile, rapid and flexible strategic "tools" that could lift our performance? I'd like to introduce you to a first Tool; the strategic technology roadmap. It is used to map, over time, where value is created, why it is driving the firm and how it is enabled. It describes a desired future state, where we are now and what the gap looks like. A roadmapping workshop should be tightly designed and facilitated. Getting the right people into the room is a core principle of our workshops.

But what about more radical or deeper exploration, if a division needs to refresh its technology strategy? The

technology strategy toolbox also includes methods for very different tasks,

Exploration: Drivers and scenarios. Creative idea generation and intelligence on where trends are heading.

Decision-making/options: Do we make technology or buy via acquisition or collaboration? How do we weigh technology development risk?

Communication: Plans and messages to the wider organisation and stakeholders.



CASE STUDY

A speciality chemicals manufacturer wanted to develop a technology roadmap. Using our fast-start one-day workshop-based processes over 8 weeks we developed a business strategy, followed by a strategic roadmap. We worked with the board and the management team to deploy a series of business and technology strategy tools; Roadmapping, opportunity selection tools, linking grids. The results are the board has been a much clearer picture of where and what to invest precious SME development resources in (and what to walk away from) thereby minimising the lost opportunity cost. The results included significant uplift in jobs and consequent revenue and profit growth.

A better place for technology strategy: How valuable would it be for as an innovation manager to be able to reach for a set of tools and rapidly, and with far greater effectiveness, reach conclusions about technology investments? The results are for R&D managers and VPs in technology-reliant businesses are,

1. Faster, more effective and rigorous answers to what technology do we invest in.
2. Knowing what capabilities to invest in with far greater certainty; what projects to place the precious resource on.
3. Futureproofing the firm, to some degree, on the strategic objectives of a firm with an uptick in ROI.

Please contact IfM's Industrial Associate in the Northwest, Rob Munro to discuss your technology and innovation management objectives, Email rjm240@cam.ac.uk or call +44(0)7896 128 878



2M Holdings win Queen's Award for International Trade

2M Holdings have won the prestigious Queen's Award for International Trade 2019 – in recognition of significant export growth.

Recently crowned Export Champions 2019 by UK Government's DIT (Department for International Trade) the Group has reached many new markets.

Mottie Kessler MBE, Chairman and CEO said:

"The Chemical Industry is essential in connecting the building blocks of everyday life. Britain is an island with a rich history of trading across the world. We hope to continue trading, more and further, to deliver the essential building blocks of everyday life for hundreds of business worldwide."

Maggie Kessler, Export Director for 2M said:

"2M Holdings winning the Queen's Award for International Trade sends a very strong and positive message to the UK Chemical Industry in the North of England and we are very proud of our partnership with DIT."

As a company, we believe in the importance of STEM (Science, Technology, Engineering and Mathematics) education for young people. We actively invest in skills creation within our local communities and in creating access to careers in STEM in the UK and beyond. The 2M STEM programme was also recognised in this award.

2M would like to thank its excellent teams across the group, as well as its customers and suppliers for successful partnership.

For further details please see www.2m-holdings.com



Siemens, Atos and STFC Hartree Centre launch Industrial Digitalisation Accelerator (IDA)

Siemens, Atos and the Science and Technology Facilities Council's (STFC) Hartree Centre have launched an Industrial Digitalisation Accelerator (IDA) based at the Sci-Tech Daresbury campus, where businesses can explore, integrate and benefit from Industry 4.0 technologies.

The Industrial Digitalisation Accelerator is the first time that three distinct and yet complementary experts in the field of computing, analytics and Internet of Things (IoT) solutions have come together and combined their expertise to offer industry the opportunity to overcome digitalisation challenges and discover new pathways to growth.

The programme is offering businesses of all sizes a practical, collaborative space to explore Industry 4.0 technologies (also known as the fourth industrial revolution). Here they will be able to produce proof of concepts and access mentorship to help them acquire these technologies, such as big data analytics, Internet of Things (IoT), modelling, simulation and sensor technology. The IDA can be accessed through various routes, including an upcoming accelerator training programme or via the Made Smarter funding programme.

Alison Kennedy, Director of the STFC Hartree Centre, said: "At the Hartree Centre we work with companies in a wide range of industries to help them benefit from advanced digital technologies such as supercomputing, big data analytics and AI. We're thrilled to be able to offer our expertise in this exciting and unique partnership which will offer UK companies a practical, collaborative space to accelerate the exploration and integration of Industry 4.0 technologies and improve productivity."

For further details please contact holly.halford@stfc.ac.uk

Brian Holliday (Siemens), Alison Kennedy (Hartree Centre) and Adrian Gregory (Atos) at the launch event for the new Industrial Digitalisation Accelerator, which will enable businesses to explore, access and adopt digital Industry 4.0 technologies.



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Trends in Cyber Attacks

Cyber-attacks are a significant risk for businesses of all sizes and across all sectors, with the threat increasing almost exponentially. In newly released research from Grant Thornton, it was identified that businesses in the UK mid-market have lost around £30 billion in the last 12 months due to cyber-attacks¹.

In addition, small businesses are also facing an increased number of attacks. In research released by the UK's Federation of Small Businesses, small organisations are collectively subject to 10,000 attacks per day². Being a target of a cyber-attack is no longer a matter of 'if' but 'when', what can make the difference is how vulnerable you are to these. So, where do these attacks originate and why are attacks evolving in such a way that more businesses than ever before are facing such a substantial threat?

