










# L@b Brief | April 2025

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## **COMMENT**

# **Customers starting to worry about PFAS rules**



**PHARMA COMPANY** Almac Sciences has been in touch with GAMBICA to express concerns about the ongoing threat to UK laboratory equipment from the threatened EU ban on Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS). PFAS, known in the press as ‘forever chemicals’ are also the subject of a current consultation by UK regulators. Senior investigation scientist at Almac, Nick Tyrell, has highlighted that the impact of the EU ban would be to outlaw the very equipment required to identify the presence of PFAS, saying that laboratories will have to get used to labs without temperature probes, stirrers, agitators, centrifuges and many other types of equipment if the ban goes through.

Nick has agreed to present a webinar for GAMBICA members on 8 May, to highlight the potential impact of EU and UK controls on PFAS on their businesses (see GAMBICA events below to book your place).

Some PFAS substances are undoubtedly harmful and bioaccumulate. There is probably no-one in western Europe who doesn’t have PFAS in their bloodstream, but it is not only pharmaceutical companies like Almac Sciences which are concerned about the practicability of a blanket ban which would include substances not known to have any harmful effect.

European industry groups have been campaigning hard on this issue, but unfortunately, many of those who are most concerned about the impact of the legislation as it is currently proposed, are based in Germany and relatively little support for their cause has been provided by other EU nations. This has led the committees reviewing the legislation to ask if difficulties in implementing the bans are ‘purely a German problem?’.

The UK is consulting right now on how it should treat the issue of forever chemicals, will it follow the EU lead and ban them outright? Would labs be able to continue to function without PFAS? I do hope you will join the meeting – this could be a big issue for you and I would like to have your input so that I can lobby the UK government with your views.

To reserve your place, click [here](#).

Jacqueline

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## UK News

### Opportunity to speak at Lab Innovations

IT'S TIME to start thinking about your presence at Lab Innovations 2025 and we are just starting work on putting together some compelling seminar sessions for the Insights and Innovations theatre so now is the time to get in touch if you would like to have someone from your company speak at the event.



The Insights and Innovations theatre is once again focusing on automation, digitalisation and sustainability but that gives quite a wide scope. (Please note that although I did manage to get a session into the Biotech theatre last year, I got nowhere at all with the theatres in Advanced Engineering, so please focus on the Insights and Innovations if you can.)

We are looking for subjects that provide learning opportunities and appeal to lab managers so please think about your customers and their activities as well as your own innovations. If we can come up with good subject, I will source independent speakers who are leaders in their field to provide an extra 'pull' to the event.

Surprisingly, when I emailed everyone about this opportunity, only three companies replied, but it's not too late so get in touch with your ideas at [jacqueline.balian@gambica.org.uk](mailto:jacqueline.balian@gambica.org.uk)

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### £3000 additional benefit for GAMBICA members

AS A GAMBICA lab member you now have access to an enhanced tender alert service worth £3000 per annum - as part of your membership.

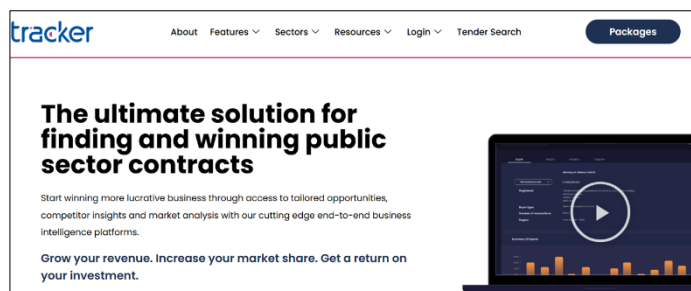
GAMBICA has subscribed to Tracker Intelligence which holds Europe's largest database of contracts

information and intelligence and

searches not only all the public sector tenders you would expect, including the Government's Contract Finder and all NHS and University tenders, but also holds details of all laboratory building and refurbishment projects.

The new service gives you:

- notice of service and equipment frameworks and tenders which would be open to you;
- contact information for those running tenders;
- details of awarded contracts;
- details of contracts which are coming to an end, and



- details of lab building and refurbishment projects.

The database is searchable by key word and by product code. We can also carry out competitor analyses on your behalf and provide information on what they have sold, to whom and when.

In order to provide the best possible search service for you, we will be holding a meeting on 13 May to draw up a comprehensive list of search terms you want to see, and a list of 20-30 key non-member competitors you would like us to monitor.

Do join us for this meeting to make sure the information we provide is exactly what you need to maximise your benefits from this new service.

To reserve your place, click [here](#)

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## New Windsor Framework agreement arrangements for Northern Ireland

A NEW, simplified processes for existing freight movements to Northern Ireland is being introduced. The **UK Internal Market Scheme (UKIMS) system** allows businesses to move eligible goods to businesses in NI without the need for a full customs declaration and without incurring duty.

