

# L@b Brief | April 2024

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Hello again,



**THE LATEST** issue of Global Trade Review highlighted a pressing concern: the European Union's solar manufacturing sector is facing significant challenges from competitors in the US and China. Despite efforts in the 'European Solar Charter' to address market distortions, the EU's subsidies fall short, leaving its manufacturers vulnerable.

With solar panel prices plummeting by 40% in 2023, European manufacturers find themselves unable to compete with heavily subsidised imports from China. Consequently, warehouses are brimming with unsold inventory, and many European firms have had to scale back or halt production altogether.

The European Commission's main response, the Solar Charter, offers only voluntary actions and according to critics, lacks concrete support measures. The promise of additional investment from the European Investment Bank (EIB) is not enough to alleviate the industry's woes.

As a result, over 97% of solar panels deployed in Europe are now imported, predominantly from China, with the US also gaining ground due to tax credits provided by the Inflation Reduction Act (IRA). Johan Lindahl, secretary general of the European Solar Manufacturing Council is quoted as saying: "The US is subsidising through the IRA and is also better than Europe currently at protecting domestic manufacturers through forced labour legislation and import tariffs. They have established both mechanisms, but currently Europe does not have either,".

All this has an ominous ring for those in the lab industry who are also seeing a large number of Chinese competitors looking to import laboratory equipment into the EU and the UK. No exporter wants a return to protectionism, but if everyone else is doing it, what should we do? One thing's for sure – if we are going to protect our industry, warm words and promises won't be enough.

*Jacqueline*

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## UK News

# ECJU plans to improve performance and move the goalposts

TWO SENIOR officials of the Export Control Joint Unit (ECJU) have admitted to GAMBICA that they intend to address ongoing complaints about delays in processing applications for export licences by adjusting their targets. The Minister responsible for export control requested the ECJU to meet with GAMBICA in April. At the meeting, Iain Everett, head of operations at the ECJU and Jo Thompson, deputy director of operations, informed us about the results of their recent review of new Military End Use Controls (MEUC), thought to have contributed to the steadily worsening performance of the department in meeting its

processing time targets. They say the results, which will go to ministers shortly, suggest that the controls are having the desired effect of allowing them to adequately control targeted products, but are nonetheless having a severe impact on some exporters.



“The MEUC has not increased the volume of applications, that has remained static,” said Jo Thompson, “but the proportion of more complex applications has increased. These require more processing time and refusal rates have gone up, particularly for China.”

In response to the growing challenges, the department has identified process improvements and set up an engagement group for the worst affected exporters.

Although the number of people employed to review applications has not been increased, the level of vacancies has been addressed and is now running at 4 - 5% rather than the 20% of 18 months ago and this is having a beneficial effect, although not all new staff are yet fully productive because of training and security clearance requirements.

“One of the benefits of MEUC is that we are seeing high numbers of applications for the same end users. In the past, each of those would have been assessed separately, but now we are looking at assessing the end user which might help us to clear perhaps 20% of pending cases.

“In the past we have been a very risk averse part of government and people have been very wedded to their way of doing things but we are looking at that now,” said Jo Thompson.

“Iain is also looking at the refusals process. Traditionally each refusal was considered at a case meeting attended by up to 30 people, because we wanted to be absolutely sure that a refusal was unwarranted. But many refusals are actually quite straightforward and don’t require discussion.

“But our problem is that our targets haven’t been changed for 20 years. This is not sustainable, we need to give clearer expectations to exporters.”

The department will not be consulting industry about the new targets which will be based on what has proved achievable in recent years.

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## Common User Charge imposed from 30 April

THE GOVERNMENT has now imposed the planned risk-based identity and physical Border Control Post (BCP) checks. Since 30<sup>th</sup> April there will be a Common User Charge on all eligible sanitary and phytosanitary (SPS) imports (from the rest of the world, EU and EFTA countries) entering the UK through the Port of Dover and Eurotunnel in Kent. The Charge will be applied to all eligible imports whether or not the import is selected for a physical check at planned government-run BCP facilities.

The rates charged for each commodity line in a Common Health Entry Document (CHED) will be:

- Low-risk products of animal origin (POAO) Imports - £10 per commodity line and Transits - £10 per commodity line
- Medium-risk POAO Imports - £29 per commodity line and Transits - £10 per commodity line

- High-risk POAO Imports - £29 per commodity line and Transits - £10 per commodity line
- For low-risk plants and plant products there will be no charge either for Imports or Transits
- Medium-risk plants and plant products Imports - £29 per commodity line and for Transits - no common user charge
- High-risk plants and plant products Imports - £29 per commodity line and Transits - no common user charge

The maximum charge for one CHED will be limited to five commodity lines, even if there are more than five commodity lines present in the CHED. This means that medium and high-risk CHEDs will be capped at £145. Low-risk POAO CHEDs and POAO transits will be capped at £50.