There are a number of reasons for the growth in cybercrime:

- **Very low barriers to entry:** Anyone can be, or can hire, a hacker with tools easy to acquire and plenty of guidance available online.
- **Highly lucrative:** The global cost of cybercrime is predicted to hit \$6 trillion annually by 2021³
- **Low risk:** There are very few successful prosecutions for cybercrime, especially so when conducted across international borders
- **Increasing 'trickle down' of exploits:** Attackers can buy ever more sophisticated attacks that used to be reserved for nation states only
- **Available credentials:** Grant Thornton have identified over 38 billion username and password pairs currently for sale by cybercriminals – these enable easy targeting, especially against firms who do not have strong password policies.

Although groups such as terrorists, nation states and hactivists remain very active, attacks from these groups tend to be targeted against specific industries and national infrastructure that have strategic value. However, attacks from these groups are increasingly being dwarfed by the number of opportunistic cyber criminals who use industrialised tools and techniques designed to find and exploit weaknesses such as unpatched software or insecure cloud storage.

For these volume cyber criminals it truly isn't personal, it's just business, and they don't care who they are targeting – with small and mid-sized businesses frequently becoming victims due to fact they often have not been able to invest in good cyber controls that larger firms can afford.

The most common types of attacks are phishing campaigns which have affected 530,000 smaller firms over the past two years, followed by malware (374,000), fraudulent payment requests (301,000) and ransomware (260,000)⁴.

We have identified six simple ways in which organisations can start to recognise the cyber threat and put in place actions to mitigate against it:

1. **Establishing a cyber incident response plan:** This sets out the various actions to be taken in the event of an incident, together with who has responsibility and accountability for those different actions. It need not be overly formal but should include different functions in the business that may be affected such as IT, HR, Finance and Legal.
2. **Regularly rehearsing the response plan using a range of different scenarios:** Ensure that the incident response plan is tested. This will iron out any issues before it is used in a live event.
3. **Monitoring and managing the risk posed from your supply chain:** Businesses are increasingly aware of the threat posed by their supply chains. Take steps to understand how your data is handled by your suppliers and what cyber defences they have in place.
4. **Ensuring you understand the terms of your insurance and what is covered:** What are the caveats and carve-outs and what standards are being attested to? – this is particularly important for businesses to understand.
5. **Understanding what "normal" looks like for your business, in terms of application usage, so you can identify any unfamiliar patterns:** Take the steps to understand your environment and what behaviours and habits form a part of that on a day to day basis. This will help you to detect activity outside of the norm.
6. **Investing in regular training and raising their people's awareness of cyber security:** Your people are your strongest asset and weakest link when it comes to detecting cyber threats.

If you would like to find out more or have any questions please contact James Arthur, Grant Thornton

¹ <https://www.grantthornton.co.uk/news-centre/uk-mid-market-boards-ignoring-30-billion-cyber-risk/>

² <https://www.fsb.org.uk/media-centre/press-releases/small-firms-suffer-close-to-10-000-cyber-attacks-daily>

³ <https://cybersecurityventures.com/cybercrime-damages-6-trillion-by-2021/>

⁴ <https://www.fsb.org.uk/media-centre/press-releases/small-firms-suffer-close-to-10-000-cyber-attacks-daily>

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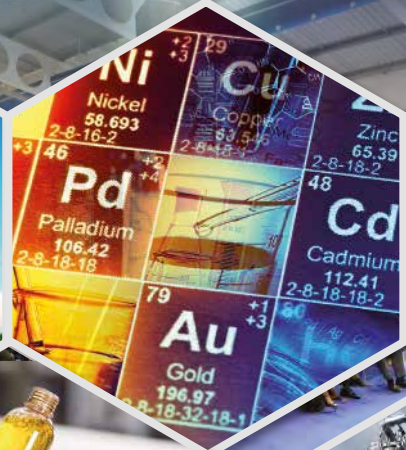


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Smart financing is enabling manufacturers to invest in energy optimisation without the need to commit capital

Siemens Financial Services (SFS) has released a new research paper examining how UK manufacturers can more easily implement energy optimisation solutions to reduce energy usage with the help of innovative financing methods.

There are major opportunities for the UK manufacturing industry to optimise energy consumption and generation to make major savings. According to the report, entitled 'Saving without Spending', cost savings from energy optimisation programmes are in the region of at least 25%, compared with just 6% actually achieved from reduced energy usage in UK manufacturing in the last five years.

Many manufacturing firms are using the considerable savings from improved energy management to subsidise digital transformation, improve competitive positioning, develop innovative products, implement marketing initiatives, enter new markets, or other business-generative activities. Manufacturing digitalisation also greatly helps to improve monitoring, analysis and optimisation of energy generation, energy waste reduction and recapture, energy transmission, and energy usage efficiency.

Therefore, for companies not yet embarked on an energy optimisation programme, every day that deployment is deferred is a day shareholders' funds are unnecessarily wasted. However, there are many demands on manufacturers' capital budgets and energy-optimisation tends not to be regarded as a strategic investment priority over more immediate business development priorities.

Smart financing techniques are becoming available which harness future energy savings to fund the implementation of energy optimisation solutions. Chief Financial Officers (CFOs) can therefore 'pay for outcomes' - in this case energy savings from optimised generation, transmission and efficiency, along with resilience against disruptive power outages. In the case of smart manufacturing, this is leading to the rise of a concept called 'Energy-as-a-Service'^[1]. Manufacturers are conserving their capital for growth and business development initiatives – including digitalisation - and choosing to let integrated technology-service-finance companies fund the digital transformation of their factories, plant and production sites.

These solutions also enable CFOs to optimise their capital deployment by moving tangible investments – such as the energy optimisation of a manufacturing site – away from capital expenditure (CAPEX) on the balance sheet and into operating expenditure (OPEX). There are a variety of



modern financing models available, with the most attractive option offering low or zero-net-cost for the manufacturer from smart solutions partners.