To move goods under UKIMS, you must apply for UKIMS registration which may take several weeks so the government is advising you [apply for UKIMS](#) on GOV.UK straight away.

From 1 May 2025, you will need to provide information about your movement to the business receiving the goods or those physically moving the goods, such as your parcel carrier.

To move goods under UKIMS:

- The party acting as the importer of record will need to be UKIMS authorised.
- You will need your customer to confirm whether the goods are for sale to or final use by, end consumers located in the UK.

You will also need to provide following information:

- Your business name, address and EORI number.
- Name and address of recipient in NI.
- UKIMS authorisation number and associated EORI number.
- Total value of goods.
- Total weight.
- Description of goods at item level or commodity code at the appropriate level.
- Country of origin.

For goods not under UKIMS you will also have to provide:

- Your business name, address and EORI number.
- Name and address of recipient in NI.
- UKIMS authorisation number and associated EORI number.
- Total value of goods.
- Incoterms.
- Total weight.
- Description of goods at item level or commodity code at the appropriate level.

- Country of origin.
- 10 digit commodity code at item level.

B2C goods under 100kg for a single item parcel or 31.5kg for a parcel containing multiple items can be sent to NI without registering for any customs scheme.

You can get further help from the free-to-use Trader Support Service (TSS) [here](#).

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## MRHA retains WHO partner status

THE MEDICINES and Healthcare products Regulatory Agency (MHRA)'s Science and Research group has been confirmed as one of the Collaborating Centres for the Standardisation and Evaluation of Biologicals for the World Health Organization (WHO). The MRHA is working on behalf of the WHO to develop, produce and distribute physical standards that are applied to assure the quality of biological medicines including vaccines.

The Science and Research group at the MHRA, is one of only four institutes worldwide that WHO designates as a custodian laboratory for its International Biological Reference Preparations.

### **MHRA experts carry out four main responsibilities:**

- Supporting WHO in developing, producing, and distributing international standards and reference materials for quality control and assurance of clinically relevant biological materials.
- Conducting collaborative research to assure the quality of vaccines and other biologicals.
- Providing technical input that may inform WHO when developing international written standards and guidelines for production and quality control of vaccines and other biologicals.
- Contributing to WHO's regional work to assure the quality and safety of vaccines and other biologicals through the provision of technical support and technical assistance to build capacities.

It's great that this important activity is being carried out in the UK.

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## Research news

### Lab-grown teeth to 'fill in the gaps' in regenerative dentistry



SCIENTISTS FROM King's College London have managed to grow a tooth in a laboratory. Director of regenerative dentistry, Dr Ana Angelova-Volponi explained: "Lab-grown teeth would naturally regenerate, integrating into the jaw as real teeth. They would be stronger, longer lasting, and free from rejection risks, offering a more durable and biologically compatible solution than fillings or implants."

The King's team, in collaboration with Imperial College London, has successfully introduced a special type of material that enables cells to communicate between each other.

This means that one cell can effectively tell another to start becoming a tooth cell, which mimics the environment of growing teeth and allows scientists to recreate the process of tooth development in the lab. Having successfully created the environment needed to grow teeth, scientists now need to work out how to get them from the lab to a patient's mouth.

## **Trump shuts top US sexually transmitted diseases lab**

THE US SEXUALLY transmitted diseases lab at the Centers for Disease Control and Prevention — a leading player in global efforts to monitor for drug resistance in the bacteria that cause these diseases — was among the targets of major staff slashing at the CDC this past week. All 28 full-time employees of the lab were fired.

‘We are blind,’ said one researcher, noting the lab is crucial to tracking drug-resistant gonorrhea and other diseases. At a time when the world is down to a single drug that can reliably cure gonorrhea, the U.S. government has shuttered the country’s premier sexually transmitted diseases laboratory, leaving experts aghast and fearful about what lies ahead.

## **Eleven quantum technology career acceleration fellowships awarded**

THE ENGINEERING and Physical Sciences Research Council (EPSRC) has invested £15 million in 11 Quantum Technology Career Acceleration Fellowships recognising the most promising early career researchers in the UK.

The funding will support research into topics including:

- investigating new platforms and protocols for quantum imaging, sensing and computing,
- advancing methods for quantum error correction and mitigation,
- advancing materials research and technologies for quantum applications,
- exploring fundamental scientific principles underpinning quantum technologies,
- new theoretical and algorithmic approaches to creating robust and scalable quantum models, and
- redefining how superconductors are understood and optimised to pave the way for advances in quantum technologies.

Fellowships will also support innovation activities to deliver growth in the sector and maximise opportunities to build connections with industry and end-users, reducing the gap between research and commercialisation.

At least one of the awards addresses areas of interest to GAMBICA member: Dr James Seddon at University College London aims to enable scalable superconducting qubits using photonic terahertz (THz) frequencies for quantum control, allowing higher-temperature operation in compact cryocoolers. Current superconducting based quantum computers’ ability to scale can be limited by environmental limits like temperature.