The first digital invoices will be issued in arrears later in the year for charges incurred from 30 April 2024 but digital invoices will normally be issued in arrears on a month-by-month basis. The Common User Charge will be in addition to any inspection fees applied by the Port Health Authority (for products of animal origin) and/or the Animal and Plant Health Agency (for plant and plant products). It will be up to commercial (private) ports to set their own charging structure and rates for traders using their services.

For more information click [here](#).

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## Bad bots now targeting APIs



BAD BOT traffic levels have risen for the fifth consecutive year, partly driven by the increasing popularity of Artificial Intelligence (AI) and Large Learning Models (LLMs). In 2023, bad bots accounted for 32% of all internet traffic – a 1.8% increase from 2022. The portion of good bot traffic also increased, albeit slightly less significantly, from 17.3% of all intent traffic in 2022 to 17.6% in 2023. In 2023, 49.6% of all internet traffic wasn't human.

Bad bot operators often employ evasive bots which use complex tactics like cycling through random IPs, entering via anonymous proxies, using residential proxies, changing their identities, mimicking human behaviour, delaying requests, and defeating CAPTCHA challenges.

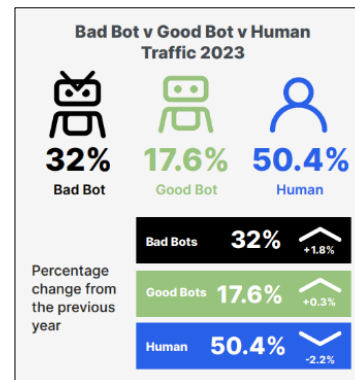
Over the past year, automated threats caused 30% of API attacks. The use of APIs for seamless communication between different applications and services is increasing, making them a critical element of software development. Due to their machine-readable nature, APIs are increasingly susceptible to bad bot attacks, with a lack of visibility into API traffic making them challenging to detect.

Malicious bots take advantage of APIs, which often act as direct pathways to sensitive data, making them vulnerable to business logic abuse and fraud. APIs increase the attack surface, providing more entry points for automated attacks.

Account takeover (ATO) attacks are among the most prevalent automated threats.

Account takeover attacks targeting APIs accounted for 44% of all ATO attacks recorded by Imperva, compared to 35% last year. The widespread adoption of APIs due to the proliferation of mobile and web applications made them an appealing entry point for attackers seeking to compromise user accounts. These APIs handle crucial identity verification processes, making them an ideal target. However, implementing security measures is challenging due to the complexity of modern IT environments and the interconnected nature of online platforms. As a result, cybercriminals exploit vulnerabilities in authentication APIs to gain unauthorised access to user accounts.

Information is from the Imperva Bad Bot Report can be accessed [here](#).



## This month's shared cost training for GAMBICA members

THIS SPRING, we have been able to schedule a good number of shared cost training courses. The courses below still have places available.

To book places contact Sonia on 07788292842 or email: [Sonia.dougall@gambica.org.uk](mailto:Sonia.dougall@gambica.org.uk)

Course	Date	Location
Project management for non-project managers	15/16 <sup>th</sup> May	Povair, Wrexham
Introduction to six sigma	6 <sup>th</sup> June	Cherwell Laboratories
Problem solving using lean techniques	10 <sup>th</sup> June	Online
How to behave assertively	20 <sup>th</sup> June	Porvair, Wrexham

### Export training discounts for GAMBICA members

Discounts are also available to GAMBICA members from Chamber International. In April and May they are offering you the following courses:

Customs Special Procedures	15 May 2024	Cost: Member £372, Non-member £392
CDS for Imports	21 May 2024	Cost: Member £372, Non-member £392
An Introduction to Export Licensing	23 May 2024	Cost: Member £372, Non-member £392
Methods of Payment & Letters of Credit	6 June 2024	Cost: Member £392, Non-member £432