Mark Kelly, Project Development Director, Distributed Energy Systems (DES), Siemens says, "Manufacturing CEOs or CFOs looking after the interests of shareholders and investors are looking to minimise demands on their capital and secure long-term outcomes, such as lower and more predictable energy costs. Optimising their manufacturing sites using 'Energy as a Service' means their own capital is not at risk, and frees up their funds for other strategically important investments or for shareholders. Manufacturing companies have made great strides in energy optimisation but these new innovative solutions will mean there is much more that can be done."

Gary Thompson, UK Sales Director - Siemens Industries and Markets, Siemens Financial Services (UK) adds, "Potential savings from energy optimisation are considerable, especially in high-energy-intensive manufacturing industries. UK manufacturers currently spend in excess of £8 billion per year on electricity and gas, and the long-term trajectory of industrial electricity prices is upwards.

"Innovative financing methods regard energy savings as a source of funding – to effectively pay for the conversion to optimised energy generation, transmission and consumption over a given period. The beauty of these schemes is that they eliminate the main obstacle to smart energy conversion – i.e. the need to raise and commit scarce capital which is under pressure to be deployed elsewhere."

Download the paper here:
www.siemens.co.uk/energyasaservice

^[1] See, for instance, ITEA, BaaS "Building as a Service" as technical enabler for future building automation ecosystems, 2016

That first spark - chemistry motivates disadvantaged children

We need more students studying chemistry. Very bright, original thinkers to save the planet and a constant supply of practitioners at all levels to keep our businesses running. We know why students prefer arts to sciences – they see chemistry as dirty, dull and difficult, arts subjects are creative and imaginative. What nonsense!

Chemistry with Cabbage was set up to turn this round. We inspire children and spark their curiosity. Students make career choices surprisingly early and we capture their imagination at primary school, doing a full day's experiments with nearly 200 classes a year. There has been another interesting result. Practical chemistry appeals particularly to those who don't succeed at school.

Intelligent children can under-achieve; this has always been the case. You know bright adults with few qualifications. Students in areas of deprivation are particularly at risk. Financial problems, poorly-educated parents or those who don't value education are more likely to have children who start school already behind their peers.

From a bad start, it is difficult to catch up. They go to secondary school as reluctant readers, they struggle to access other subjects and may give up. However good their teachers they trail along in bottom sets, with poor marks and low ambition, often disrupting the class as they go.

These students come alive when given practical activities where, for a change, they can shine. We see this in sport which rescues many problem children. Experimental chemistry can do the same and these students are often surprisingly good at thinking through real-life, hands-on problems. A challenging home-life develops particular, perhaps unrecognised, skills.

Children in areas of deprivation are very observant. In leafy areas, the kids come skipping out of school into a warm, waiting car. But these less fortunate children walk home warily, eyes peeled for problems round every corner. The world seems bewildering. Many things make no sense to them. The idea that the world can be understood is a revelation. Chaotic home lives mean that they don't have an established understanding of cause and effect and they find the routine and reproducibility of science soothing.

and you can help...

CNW members – Brenntag and ReAgent support the work that I do in schools.

They see the value of inspiring the next generation.

The chemistry that we do seems real to kids. They experiment with household chemicals, things they've heard of. It is not baby chemistry, they are dealing with important abstract concepts, making predictions and constructing testable hypotheses. They work out for themselves that:

1. Everything is made of chemicals – they work with sugar, lemon juice, milk, cabbage, constantly referring to them as chemicals.
2. Molecules are crucial to the understanding of what is going on. Dissolve polystyrene in nail varnish remover and you get their attention. Then, crucially, you can get them excited about dissolving in water.
3. The way chemicals behave depends on the size and shape of their molecules – they add vinegar to milk making it curdle and discuss why. The only explanation that works is unfolding and tangling of protein molecules.

Primary teachers, who know their students very well, are often amazed at the intelligence and enthusiasm of these, often difficult students. "I've never seen Darren put his hand up before". They ask intelligent questions and have bright ideas, despite being seen as low ability. Other organisations doing science with young children report the same findings.

A 10 year old in a very run down school in Liverpool (who gets his brothers and sisters to school because his drug-addict parents aren't up before lunchtime) said to me "Water can't be H₂O - it evaporates too slowly". To realise at that age that small means volatile in the molecular world, shows a brain that we need to encourage into chemistry.

You can be part of this....Contact Lorelly Wilson MBE, lorellywilson@gmail.com

A photograph of a modern office building with a mix of red brick, white panels, and large glass windows. The building has a curved facade and is surrounded by greenery. The sky is blue with some light clouds.

OUR BUSINESS IS RELOCATING...

After a very successful 10 year period at Preston Brook, PM PROJEN is relocating to new premises in [September 2019](#).

The continued growth and expansion of PM PROJEN's service offering has meant the business has outgrown its current headquarters.

The move will provide an enhanced working environment for all of its personnel as well as the extra capacity required for future growth.

PM PROJEN is a 130+ strong, employee owned, Engineering Design and Project Management business working across a range of market sectors for a diverse mix of clients.

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**E: enquire.uk@pmgroup-global.com
www.projen.co.uk**

Thermal Stability in Bulk Powder Drying

...and having the right test data for you

There are several major hazards associated with the drying of products or intermediates in bulk, in addition to the basic flammability of some powders. These are:

Decomposition

Decomposition in bulk can be a devastating event as typically 80-90% of the energy of decomposition is evolved in the last few seconds of the decomposition. Typical decomposition energies for ordinary organics are 800 to 1000 kJ/kg.

Deflagration

Deflagration is a decomposition event where a wave of decomposition moves away from an initiating hot spot. It is confined to high energy materials such as near-explosives and organic peroxides. [See HS(G) 131 Energetic and spontaneously combustible substances - Identification and safe handling].