Secretary of State for Science and Technology, Peter Kyle said: “Quantum – manipulating the universe at its smallest scale – has the potential to save millions for our economy, create thousands of jobs and improve businesses across the country – stopping fraudsters in their tracks, protecting our bank accounts and more.



“The UK is home to the second largest community of quantum businesses in the world and this investment means they can go further paving the way for new quantum tools and products that make our lives easier, fuel growth, and help us tackle the great challenges of our era.”

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## LABORATORY Construction Update

### Builders appointed for £700m Warwick Uni campus build



CONSTRUCTION COMPANY, Kier, has been named preferred contractor to deliver Phase 1 of the University of Warwick's £700m plan to regenerate its campus with new STEM teaching facilities. The investment represents the largest single investment in Warwick's campus facilities across its entire 60-year history. Phase one will involve the new science and engineering precinct to

reinvigorate the heart of its campus. Some of the existing physics and chemistry buildings will be demolished and others refurbished.

### Warehouse transformed into life sciences lab

LIFE SCIENCES developer, Misson Street, has turned a vacant retail warehouse near Oxford city centre into a 7,370m<sup>2</sup> laboratory and office space for life science start-ups and scale-up companies.

The warehouse, on Botley Road, Oxford, was constructed in 1993 as a typical retail shed with blank facades but now the first floor features an expansive glass frontage.

The adaptive reuse project aims to both revitalise a redundant building and serve as a catalyst for further development in the surrounding Oxford retail park. It accommodates a mix of Category 2 laboratories, offices and collaborative areas, with shared meeting rooms, circulation space and a cafe to facilitate interaction.

### Second lab block for King's Cross Tileyard project



CONSTRUCTION HAS begun on a new purpose-built commercial science facility in London's King's Cross district. The four-storey Versa building is the second of four buildings being planned by Dutch company Kadans Science Partner's within the Tileyard Quarter in King's Cross. Due to complete in the second quarter of 2026, and located at 4 Brandon Road, Versa will provide 51,500 sq ft of space,

designed to accommodate a range of uses from CL2 labs to dedicated production and pilot spaces.

Versa will supplement Kadans' existing facilities at Mayde, a neighbouring 114,000 sq ft building that opened last year.

Kadans has further plans to develop more than 300,000 sq ft of laboratory, office and manufacturing space at Tileyard Quarter.

## Planning begins on £61m new lab scheme for Liverpool

A CONTRACTOR has been appointed to develop HEMISPHERE One, a £61m, 117,190 net sq ft development which will be located at Paddington Village, Liverpool City Council's flagship development site in the city's Knowledge Quarter innovation district.

HEMISPHERE One is part of a two-phase project that will ultimately offer a combined net total 216,693 sq ft of chemistry labs, data labs, bio labs and innovation labs, alongside incubator space, grow-on and commercial lab space.

Construction is expected to start on site in the Autumn.

Sciortec, a partnership between Liverpool City Council, University of Liverpool, Liverpool John Moores University and Bruntwood SciTech, has already reached outline letting agreements prior to work commencing at HEMISPHERE One. Earlier this year, HEMISPHERE One was allocated a £13m funding package from the Government to support completion of the project.

Colin Sinclair, chief executive of Sciortec, said: "We are bringing HEMISPHERE One and Two forward to satisfy the rocketing demand for high-quality lab space in Liverpool city centre and support delivery of the city region's Innovation Zone ambitions.

"While we are advancing with pre-let agreements, we also hope that this latest step forward will offer confidence to the wider market and future innovation occupiers that Liverpool can deliver excellent new developments at scale."

Worthington Owen and Avison Young have been appointed as agents for HEMISPHERE One.

## Alabama lab build halted



*Architectural drawing of the University of Arizona's Center for Advanced Molecular and Immunological Therapies (Courtesy of McCarthy + SmithGroup)*

THE UNIVERSITY of Arizona has stopped construction of an estimated \$300m biomedical research hub in downtown Phoenix as the Trump administration slashes university funding.

Planned since 2022, the Center for Advanced Molecular and Immunological Therapies

(CAMI) was meant to develop precision therapies that stimulate or suppress the immune system to fight cancers, infectious diseases and autoimmune conditions. Officials said it would be a research hub of national significance.

Work on the 200,000-sq-ft, seven-storey building started at the end of October last year. It was to house laboratories, a clinical suite, and administrative and meeting spaces. At the time, it was expected to be finished in 2027.



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## GAMBICA Events

**PFAS – WHAT EVERY LABORATORY SUPPLIER NEEDS TO KNOW | ONLINE | 8 MAY 2025  
| 10.30 - 12.00**



PHARMA COMPANY Almac Sciences explain why you might have to get used to labs without temperature probes, stirrers, agitators, centrifuges...