Export Documentation & Import Procedures	10 June 2024	Cost: Member £512, Non-member £532
HS Code Classification & The UK Global Tariff	11 June 2024	Cost: Member £372, Non-member £392
VAT for International Business	13 June 2024	Cost: Member £372, Non-member £392
Importing from the EU - What you need to know	20 June 2024	Cost: Member £372, Non-member £392
Shipping to Egypt	25 June 2024	Cost: Member £372, Non-member £392
Rules of Origin, Trade Agreements and Commodity Codes	27 June 2024	Cost: Member £372, Non-member £392
Incoterms® - The Basics	2 July 2024	Cost: Member £372, Non-member £392
CBAM: Policy, Transition and Compliance	3 July 2024	Cost: Member £372, Non-member £392
Understanding Exporting	4 July 2024	Cost: Member £372, Non-member £392
CDS for Exports	30 July 2024	Cost: Member £372, Non-member £392
Workshop for Import Administrators	31 July 2024	Cost: Member £372, Non-member £392
Importing and Customs	6 August 2024	Cost: Member £372, Non-member £392
Export Documentation	13 August 2024	Cost: Member £372, Non-member £392
Lithium Batteries by Air, Sea & Road	15 August 2024	Cost: Member £572, Non-member £592
Shipping to the UAE, Saudi Arabia and Qatar	27 August 2024	Cost: Member £372, Non-member £392
Shipping to and from Northern Ireland under the Windsor Framework	3 September 2024	Cost: Member £372, Non-member £392
Understanding Exporting & Incoterms	6 September 2024	Cost: Member £512, Non-member £532
CDS for Imports	12 September 2024	Cost: Member £372, Non-member £392
German Packaging Regulations	19 September 2024	Cost: Member £197, Non-member £217
HMRC Audits & Customs Record Keeping Requirements	23 September 2024	Cost: Member £372, Non-member £392
Exporting and Customs	26 September 2024	Cost: Member £372, Non-member £392

### **General training discounts for GAMBICA members**

Because we have been able to run a number of courses, Make UK has agreed to extend a further discount to GAMBICA members who want to book onto their open courses.

GAMBICA members will be able to claim a 5% discount on the prices when booking by using

the code word GAMBICA in the PO Box number. Alternatively, they can book direct with Joanne Parry who can be contacted on [jparry@makeuk.org](mailto:jparry@makeuk.org).

### **Finally – sustainable manufacturing training discounts from Cranfield**

Cranfield School of Management has developed a short executive course titled ‘Sustainable Manufacturing in Practice,’ designed to equip industry staff with a comprehensive understanding of sustainability's core principles, tools, and strategies.

The two-day course has been crafted to address the evolving landscape of sustainable manufacturing, offering a blend of theoretical knowledge and practical insights to navigate this field effectively and aims to provide you with the credible skills and confidence needed to make significant progress in your sustainability initiatives.

The next sessions are scheduled for 15-16 of May, 11-12 September and 20-21 November. GAMBICA members have been offered an exclusive 50% discount on the course fee. The special rate of £1,500 will apply for the whole of 2024, after that the discount will drop to 25%.

For more information, click [here](#).

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## **Use of life science space up by 25% in Golden Triangle**

ACCORDING TO the latest research from estate agent Knight Frank, take up of life science space in the Oxford/Cambridge/London ‘Golden Triangle’ is up by 25% year-on-year with notable deals from Diamond Light Source which is expanding its Harwell labs by 64,000 square feet, and invoX temporarily leasing the Franklin Building lab space at Granta Park in Cambridge. The UK Space Agency is also launching new head-quarters at the Harwell Science Campus Space Cluster. Novo Nordisk has announced plans to open a new AI-based research facility in King’s Cross in London. GSK has located its new headquarters at The Earnshaw Building on New Oxford Street, partly to be close to collaborators at University College London.

According to *Property Magazine*, available lab space remains constrained with ‘just’ 400,000 square feet of lab space available in the golden triangle at the end of Q1 2024, however, a further 1.4 million square feet are due to become available by the end of 2024.

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## **Research round-up**

### **Magic mushrooms have similar side effects to SSRIs**

PSILOCYBIN, COMMONLY known as ‘magic mushrooms’, is recognised as a potential new therapy for medication-resistant depression and anxiety. The University of Georgia has conducted an analysis of its safety profile and therapeutic potential which reveals side effects akin to those associated with traditional antidepressants, but that benefits can be obtained with far lower doses of psilocybin.





Traditional antidepressants, such as selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs), work by modulating neurotransmitter levels, particularly serotonin, in the brain. Common adverse effects of antidepressants may include headaches, nausea, anxiety, dizziness, and changes in blood pressure. While these side effects can vary in intensity and duration, they are often observed in the initial stages of treatment and may diminish over time as the body adjusts to the medication.

Psilocybin induces psychedelic effects by binding to serotonin receptors in the brain. The UGA analysis suggests that when administered under controlled conditions, the acute side effects of psilocybin mirror those of traditional antidepressants with study participants reporting similar transient side effects which were generally well-tolerated and tended to dissipate within 24 to 48 hours following administration.