Gas Evolution

Some materials when heated evolve gases which will be toxic, anoxic and/or flammable. Many quality changing issues associated with heating processes reveal themselves as minor exo or endothermic events under test.

As well as the above there is also the risk of a reduction in product quality (batch loss) and depending on the drier type (convection drying): Dust explosions and oxidative instability.

Dust Explosions

The hazard of dust explosions in convection driers is well known and test methods to establish the parameters for explosion protection (Kst, MIE etc) are well established to international standards. Oxidative instability can lead to fires and potentially to dust explosions.

Common Causes of Bulk Decomposition

Many thermal explosion incidents have similar root causes.

These include:

- Ignorance of the thermal and/or oxidative properties
- Prolonged storage at elevated temperatures
- Incorrectly set drying temperatures
- Increasing the volume of hot material

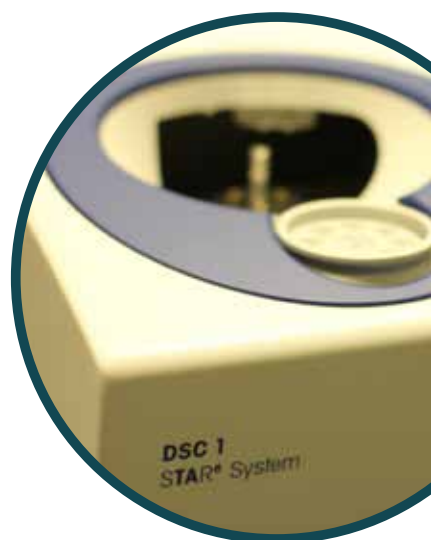
Choosing Basis of Safety

The primary consideration is the nature of the drier to be used. Contact driers (e.g. Vacuum paddle driers) have to be treated differently to convection driers (e.g. Spray driers).

The next consideration is the bulk size of the batch to be dried or the hot discharge volume. As bulk increases the system approaches adiabatic conditions and minor exothermic events which go unnoticed in smaller bulks will become critical.

Finally safe drying temperatures (Contact driers) or safe air inlet and discharge temperatures (Convection driers) need to be set based upon sound testing principles.

Kindlow Safety Services offer complete solutions for all powder handling processes, integrating laboratory analysis, hazard identification and risk analysis. This allows a basis of safety to be developed in compliance with best international practice and critical safety parameters can be set with confidence. The results provide a data related basis of safety for legal compliance and reduces the risk of suffering a devastating thermal explosion incident.



Why Kindlow Safety Services?

We're just the same as any other test house right?
Wrong!

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. That's why at Kindlow your process safety is our number one priority.

Competitive Price

Our pricing structure is designed to give our most loyal customers the best prices with discounts available for multiple samples per annum.



Experience

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.

Fast Results

Our standard lead time is just 4 weeks!

Need results faster? Not a problem; with our expedited services you can have your results within a week!



Flexible Management

As a valued customer you will be appointed a dedicated account manager providing you with a single point of contact to arrange sample priorities, answer queries and provide updates.

Axiom Engineering Associates Ltd joins Chemicals Northwest and achieves key appointment with fellow member, Vynova Runcorn

The North East and the North West of England chemical hubs “mirror” each other in many ways with a line of symmetry cutting down through the Pennines. Both regions have a common beginning from that once titan of industrial innovators which was ICI. Today, the legacy of running ageing assets and the challenges to reinvent around new technologies and opportunities in the process sector are shared.

Both regions talk the same language, at least figuratively when it comes to industry, albeit with a different regional twang but both regions feel the same, with engineering know-how and talent that defines the areas landscape and working life.

It is no wonder that Axiom Engineering Associates Ltd has, from its inception in 2003 over in the North East, always found a pull to the North West, providing its services to some of the largest chemical producers, but also some of the smaller mid-size companies that spread across the region.

An excellent example of a business that has the challenge of operating legacy plants, but has an ambitious eye on the future, is Runcorn-based Vynova, a leading European PVC and chlor-alkali company. This top tier COMAH site produces caustic soda as well as chlorine and ethylene dichloride, two essential intermediates for the production of PVC. Axiom has supported Vynova for a number of years with the provision of niche engineering services around its core offerings of mechanical, materials and UKAS

accredited inspection services. Following an extensive audit programme conducted by Vynova Runcorn in April 2019, Axiom successfully secured the appointment as Mechanical Design Body and Mechanical Design Verification Authority. With both businesses striving to achieve safe and efficient operation of plant assets in a sustainable manner, this strong partnership is destined to flourish.

In recognition of this and other significant contract awards in the North West, Axiom is looking to build and strengthen its regional presence. In June 2019, Axiom appointed a regional manager for the North West who is already making introductions and checking-in with existing accounts. Like Vynova, Axiom has also now joined the industry-led organisation, “Chemicals Northwest” and looking forward to working with and contributing to this key champion of the region’s chemical sector.

Axiom’s Regional Manager responsible for the North West, Kevin Murray said, “We definitely need to be working with Chemicals Northwest, and given the amount of work we do in that part of the world, membership is long overdue. We’re proud of our involvement in the North East and need to “mirror” that in the North West with focus and ambition. The North East cluster organisation is called NEPIC and we won their “North East Engineering Company of the Year” award for 2019. We now also need to aim high in the North West but recognise that success isn’t just about winning contracts but also about investing time and resource into the region so that local companies, communities and workforce can benefit.”

***For further details on Axiom please contact
helen.carroll@ax-ea.co.uk***



Chemicals Northwest events and dates for your diary

<https://www.cia.org.uk/chemicalsnorthwest/CNW-Events/>

CNW September 2019 Breakfast networking event 18th September 2019 (8.30am - 10am) - The Innovation Centre, Sci-Tech Daresbury

Our first speaker will be **Daniel O'Toole from Grant Thornton UK LLP** who will be presenting on Innovation reliefs for the chemical industry.