The UK is consulting right now on how it should treat the issue of 'forever chemicals', will it follow the EU lead and ban them outright? Would labs be able to continue to function without PFAS? Join this meeting to hear from Nick Tyrrell, senior investigator at Almac

Sciences, one of the world's largest pharmaceutical companies about his concerns, and how the changes could impact you.

To reserve your place, click [here](#).

**EXPORT GROUP MEETING – INDIA SPECIAL | GAMBICA'S LONDON OFFICE | 28 MAY 2025  
| 14.00 – 16.30**



THE NEXT meeting of the Export Group will be a special on growing your sales in India. The speaker, Siddharth Mukne previously worked with the UK India Business Council and helped organise the 2017 GAMBICA delegation to India. Now running his own specialist business helping British businesses to engage with India, Southeast Asia, and the Middle East he will offer a portrait of the different Indian

markets and advice on how to engage with them.

We will also have an update on the law on agencies and distribution by Steve Sidkin of legal firm Fox Williams. The meeting is in person at GAMBICA's London offices.

To reserve your place, please click [here](#).

**GAMBICA ECONOMIC FORECAST | ONLINE | 3 JUNE 2025 | 09.30 - 12.00**

AS PART of our efforts to share knowledge within our community, GAMBICA has commissioned an economic forecast from Oxford Economics, focusing on the industries and global regions that our members supply into.

Book your place to attend the live webinar now, plus you'll also receive a digital copy of the report.

Early bird offer! For March and April, the cost of the report to GAMBICA members will be £170 + VAT per company (£395 + VAT for non-members.) Then the price will be £200 +VAT for members and £445 + VAT for non-members.

After you have registered for the report and webinar, each company will be able to reserve up to two further places on the live webinar and you will also be able to share the recording much wider within your company.

To reserve your place, click [here](#).

## HOW TO SUCCEED AT ECOVADIS | ONLINE | 25 JUNE 2025 | 10.30 – 11.30



MEMBERS ARE telling GAMBICA that Thermofisher is now requiring its suppliers to gain EcoVadis certification. Getting the right level of certification does not seem to be easy, so we have arranged a webinar by a specialist consultant, based in the UK, whose expertise is in helping companies achieve the required pass level.

The webinar will cover:

- What is EcoVadis?
- How does EcoVadis rate companies?
- What are the benefits of an EcoVadis rating?
- Practical steps to gaining a good EcoVadis score.
- How EcoVerify can support you.

To reserve your place on the webinar, and to take advantage of the discount on Ecoverify services for GAMBICA members, click [here](#).

## DELIVERING GROWTH AND PREPARING FOR DUE DILIGENCE | GAMBICA's LONDON OFFICES | 8 JULY 2025 | 14.00 - 16.00



THE NEXT Business Growth Community meeting will focus on minimising the efforts required of senior management at two key stages of a business journey; growth and acquisition.

First we will have Business Operations specialist Cerys Baigent, ex of Alphalabs who will take attendees through gaining a clear view of the essentials for growth, and delivering them as efficiently as possible.

Cerys will work through three critical tasks:

- Understanding your stakeholders needs and desires;
- Setting the correct company KPIs; and
- Using ISO systems to deliver these KPIs efficiently.

Before setting up her own business Cerys managed compliance, operations and logistics for Alphalabs.

Secondly, we will have Tony Collins, ex of Priorclave who will provide insights from personal experience of the due diligence requirements of funders or acquirers of lab businesses. He will cover the type of information you will be expected to provide and how best to gather it. This will be an in-person meeting at GAMBICA's London office.

To reserve your place, click [here](#).

## SPECIAL CUSTOMS PROCEDURES TRAINING | ONLINE | 8 May 2025 | 09.30 - 12.30

SPECIAL CUSTOMS procedures training discounted for GAMBICA members.

Specially designed for those wanting to prepare now in case of tariffs being introduced which will affect your business. The training, from GAMBICA partner, Chamber International, will cover the main customs procedures for international traders to help save costs and improve cash flow, including:

- Global customs procedures
- An overview of Customs special procedures and the benefits each one provides
- Customs warehousing: What it is used for and how it works
- Inward Processing
  - Repairing goods under the EU/UK Trade Agreement
  - Bill of discharge
  - Terminology
- Outward processing: How it works and the benefits
- Temporary admission: How it works and the benefits
- Customs guarantees
- Procedure codes for customs entries when using these procedures
- Global customs procedures

**Further training is also available to GAMBICA members from Chamber International at Chamber members' prices, it includes:**

- 15 May 2025 - [HMRC Audits & Customs Record Keeping Requirements](#)
- 20 May 2025 - [Importing from the EU - What You Need To Know](#)
- 22 May 2025 - [Export Documentation & Import Procedures](#)
- 12 June 2025 - [Doing Business with CCPTTP and Latam](#)
- 18 June 2025 - [HS Code Classification & The UK Global Tariff Workshop](#)
- 20 June 2025 - [Exporting and Customs](#)
- 26 June 2025 - [Understanding Exporting & Incoterms®](#)

Further information is available [here](#). When booking, please quote discount code 'CICSP25' to get your 10% discount.