Psilocybin is classified as a Schedule 1 substance in the UK under the Misuse of Drugs Act. Drugs in this category are deemed to have a high potential for abuse and lack accepted medical use. However, psilocybin has a long history of traditional use in indigenous cultures for spiritual and religious purposes, and contemporary research has increasingly explored its therapeutic potential.

For more information see the University of Georgia research [here](#).

## AI in scientific publishing

THE POSSIBILITY that AI tools, as well as cutting out some of the boring bits of academic work could supercharge ‘paper mills’, (where organisations produce and sell poor or fake journal papers) has been highlighted in a paper from Gianluca Grimaldi and Bruno Ehrler which alleges that machines are about to change scientific publishing forever.

“A text-generation system combining speed of implementation with eloquent and structured language could enable a leap forward for the serialised production of scientific-looking papers devoid of scientific content, increasing the throughput of paper factories and making detection of fake research more time-consuming,”. Paper mills are already abundant across the globe, and the pair fear that the situation will only worsen with the influx of AI-assisted tools.

Others have commented that while Large Language Models can generate text, they can’t always produce accurate or scientifically valid content, generally lacking a proper understanding of scientific concepts and context.

Fabrication of data is also a potential problem. A recent [Nature](#) study used ChatGPT-3.5 and ChatGPT-4 to create short literature reviews on 42 different topics using 84 papers. The researchers found that 18–55% of references generated using ChatGPT-4 and ChatGPT-3.5 were fabricated, respectively.

The journal *Science* initially imposed a ban on the use of AI in production of articles but subsequently changed its position because of the difficulties of policing the ban. Now authors can use AI provided they add a small declaration of how AI was used.

New guidelines will inevitably be developed but some commentators have suggested that AI has just highlighted the issues with an already broken and gamified academic system.”



The research from Grimaldi and Ehrler can be accessed [here](#).

*This is an extract from an article published by Technology Networks which can be accessed [here](#).*

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## Upcoming GAMBICA Events

### How to successfully scale your business | online | 8 May

THIS WEBINAR from the GAMBICA Business Growth Community will be an interactive session with consultancy Johnson Carmichael covering:

- your growth strategy and how to successfully scale your business;
- your people strategy; engaging the right advisors and incentivising your team;
- case studies of successful scale ups and
- preparing for M&A transactions.

Johnson Carmichael is one of the top 10 accountancy and business advisory firms in the UK employing 850 consultants across 14 locations nationwide. The company has a sector team dedicated to Technology and Life Sciences led by Shaun Millican and specialises in insights on moving from start-up, to scale-up and international expansion.

Our speaker will be Yvonne Irwin who has 20 years' experience on helping companies to scale up. To book your place click [here](#).

### Free spring briefings from Make UK | online | 8/9 May

DELIVERED BY experts from Make UK, two Spring briefings will cover key legislative developments, policy updates to industry standards as well as latest trends and key issues in health & safety and environmental management. The subjects of the briefings are:

- Health and Safety briefing - 8 May – for more information click [here](#)
- Environmental briefing - 9 May – for more information click [here](#)

### Google analytics 4 without tears | Online | 14 May, 10.30-11.30am

A RECENT LinkedIn poll found that 71% of respondents don't find Google Analytics 4 at all user-friendly. In this webinar, AZoNetwork's SEO expert, Taryn-Jade Hatley will explain how to extract the information you need, quickly and easily with shortcuts and alternatives.

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

### Working capital support for SMEs | Online | 29 May, 10.30am

UK EXPORT Finance has been increasing its support for SMEs and has substantially changed the way it provides working capital support. This is no longer tied to a particular export but can be used for extended periods. Hitesh Patel will explain what funding is available and how to access it, and will also run through UKEF's insurance support.

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

### Shared cost training available via GAMBICA | Multiple dates | Multiple locations

THERE ARE still places available on the following courses which have been arranged for GAMBICA members with trainers provided by Make UK. Cost depends on the number of

delegates. If fully booked (12 people) the courses will cost c £180 pp, if six people attend the costs will be c £360pp. **The following courses are available:**

Course	Date	Location
Project management for non-project managers	15/16 <sup>th</sup> May	Povair, Wrexham
Introduction to six sigma	6 <sup>th</sup> June	Cherwell Laboratories
Problem solving using lean techniques	10 <sup>th</sup> June	Online
How to behave assertively	20 <sup>th</sup> June	Porvair, Wrexham

To book places contact Sonia on 07788292842 or email: [Sonia.dougall@gambica.org.uk](mailto:Sonia.dougall@gambica.org.uk)

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## Industry Events

### London Biotechnology Show | London Olympia | 8-9 May 2024

A WORLD class exhibition and comprehensive conference according to the organisers, this inaugural event aims to cover the full value chain for biotech in the UK. To book an exhibition stand, click [here](#).