Andy Rippon from Covance will give a company introduction and overview of Covance's recent acquisition of Envigo's Contract Research Services (CRS).

Chris Hart from Graham Hart (Process Technology UK) will be giving an introduction to Graham Hart (Process Technology) Ltd. A company that has been delivering high integrity heat transfer equipment for over 45 years. The company has a strong emphasis on Chemical/ Process & Mechanical Engineering backed up by an advanced manufacturing facility.

Jim Smith from ACJ Risk Solutions Limited (a member of CICA) will be presenting on the significant impact of the 2016 Health & Safety Sentencing Guidelines on industry. Jim will describe the purpose of this legislation and provide a summary of its effect on manufacturers and their contractors. He will conclude by describing the actions the industry can take to mitigate fines and penalties.

CNW October 2019 Brexit User Group (members of CNW only) 3rd October 2019 (1pm - 4pm) - The Innovation Centre, Sci-Tech Daresbury

Our speaker will be **Ian Cranshaw from the Chemical Industries Association and Chemicals Northwest**, Ian will be giving the latest overview on Brexit developments. He will share an update on Brexit and advice on how you might prepare your business ahead of Brexit. Ian will cover wider issues such as Trade Remedies, Continuity of EU FTAs and the proposed Zero Import Tariff policy. The latter issue of unilaterally removing almost all import tariffs has met with some concern from UK manufacturing companies but chemical companies that routinely import raw materials and feedstocks, often from countries including China, India or the US, the prospect of being able to do so without paying tariffs offers a real competitive advantage.

A working lunch will be provided at the meeting.

CNW October 2019 REACH User Group (members of CNW only) 9th October 2019 (1pm - 4pm) - The Innovation Centre, Sci-Tech Daresbury

Zameer Qureshi, Legal Consultant to ACTA EU will be our speaker at this event. Zameer will be discussing key post-2018 issues under REACH.

A working lunch will be provided at the meeting.

Chemicals Northwest Awards 2020 19th March 2020 - Hilton Hotel Deansgate Manchester

We are delighted to announce that the next Chemicals Northwest Awards dinner will be taking place on the 19th March 2020 at the Hilton Manchester Deansgate.

All further details to follow.

CHEMUK2020 - UK Chemical industries supply chain expo 13 - 14th May 2020 - Event City Ltd, Barton Dock Road, Manchester

Chemicals Northwest are delighted to be announced as "Headline industry partner" for CHEMUK2020.

The CHEMUK EXPO & Speaker Programme brings together the UK's industrial chemicals, biochemical, chemicals processing & chemical product formulation industries.

Supply-Chain Sourcing – leading partners and suppliers providing process plant, equipment, ancillaries, technologies and services, plus, supply-chain chemicals & ingredients.

Innovation Insight, Intelligence Gathering & Best Practice – latest innovations & enablers, crucial trends, markets, regulatory changes, case studies, compliance etc.

Business Networking – designed to introduce new relationships and strengthen existing ones throughout the intersecting layers of the UK's 'chemical sector'. Chemicals Northwest are delighted to be headline industry partner for this event.

NEW FOR 2020! CHEMSOURCECHEMUK 2020 sees an expansion of the exhibits space and speaker programme coverage, relating to **Specialty Chemicals, Ingredients & Raw Materials supply chain & sourcing.**

Look at recruitment as ‘Preventative Medicine’

A leading healthcare client was recently outlining their latest marketing campaign. The essence of the service focussed on three core provisions; a healthy fitness and diet plan, treatment of illnesses/conditions as they occur and a robust rehabilitation plan post illness. Therefore, as a client you are entering a partnership to ensure you are in the best possible condition at all times to avoid health problems, but given that “life happens”, also in a great position to treat and quickly recover when you do have an issue. Makes sense!

This approach to service provision is something RMG have been looking at. Recruitment is all too often a panic buy, or to extend the metaphor, a headache you hadn't foreseen. As such we are unbundling the traditional headhunt model to look at how we can offer a longer term “preventative medicine” approach to recruitment solutions. It starts with identifying which areas of your business are likely to cause the most pain if under-resourced. We then look at and engage with the very best people operating in this space outside of your organisation; both the superstars and the up and coming

bright lights. As such when the unexpected happens we effectively move into treatment mode, we are able to address the issue more quickly and effectively as we were planning for it all along.

RMG have also invested in the area of Executive On-Boarding and Coaching which we see as the after-care provision of our service. Once you have selected the best candidate and we have successfully negotiated through the offer phase we can extend the consulting provision by integration into the business via our on-boarding model. Further still our executive coaching service means our clients and candidates can continue to benefit from impartial external advice whilst in their new role to ensure they are maximising their performance and output.

As a business we are always looking for solutions that add value to client's businesses; being involved throughout the whole process and induction phase is providing our clients with the “Preventative Medicine” regime they need to address the recruiting challenges they face.

Giles Hampson, Managing Director, RMG – Recruitment Management Group, 01928 711800
www.rmg-uk.com

Catalyst welcomes new Chief Executive Officer

Chair of the Catalyst Trustees, Dr Diana Leitch MBE is pleased to announce the appointment of Martin Pearson as the new Chief Executive Officer. Martin agreed to join Catalyst on a part-time basis and will bring over 35 years' experience across the engineering, business and science sectors. Martin started his career in the Merchant Navy and has previously held roles as Managing Director of a large, UK based science company and was also Director of Dungeness B Nuclear Power Station in Kent.

Martin is a board trustee of Youth Federation and Stick 'n' Step and is also deputy chair of Active Cheshire. He is married with six children and three grandchildren and a lifelong supporter of Liverpool football club.