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## INDUSTRY Events

### PITTCON | BOSTON, USA | 1-5 MAY 2025

PITTCON WILL run at the Boston Convention and Exhibition Center as usual in May. Click [here](#) for more details.

### LONDON LAB LIVE | EXCEL LONDON | 14-15 MAY 2025

YOU ARE invited to join industry leaders and innovators at London Lab Live 2025, where professionals from pharma, biotech, food & beverage, academia, and more unite to tackle the challenges shaping tomorrow's labs. Explore cutting-edge technologies on the exhibition floor, including the latest hardware and software from top suppliers and groundbreaking innovations in the start-up zone. With eight themes across the conference program and countless networking opportunities, this event is your chance to connect, learn, and innovate. You can register now and attend for FREE by clicking [this link](#)

### SLAS EUROPE CONFERENCE AND EXHIBITION | HAMBURG | 20-22 MAY 2025

SLAS IS the society for lab automation and screening and its exhibitions concentrate on lab automation. For more information about the German exhibition, click [here](#).

#### **CHEM UK | NEC BIRMINGHAM | 21-22 MAY 2025**

REGIONAL UK exhibition for the chemical industry, includes chemlab. For more information click [here](#).

#### **FUTURE LABS LIVE | BASEL, SWITZERLAND | 28-29 MAY 2025**

UK COMPANY, Terrapin is behind both London Lab Live and the original event which was developed to serve the pharma industry in Switzerland. You are also invited to experience what the organisers describe as Europe's most dynamic and inspiring event for lab innovation, bringing together professionals from pharma, biotech and academia, this free event features cutting-edge technologies and breakthrough ideas in the start-up zone. The event has nine conference themes. You can register for a free pass to this event by clicking [here](#).

#### **LONDON BIOTECHNOLOGY SHOW | EXCEL | 18-19 JUNE 2025**

THIS RELATIVELY new show aims to bring together policymakers, industry leaders, innovators, and investors from the global biotech and life sciences ecosystem. The event will showcase advances in biotechnology, pharmaceutical research, digital health, biomedical engineering, and regenerative medicine. With a well-curated exhibition and content-rich conference, the event will serve as an invaluable networking and knowledge-sharing opportunity for professionals and businesses in the sector.

The organisers are offering participation opportunities for GAMBICA including the opportunity to host workshops which we will take up if members are interested. If you would like to attend or exhibit at this show, could you let me know in the first instance? Email [jacqueline.balian@gambica.org.uk](mailto:jacqueline.balian@gambica.org.uk)

#### **SOLUTIONS IN SCIENCE | BRIGHTON | 8-10 JULY 2025**

FEEDBACK FROM visitors to the last SinS conference in June 2023 was positive and the next event has now been scheduled to take place in Brighton. The aim of SinS is to showcase complementary and diverse ranges of analytical instruments, technologies, applications and present solutions to scientists from a range of industries and academic disciplines. To book your exhibition stand contact Chris Jarvis [chris@intlabmate.com](mailto:chris@intlabmate.com) 01727 855574.

#### **JASIS | JAPAN | 3-5 SEPTEMBER 2025**

JASIS IS a large, well-attended exhibition run by the Japanese lab trade associations. It is a hybrid show with an effective online presence. For more information click [here](#).

#### **ANALYTICA USA | CLEVELAND, OHIO | 10-12 SEPTEMBER 2025**

SET UP to capitalise on the slow decline of Pittcon, this exhibition may suffer from a less than glamorous location – but it should be relatively cheap because of that. Click [here](#) for more information.

#### **ILMAC | BASEL, SWITZERLAND | 16-18 SEPTEMBER 2025**

THE INTERNATIONAL Laboratory, Measurement, and Automation Technology in Chemistry event has been held since 1959. For more information click [here](#).

#### **FARMAFORUM | MADRID TRADE FAIR | 17-18 SEPTEMBER 2025**

WHAT LOOKS like a fairly small forum for the pharmaceutical, biopharmaceutical and laboratory technology industry. For more information click [here](#).

## LIFE SCIENCES INNOVATION CONFERENCE | LONDON | 18 SEPTEMBER 2025

THIS CONFERENCE aims to bring together 250+ attendees from the NHS, health research communities and prominent members of the life sciences sector to discuss the Government's plans to channel significant investment into the UK's health and life sciences sector over the next five years. For more information click [here](#).

## ANALYTICA LAB INDIA | HYDERABAD | 18-20 SEPTEMBER 2025

ONE OF two lab trade fairs based in India, the Analytica show in Hyderabad is German run and designed to cater for both local and international markets. For more information click [here](#).