### SLAS Europe Conference and Exhibition 2024 | Barcelona | 27-29 May 2024

THIS LAB automation and biotech exhibition and conference offers scientific sessions, keynote presentations and new product demonstrations concentrating on frontiers of technology, screening applications and diagnostics and shaping the future of therapeutics. For more information click [here](#).

### GAMBICA discount for Future Labs Live | Basel | 26-29 June 2024

THERE IS now a 10% discount available to GAMBICA members who would like to exhibit at Future Labs Live in Basel. The organisers have offered GAMBICA members the opportunity to present to attendees, exhibit or sponsor at reduced rates and improve your brand awareness among industry leaders, innovators, and enthusiasts attending this leading global R&D lab event for innovation and technology. Key themes of the show are digital transformation, connectivity and collaboration, data management, AI and deep learning, lab operations and efficiency and smart lab facilities. The event aims to bring together industry disruptors, start-ups, lab heads, and technicians alongside tech and practice innovators to showcase solutions and discuss the future of labs.

For speaking and partnering enquiries contact Ellie at [ellie.whitehead@terrapinn.com](mailto:ellie.whitehead@terrapinn.com), for exhibiting inquiries and to claim your 10% GAMBICA discount, email Shilpa at [Shilpa.suthar@terrapinn.com](mailto:Shilpa.suthar@terrapinn.com) For more information, click [here](#).

### Ilmac | Lausanne | 18-19 September 2024

EVERY TWO years, the Ilmac industry event in French-speaking Switzerland offers:

- Proximity to pharmaceutical and biotechnology companies
- High-quality community and quality contacts
- Renowned exhibitors from over 20 different industries
- Catering & networking aperitif included

Get your ticket to enter the fair for free [here](#) (please use promotion code: welcome-ilmac24). If you would like to take part in the IImac trade fair as an exhibitor, you will find the participation options [here](#):

#### **BioTechx | Basel | 9-10 October 2024**

GENERATIVE AI has the potential to revolutionise various aspects of the life science industry and [BioTechX Europe](#) claims to be at the forefront of thinking around Generative AI and biotechnology. The agenda covers Digital Transformation, LLM and Data Management, Storage & Architecture. Contact Alistair Wilmot about remaining opportunities at [Alistair.Wilmot@terrapinn.com](mailto:Alistair.Wilmot@terrapinn.com).

#### **Festival of Biologics | Basel | 15-17 October 2024**

A CONFERENCE designed for experts working in antibody therapies, immunotherapies and biosimilars, featuring 150 speakers from Cancer Research UK, Novartis, Roche, Numab, Pierre Fabre and others. It covers discovery, development, manufacturing, market access, and fill and finish. The agenda will be released next month. Tickets cost 150 Euros and there will also be a small exhibition. For more information click [here](#).

#### **Global innovation and new technology health event | London | 9-10 December 2024**

This event is described as the NHS innovation festival and comprises the UK National ICS congress, the mental health technology show, the future hospital show, the women's health technology show and the net zero technology show. For more information click [here](#).

#### **CIM2025 International Metrology Congress | Lyon | 11-14 March 2025**

A CALL for abstracts for this event is open until June 26<sup>th</sup>. The event is co-located with France's largest industrial trade show and aims to be a hub where science, industry and metrology players come together. For more information, click [here](#).

#### **Solutions in Science | Cardiff | 8-10 July 2025**

FEEDBACK FROM visitors to the last SinS conference in June 23 was positive and the next event has now been scheduled. 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@labmate.com](mailto:chris@labmate.com) 01727 855574.

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## **Export News**

# **Analytica exhibition a success despite negative global sales data**

DESPITE WORRIES about another year in which German exhibitions, Analytica and Achema fall in the same year, exhibitors in the GAMBICA pavilion at Analytica were happy they had come. Awarding the event an average of 8 out of 10, the group felt that the footfall had

justified their attendance and most had accumulated a good number of high potential leads at the event. According to the organisers, Analytica had 1066 exhibitors which was 20% up



on 2022, the first event after Covid. The top three countries for exhibitor numbers were The US, China and Italy, and according to event manager, Susanna Groedl, they were on track to attract 34,000 visitors to the event which boasts a free academic conference featuring 200 lectures.

GAMBICA exhibitors unanimously said they would attend again when the event runs in two years' time, even though, once again, it will co-incide with Achema.