On his appointment, Martin said “I am thrilled to be joining the Catalyst team and continuing the great work in ‘preserving the past’ and ‘inspiring the future generation’ to enjoy what science has to offer in a fun, educational and inspiring way. I look forward to building

strong relationships with local stakeholders as we look to rejuvenate Catalyst over the next few years.

Dr Diana Leitch said “The Trustees and staff of Catalyst were delighted to welcome Martin to this new role of Chief Executive Officer on 1st July and look forward to working with him as we move Catalyst forward in to a new era and its fourth decade. His depth and breadth of industrial and business experience will be invaluable as will his personal and leadership qualities and experience of working in the educational charity sector. Catalyst is on the cusp of great change in serving the locality around Halton but also the North West Region and we believe he is the right person for that task. An added bonus is that he supports the same team as me”.

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



SCS welcomes XCellR8's Dr Carol Treasure as new Council Member

The Society of Cosmetic Scientists has invited XCellR8 Founder and CEO Dr Carol Treasure to join the Council. She will serve on the Publicity and Recruitment committee with a focus on building the SCS brand, engaging members and prospective members through social media and growing the membership.

Carol has been a member of the SCS since 2009, has been a regular speaker at educational events over the years and shares the Society's aim of advancing the science of cosmetics. She is focused particularly on the area of vegan safety and efficacy testing.

Commenting on her appointment, Carol said: "The SCS has been an invaluable support to me as my career in cosmetics testing has developed, by providing an educational platform and opportunities to meet

likeminded scientists. They have always been at the forefront of new science and I'm looking forward to playing my part in sharing news of upcoming events, new trends and innovations."

Mary Lord, SCS President 2019-2020, added: "I'm delighted to welcome Carol Treasure (XCellR8) and Astrid Bodard (Azelis) on to SCS Council this year. Having fresh blood, fresh backgrounds and fresh thinking has got to be good."

For further details please contact Susie.Lee-Kilgarriff@x-cellr8.com



Stepan celebrates major industry awards win

The Stalybridge surfactants division of the global chemicals manufacturer has won the ABB Manufacturing and Resource Efficiency Award at the prestigious 2019 Chemical Industry Awards.

- Stepan Stalybridge manufactures surfactants and other chemicals that are used to make detergents, fabric conditioners and cleaning fluids.
- This award recognises excellence in the way chemical companies use resources in the manufacturing process
- The award was achieved through a combination of low and no-cost innovations
- The Chemical Industry Awards are the premier accolades for the UK chemical industry
- The results were announced on 13 June 2019 at Liverpool's St George's Hall in an event attended by 500 industry experts and representatives

Stepan Stalybridge, part of the Stepan Group, a global manufacturer of chemicals, is celebrating a major win at the Chemical Industry Awards, the industry's premier accolades. At the black tie event, held in Liverpool's St George's Hall on 13th June, the company won the ABB Manufacturing and Resource Efficiency Award for transforming its production with dramatic effect.

Two years ago, the Stalybridge site was struggling to cope with demand for one of its major products, and sister sites around the world were needed to make up



the shortfall in production. But by optimising the process, making small changes to equipment, implementing new shift patterns and making dozens more improvements, the company has increased batch sizes by 12%, increased overall production by 20% and now has the capability to meet all of its UK demand without imports.

Challenging the chemistry

As a result of the improvements, the company has removed 167 tankers from its supply chain and removed almost a quarter of a million kgs of CO₂ from its processes.

Speaking about the win, Stepan Stalybridge Site Manager George Forrest said, "We are absolutely thrilled with this win. The improvements we've made have come about as a result of challenging ourselves, challenging the chemistry and showing that the answer to a production challenge does not always lie in capital expenditure, but on small low and no-cost innovations that have a big impact."

"Our efforts have ensured not only that the Stalybridge site can now meet the required level of output, but also that the UK plant's cycle times are at a record low. Stepan Stalybridge has become the template for lean manufacturing projects within the company, and we are now globally recognised as key performers in the surfactants business."



There are things that **regulatory professionals** need to do over and over again.

Checking spreadsheets needn't be one of them.

Veeva's regulatory, quality, and claims management solutions help chemical companies bring innovative, high quality products to market faster without compromising compliance.

Learn more at industries.veeva.com/chemical

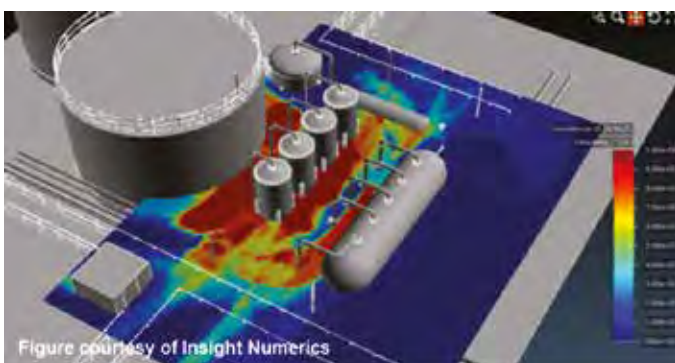


Agility at the speed of your imagination.

Flame and Gas detection – How many do I need and where should I put them?

Flame and gas detection - as part of a structured process safety management system - play an important role in the protection of people, the environment, assets and corporate reputation. Detection is dependent on both the hardware's ability to function on demand and detectors being located in the 'right' place. Historically, there has been a significant effort invested in ensuring detectors function on demand and less focus given to their positioning (termed flame and gas detector mapping). This is evidenced by data from the HSE Offshore Release Database which indicates that a large proportion of releases go undetected – 36% of major and 69% of significant gas releases. Should these releases ignite or be toxic the consequences can be devastating.