## ARABLAB | DUBAI | 23-25 SEPTEMBER 2025

GAMBICA WILL be offering a pavilion at Arablab in 2025 so you can attend with minimal effort. For more information email Kirsty on [Kirsty.roberts@gambica.org.uk](mailto:Kirsty.roberts@gambica.org.uk)

## LABNL | JAARBEURS, UTRECHT, NL | 23-25 SEPTEMBER 2025

PROFESSIONALLY RUN by the Federatie Van Technologiebranches this event covers industrial electronics, automation and lab tech. For more information click [here](#).

## POLLUTEC | LYON, FRANCE | 7-10 OCTOBER 2025

FOCUSSED ON environmental and waste management, Pollutec is expected to attract 46,000 professionals over four days. For more information click [here](#).

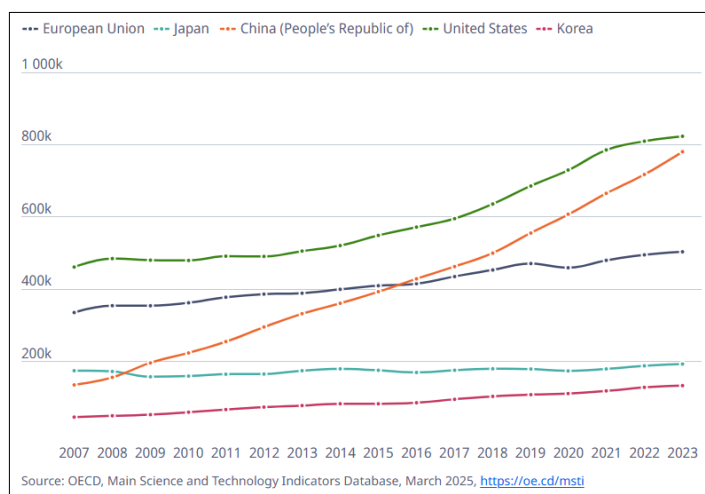
## FUTURE LABS LIVE | PHILADELPHIA, USA | 15-16 OCTOBER 2025

RUN ON the same lines as their European shows, Terrapin also offer this event in the US. For more information click [here](#).

## Export News

### R&D spending slows in OECD but surges in China

RESEARCH AND development (R&D) expenditure in the OECD area grew by 2.4% in inflation-adjusted terms in 2023, down from 3.6% in 2022. Business R&D expenditure outpaced other sectors, growing at 2.7% in 2023 and accounted for 74% of total gross domestic expenditure on R&D in the OECD area, up from 66% in 2010. R&D in government sector institutions grew by 2.5%, while R&D in the higher education sector saw a more modest increase of 1.7%.



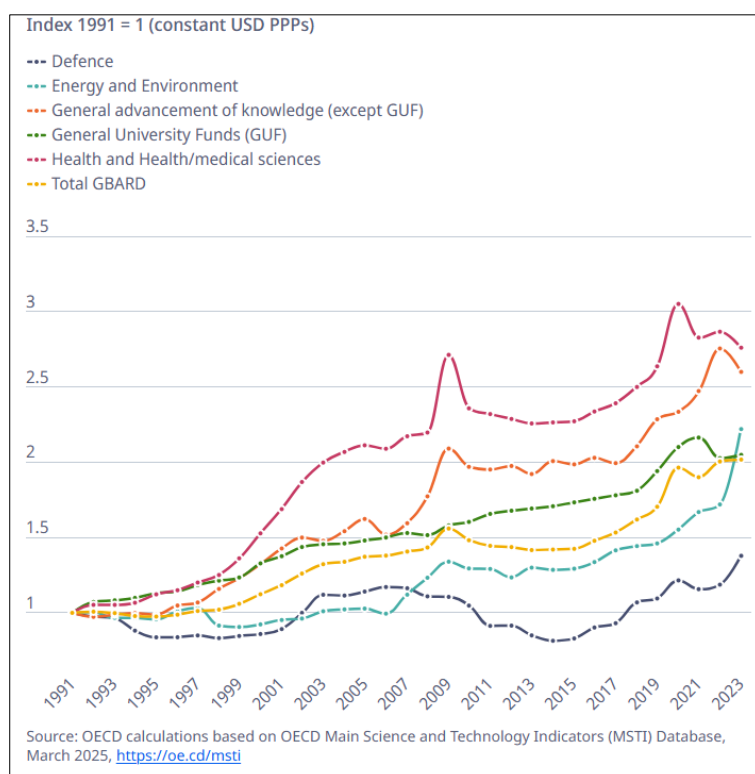
### GDP expenditure on R&D, selected economies

At 8.7%, growth in R&D expenditure in China continued to surpass that of the OECD area, the United States (1.7%) and the European Union (1.6%) in 2023. The EU's largest economies slowed the area's overall growth: Germany's R&D rose by 0.8%, while

France's fell by 0.5%. In contrast R&D in Spain and Poland increased by over 8%. Ireland's R&D expenditure fell by 2.4% in 2023 following a major boost in 2022 from large business R&D capital projects. R&D growth in Japan (2.7%) and Korea (3.7%) exceeded the OECD average.