### Updates on overseas markets

As usual, EUROM II, the umbrella body for European laboratory industry trade associations, held its major meeting of the year at the event. This year, the Korean, Japanese and US trade associations were also invited and all present shared their market experience.

### Germany

German trade association, Spectaris had been expecting good growth in 2023 but had been disappointed. The German market contracted in 2023. Predictions of 7.3% growth had to be adjusted downwards with the downturn partly attributed to ongoing overstocking issues post Covid.

### German lab industry sales

	2021	2022	2023	2023/2022
Domestic revenue (bn. Euro)	4.8	5.3	5.26	-0.8%
Foreign revenue (bn. Euro)	6.1	6.4	5.96	-6.8%
<b>Total revenue (bn. Euro)</b>	<b>10.9</b>	<b>11.7</b>	<b>11.22</b>	<b>-4.2%</b>
<b>Employees (number)</b>	<b>50,400</b>	<b>53,000</b>	<b>52,600</b>	<b>-0.7%</b>

- Decline in (nominal) sales 2023 of -4.2% after strong growth 2022 (+7.3%)
- Around 330 companies (with more than 20 employees each)
- Export quota: around 53 percent

The top five export markets for the Germans are USA, China, UK, France and Italy in that order. India is a growing export market (+12%) but generally in 2023 business in Asia was weak for the Germans with Korean sales down by 12% and Japanese sales down by 9%. China sales were also less than those in 2022, down by 4%.

Predictions for 2024 are that the German domestic lab market will grow by 4.2%, that the overseas markets for German companies will grow by 5.4% and that total revenues will grow by 4.8%. Employee numbers are expected to grow by 0.7%.

“But we will have to be very active to meet these targets, warned Mathis Kuchejda, chair of Spectaris. “The industry is still being affected by shortages of skilled workers, cost increases

and export restrictions and anti-competitive action in China which has imposed higher taxes on imported goods.” These economic headwinds, taken together with increasing environmental legislation and logistical problems would mean, he felt, that achieving growth would not be straightforward.

## Spain

In Spain the unemployment situation has improved markedly and is now ‘only’ 13%. Inflation stands at 3% and GDP grew 4.5% in 2023 although the public debt still stands at 108%. Chair of the Spanish lab trade association, Penelope Alvarez, is trying to get Spanish companies to lobby the EU on F Gas, PFAS and MDR all of which are described as causing a drag on Spanish lab equipment producers.

There is some concern that the Germans are shouldering most of the burden of lobbying the EU about the rapid growth of environmental legislation and Penelope made clear that the Spanish would do all they could to support German efforts in order to counteract increasing push back from the European Commission. Commission officials have increasingly been describing much of the input they receive as appearing to be ‘solely a German problem’.

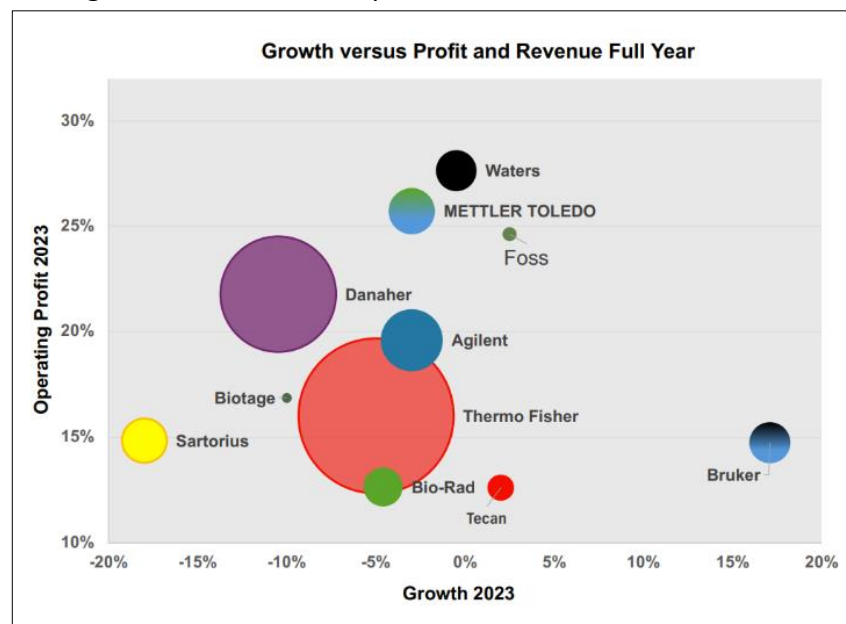
Clearly EU environmental regulations affect UK companies selling in Europe too, but we have much less scope to lobby the European Commission directly.