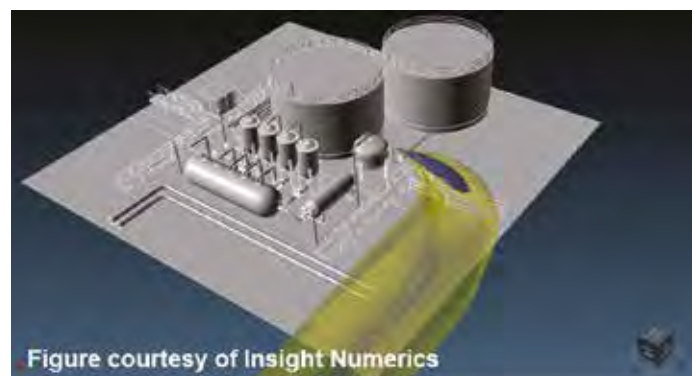
At present there is limited guidance on how many detectors you need and where they should go. ISA-TR84.00.07¹ gives detailed guidance on a fully quantitative method but limited guidance for toxics. So why is there such little guidance available? The answer is that the locating of detectors is not trivial and can be influenced by many factors such as ventilation conditions (both forced and natural), nature of the fluid being released, congestion, confinement, amongst others.



Despite limited guidance, there has been significant investment in recent times in Flame and Gas Detector mapping and with the development of parallel computing and machine learning techniques such as Computational Fluid Dynamics (CFD) and genetic algorithms, many commercial software packages are now available that can 'aid' the mapping process. However, even with the advances in technology, the age old problem of 'garbage in equals garbage out' still remains and without guidance there

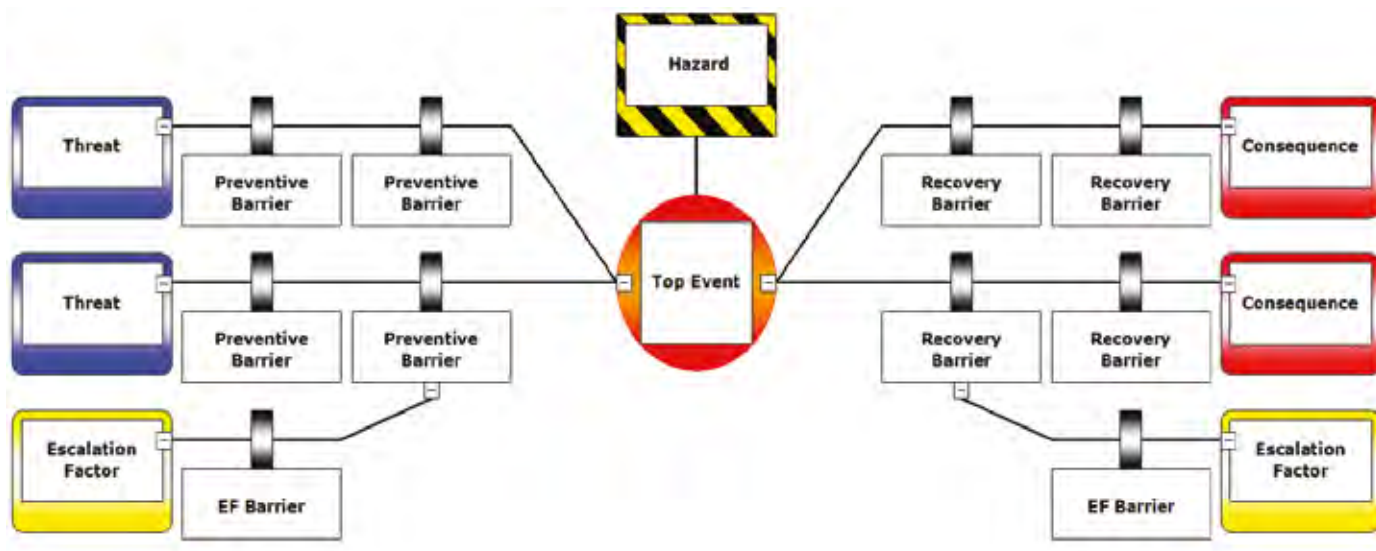
is often little consistency or documentation that justifies the number and position of detectors.

The Industry is addressing this issue through the development of a British Standard² that is to be released early 2020. The aim of the British Standard is to bring consistency to flame and gas mapping and give guidance on the key points to consider for the hazard against which you are trying to protect. The guidance will also cover toxic gases, a topic which is even less documented than flammable gas and flame detection.



The British Standard will be a guide as often there is no 'right' answer with respect to how many detectors you need and where to put them. The 'right' answer depends on what you are trying to protect e.g. personnel, asset, business continuity, environmental protection and your appetite for risk. One point that is often overlooked is that detection systems, unlike many other safety systems, lie on the right hand side of a BowTie diagram (see figure above) i.e. they are recovery barriers rather than preventative barriers and the hazard has already materialised. In isolation, they do not reduce the consequence and only when combined with other measures (e.g. blowdown, deluge) are risks lowered as the potential for escalation and chance of escape and evacuation are increased. This point also features in conversations on whether detection systems should have a Safety Integrity Level (SIL) as the safety function will not be realised in all instances. There are also many factors that influence how many detectors you require and where they should be placed, as highlighted previously, therefore it is not possible to be prescriptive in the approach or spacing requirements e.g. place detectors every 5m.

Unfortunately the British Standard does not give all the answers but it provides guidance on the different approaches that can be taken and aims to standardise these approaches, highlight pitfalls and enable purchasers of flame and gas detector mapping services to become intelligent customers. In practical terms it should also lower



risk and allows systems to be optimised to reduce capital expenditure and provide evidence to duty holders and regulators to demonstrate that hazards are understood and managed.