**The gap in the level of gross domestic expenditure on R&D between the United States and China narrowed significantly in 2023.** In purchasing power parity (PPP) adjusted USD, the standard method for international macroeconomic comparisons, China's R&D expenditure reached 96% of that of the US, up from 72% ten years before. The gap is larger when measured in USD at market exchange rates (49% in 2023 vs 42% in 2013).

## Where R&D spend is going



The United States maintains its lead for the business and higher education sectors, where China now reaches 95% and 74% of the US level, respectively. In the government sector, China's R&D expenditure is 1.6 times that of the United States. Considering R&D funding sectors' contributions to total R&D, China has surpassed the United States in terms of funding from domestic business enterprises, but it remains behind on funding from government and the rest of the world.

Growth in government budget allocations for R&D in the OECD area slowed sharply at 0.6% in

2023, down from 5.5% in 2022, as COVID-19 stimulus packages came to an end in several OECD economies. Since 2023 budgets may fund R&D performed in 2024, this slowdown may not yet have had a visible impact on 2023 R&D performance among sectors more reliant on government R&D funding.

## New package of support via UK Export Finance

A MULTI-BILLION pound increase in government-backed financing will give UK Export Finance (UKEF) the power to expand financing support for British businesses by £20 billion, with small businesses also able to access loans of up to £2 million through the British Business Bank's Growth Guarantee Scheme.

UKEF will also offer businesses partial loan guarantees through more flexible uses of its Export Development Guarantee, helping to mitigate the impact of new tariffs and associated



economic uncertainty. The British Business Bank will also expand its Growth Guarantee Scheme by £500 million, which will provide vital finance for smaller businesses as they look to invest and grow. This scheme provides the lender with a 70% government-backed guarantee against loans or other types of finance, enabling lenders to support smaller businesses that would struggle to obtain financing through traditional means – and has so far enabled more than £2.1 billion of lending.

This comes on top of £1 billion of funding for British Business Bank programmes for this financial year, confirmed in the Autumn Budget 2024. This includes additional support for smaller housebuilders through the ENABLE Build programme, funding for Start Up Loans and additional funding for three equity programmes supporting innovative high growth businesses

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## **Health and Safety News**

### **Chemicals company fined £2.5m for acid releases**

A CHEMICAL manufacturing company has been fined £2.5m following two incidents of uncontrolled releases of highly corrosive acids at its site in West Thurrock, Essex.

Industrial Chemicals Ltd pleaded guilty following the incidents in 2020, one of which caused the release of a hydrogen chloride gas cloud that resulted in schools in the area to close.

The first incident on 6 January 2020 resulted in an uncontrolled release of hydrochloric acid from three chemical storage tanks. Three hundred thousand litres of the substance was released via poorly maintained pipework. As it came into contact with the atmosphere, this created a hydrogen chloride gas cloud which spread to nearby towns. CCTV footage shows the atmosphere being engulfed in the cloud within 60 seconds.

Hydrochloric acid is highly corrosive and hydrogen chloride is a toxic gas. The incident lasted approximately 24 hours.

On 29 August 2020 another uncontrolled release, this time of sulphuric acid, occurred due to a crack in a pipe. This resulted in the release of 87 cubic metres of sulphuric acid. The valve that was designed to control leaks in the event of cracks did not operate as intended, leading to the uncontrolled release.

Sulphuric acid is highly corrosive and can cause lung damage if high levels are breathed in.

An investigation into the release of the hydrochloric acid in January 2020 found that pipework had not been installed, maintained and inspected sufficiently which led to several smaller pipe failures before the more serious loss of containment. The investigation found that pipework had not been properly maintained, and a protective chemical-resistant coating had not been applied to the full height of containment walls.

A further investigation by HSE into the release of sulphuric acid in August 2020 identified a lack of inspection and maintenance of the pipework and valves. The leak continued for a further two days due to the inability to operate a manual valve to stop the process. The loss of containment was eventually stopped on 31 August 2020. Fortunately, no one was harmed.

The company was fined £2.4 million in relation to charges under the Health and Safety at Work Act 1974 and a further £100,000 in relation to charges under the Environmental Permitting (England and Wales) Regulations 2016.

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## Company News

### ATAC: the turnaround kings



VISCOMETER SPECIALIST Analytical Technology and Control Ltd (ATAC) is leveraging its long-standing expertise in the oil and gas industry to explore new opportunities in the medical sector. While product innovation is often incremental, ATAC has taken a truly lateral approach, developing a world-leading

device to measure clotting potential in the blood of patients undergoing heart bypass surgery—an innovation derived from its traditional viscometer technology.