## Switzerland

The Swiss trade association was a new member of the group and its Chair, Christian Walter, who previously worked for Buchi voiced concerns about China which he said was ‘on everyone’s mind’. Rather than give overall market expectations he described how the last year had affected some of their bigger members.

- Brucker – up 20%
- Danaher – up 10%
- Bio rad – down 5%
- Tecan – up 3%
- Sartorius – down 17%
- Waters – flat.

The labour market in Switzerland is tight but they benefit from 100,000 immigrants per year.

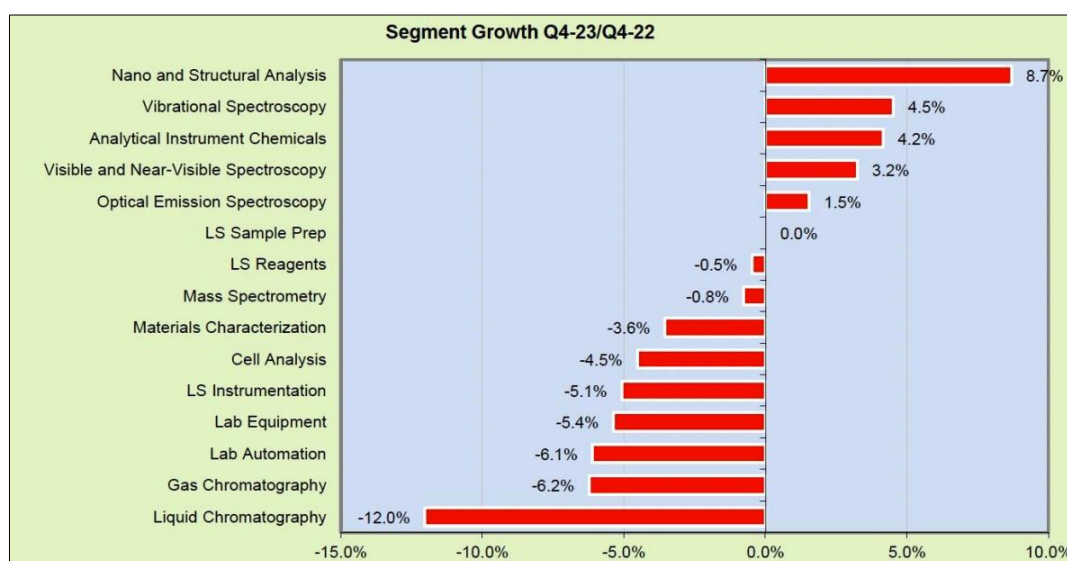


## USA

Mike Capps for the US association, ALDA noted that 2023 was ‘not a great year’ for ALDA’s 130 members with sales down by 2.7% in comparison to the same period in 2020. The areas which remain in growth are industrial with a particular focus on materials analysis and spectroscopy.

## United States Lab Industry Q4 2023 Revenues by product

\$Million	2023	2022	Growth
Spectroscopy and materials analysis	4,908	4,747	2.3%
Lab equipment	935	988	-5.4%
Materials characterisation	638	661	-3.6%
Nano and structural analysis	1,712	1,575	8.7%
Optical emissions spectroscopy	419	413	1.5%
Vibrational spectroscopy	585	560	4.5%
Visible and near visible spectroscopy	619	599	3.2%
Chrom, Mass Spec and automation	4,747	5,088	-6.7%
Gas chromatography	746	796	-6.2%
Lab automation	1,116	1,189	-6.1%
Liquid chromatography	1,519	1,727	-12.0%
Mass Spectrometry	1,365	1,376	-0.8%
Life Science	5,659	5,910	-4.3%
Cell analysis	474	496	-4.5%
Life science instrumentation	1,200	1,264	-5.1%
Life science reagents	2,936	2,950	-0.5%
Life science sample prep	1,048	1,199	-12.6%
Analytical Chemicals	740	710	4.2%
<b>Total</b>	<b>16,054</b>	<b>16,505</b>	<b>-2.7</b>



Demand for US goods from the Asia Pacific region had decreased in 2023 without much sign of improvement since. Chinese demand was weak across all segments but life sciences were particularly affected. Outside China Mike Copps said, things were more stable. Bio pharma



remains weak. European markets had achieved the best growth for US companies, helped by a favourable exchange rate.

Japan's trade association represents 94 companies and has an additional 64 affiliate members who provide services to their members. (GAMBICA has around 100 members in the lab sector, just over 200 in total in all sectors.) They too were seeing the post covid effect but in Japan stocks have been building for the last 10 years. Nonetheless they are seeing a positive shift in GDP and exports are increasing, especially in the last year.