¹ ISA-TR84.00.07 - Guidance on the Evaluation of Fire, Combustible Gas, and Toxic Gas System Effectiveness

² BS 60080:2019: Explosive and Toxic Atmospheres: Hazard Detection Mapping – Guidance on the placement of permanently installed detection devices using software tools and other techniques

If you would like to find out more or have any questions please contact Tim Jones who is a committee member authoring the British Standard (tim.jones@rpsgroup.com).

STFC Hartree Centre introduces digital asset catalogue

A new catalogue describing the digital Assets developed through the Science and Technology Facilities Council (STFC) Hartree Centre’s IROR programme is now available to download, where businesses can explore each asset and the benefits it could bring to your organisation.

Innovation Return on Research (IROR) is a 5-year collaborative programme delivered by the Hartree Centre and IBM Research. It aims to solve industrial problems and create economic and societal impact by developing a suite of digital assets - software tools, machine learning models, methods and applications - that can give a competitive advantage to UK industry. Since 2015, the programme has been working in partnership with a range of industry partners in the areas of Chemistry & Materials, Engineering & Manufacturing and Life Sciences to develop and test digital assets through industry challenge-led projects.

The recently launched digital asset catalogue is now available to download from the Hartree Centre website.

It describes what each individual digital asset does as well as the benefits it can bring to a business, and also outlines three possible routes to adoption:

- Software licensing | Many of the digital assets can be licensed so companies can access the source code and make use of the software on their own computing systems – Three month evaluation licenses are available at no cost.
- Platform as a Service | Companies can choose to make use of the digital assets pre-installed on the Hartree Centre’s own high performance computing (HPC) resources.
- Collaborative R&D | Bespoke projects to develop or apply a digital asset to solve a specific business challenge.



Graham Hart Process Technology Ltd

Bespoke, dependable and exceeding customer expectations.

Design and manufacture of high integrity heat transfer and specialist pressure equipment.

UK based company of over forty years' experience in all aspects of process and mechanical design, advanced manufacture and testing of pressure equipment, supplying customers throughout the world.

Bespoke innovative designs providing unique customer driven solutions.

Products include:

- Shell & Tube
- Air Cooled
- Direct Contact
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- Double Pipe
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- Coil
- Reactor Vessels

A more comprehensive list of equipment, services and materials, can be found on our website.

Safe, Professional, Innovative:

Our three key values, living and

breathing through every element of what we do, mirroring the industry we work in and client expectations.

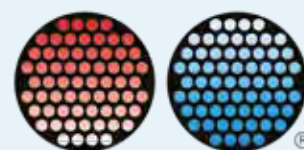
Sharing similar values to Chemicals Northwest, our commitment is to developing supply chains, connecting our industry and building partnerships with suppliers, clients and education. We hold ISO 9001, OHSAS 18001, ISO 14001, ASME U and F4N.

Dependability and reliability, with equipment in service for over 25 years.

Our philosophy is that our equipment should be "plug and play" with minimal maintenance or in-service requirements. Very high level of customer satisfaction results in us having no requirement for site/service teams.

Meeting customer expectations with 100% On Time In Full (OTIF) for the last four years.

An ability to perform all design and fabrication processes, under one roof, enables our customers to confidently schedule shutdowns, site crews and craneage, around our committed deliveries.



GRAHAM HART
(PROCESS TECHNOLOGY) LTD.

Graham Hart
(Process Technology) Ltd
Idle,
Bradford,
BD10 8SW
United Kingdom

T: 01274 617021

E: post@graham-hart.com

W: www.graham-hart.com

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.



Contact:

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Director

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£2 Million fine upheld for Thames Water's corporate recklessness

There are not many companies with the record of environmental non compliance achieved by Thames Water. As such, Thames are a rather frequent visitor to the courts. The most recent visit saw the Court of Appeal uphold a fine of £2 million for pollution and fish kill by raw sewage, and pronounce the company's record as "lamentable".

Regular readers will be aware of the environmental sentencing guidelines which give a signpost to judges to impose fines which will send home a message to Boards and shareholders that poor compliance is not acceptable. Thames Water has clearly not been very receptive to such messages, the current fine being imposed for its 181st environmental offence.

On one hand, Thames had little to lose commercially by appealing the fine, and perhaps little reputation to lose either. The Environment Agency has for reasons best known to itself, chosen not to challenge certain more lenient fines imposed in other cases, which might have served to give unwitting encouragement to just this sort of appeal.

If one takes Thames's annual turnover of £2 billion, and its daily profit of £2 million, then in order to send a message to a company with such persistent and ingrained environmental failings, one really has to ask whether a fine of even £2 million will stimulate change in the most basic functions of training, staffing and investment that are evidently required to ensure that Thames's 5,000 or so sewage-related assets operate to the standard that the public expects.

The present fine represents 0.1% of Thames' turnover, and one has to wonder whether fines based expressly on a higher percentage of turnover will become more commonplace, as they will be unequivocally understood by Boards and shareholders.

This case has taken some time to eventually reach the Court of Appeal, and the facts complained of occurred back in 2015. The next few years will therefore demonstrate whether adequate management steps have been taken to secure compliance in the intervening period.

For further information contact:
paul.bratt@symmetrylaw.co.uk or
victoria.joy@symmetrylaw.co.uk



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
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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.

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.

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.

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

Degree apprenticeships, consultation services, collaborative and contract research facilities, and students seeking placement opportunities. The Department of Natural Sciences trains undergraduate and postgraduate students in chemistry, pharmaceutical chemistry, medicinal and biological chemistry, biology and environmental science. New MSc in Advanced Materials starting in September 2020.

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 3/4" 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.

Graham Hart (Process Technology) Ltd

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

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.

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.

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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