The development was initiated by Dr Mark Turpin, (above) Technical Director of ATAC, who together with Managing Director Ray Browne, acquired the company from a Singaporean firm where he had worked for several years. Mark began his career as a materials science researcher, working at Leeds and Loughborough universities, where he was responsible for teaching people how to blow things up. After leaving academia, he worked at Morgan Crucible, now Morgan Advanced Materials, where among other things, he contributed to the design of space shuttle engines. Then he joined ATAC.

Over the 20 years under its previous ownership, ATAC's value declined drastically from £5 million to just £1 million. This downturn ultimately enabled Mark and Ray to acquire what remained, which included some lovely old buildings and several once-renowned brands such as Hallikainen, Hone, and REL.

Beyond developing new products, the new Board's goal was to re-establish ATAC's presence in the oil and gas industry, reviving brands that had been neglected under previous ownership. Equipment bearing these brands is still widely used in refineries worldwide, largely because replacing high-quality, functioning equipment in active oil and gas plants is rarely deemed necessary.



Despite Russia's invasion of Ukraine, which has led to the reactivation of oil storage facilities unused for 50 years—the oil and gas industry remains volatile. Recognising this, ATAC sought a secondary market with steady sales to counterbalance the industry's cyclical nature. The company had previously acquired REL (Research Equipment London Ltd) who manufactured cone and plate viscometers for laboratory use, targeting the manufacturing laboratory sector where products like toothpaste, paints, bitumen, and resins are produced. This strategic move has led to significant sales in China, the world's leading resin producer.

Picking a company back up from the floor is no trivial task. ATAC has focused on enhancing its service

capabilities, a crucial move given the substantial number of legacy products still in use. Mark explains, "Most oil and gas companies prefer to use in-house service teams rather than external contractors, so we've developed specialised training for them. On the laboratory side, we train our distributors to service our equipment, or they can return it to us for repairs. Our priority has been strengthening customer relationships, and now we're planning a major marketing push to expand our market reach. This will include seeking complementary products and establishing new distribution channels."

One key area Mark is keen to explore is a partnership with a cooling equipment supplier. Many of ATAC's clients face temperature control challenges, particularly as legacy equipment was typically designed for ambient temperatures around 25°C, whereas real-world conditions now regularly exceed 40°C, especially in desert environments.

"Temperature control is a fundamental aspect of nearly all our equipment, and many of our competitors struggle with it," Mark explains. "For example, viscosity doubles with every 10°C temperature change, so we maintain our temperature stability to within  $\pm 0.05^\circ\text{C}$  for our process viscometers and within  $0.1^\circ\text{C}$  for our laboratory viscometer. We are starting to gain recognition for this precision, and we're seeing an increasing number of Requests for Quotations specifying our machines."

Like many businesses, ATAC has encountered challenges competing with American firms. "American manufacturers often advertise their equipment at a deceptively low base price, then charge extra for every essential accessory required to make it functional. This makes it difficult for customers to realise that our cone and plate viscometer actually costs around half as much," Mark explains. "Brookfield, our main competitor, is particularly skilled at this pricing strategy. Their equivalent equipment comes to around £22,000, whereas our more



robust version costs less than £10,000. We need to find a way to convey this more clearly to potential customers.”

Based in Wiltshire, ATAC ensures that every employee earns above the regional average wage. “We’re fortunate to have outstanding engineers and technicians, as well as the space and expertise to customise equipment to precisely meet our customers’ needs. Our philosophy is simple: whatever you need, we’ll make it for you.”

It was this can-do attitude that led ATAC to collaborate with an Italian anaesthesiologist working with Extra Corporeal Membrane Oxygenation (ECMO) machines, which keep a patient’s blood oxygenated during heart bypass surgery. He was experiencing difficulties with blood clots forming in the machine, and while patients were given anticoagulants to reduce this risk, determining the correct dosage remained a challenge. Greater predictive capability in blood coagulation testing during surgery was required. Traditional viscometers were unsuitable due to the high shear forces they generate, which destroy blood samples. To address this, ATAC developed a new viscometer featuring a bob that confines shear forces between the sample tube’s side walls and the bob itself. “The medical team loved the prototype, but sourcing the tubes has been a challenge—perhaps other GAMBICA members could assist?” Mark suggests.

ATAC’s team attended the recent GAMBICA conference, where attendees may have met Ross Davies, who previously worked in industrial electrical component manufacture, and now manages the company’s operations and office, and leading the DFMA and efficiency improvements. Also present was Managing Director, Ray Browne, and James McCann, a veteran of the laboratory industry who formerly worked at Lorne Labs and is now assisting ATAC with marketing and commercial development. The team is committed to engaging fully with the GAMBICA community and actively participating in the industry’s future.

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