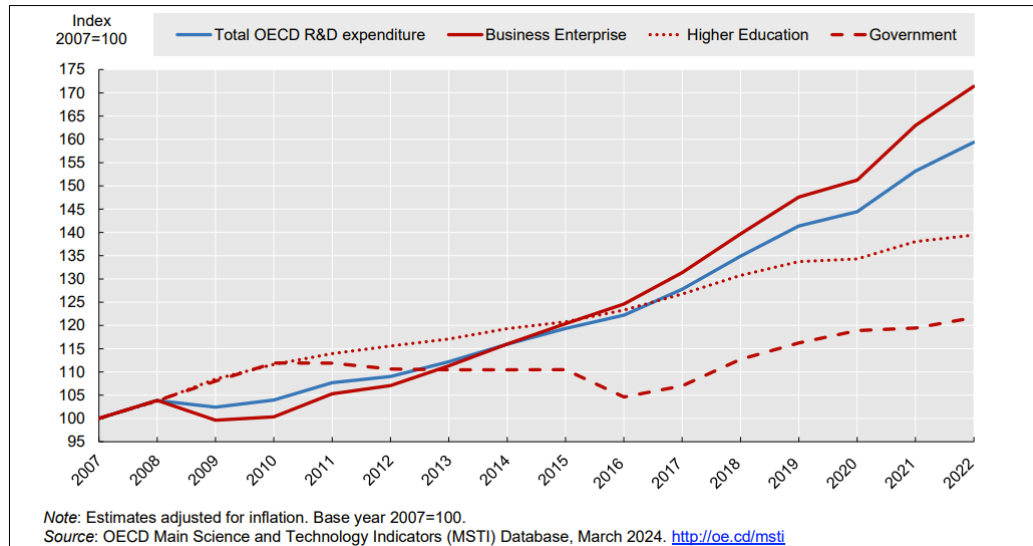
Korea actually had some of the most interesting statistics: It has the fifth largest R&D spend in the world and is in second place, behind only Israel when spend is compared to GDP. In Korea, 75% of R&D spend comes from the private rather than the public sector. Their highest ever spend on research instruments was in 2021, 40% of the spend in that year was from the Korean government. R&D spend has increased in Korea for 33 years in a row, until last year, when it reduced.

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## OECD figures point to stark slowdown in research spending in 2023

GROWTH IN Research and Experimental Development (R&D) expenditures in the OECD area continued in 2022 with a 4% increase in inflation-adjusted terms on the previous year, but figures point to a stark slowdown in real R&D growth in 2023.

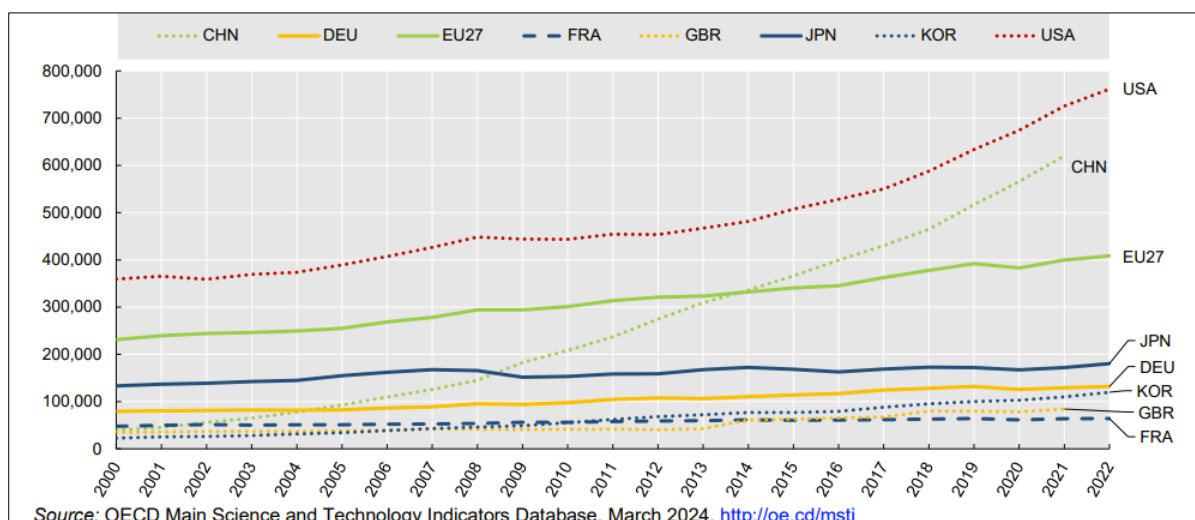
**Figure 1. R&D expenditure trends in OECD countries, 2007-2022**



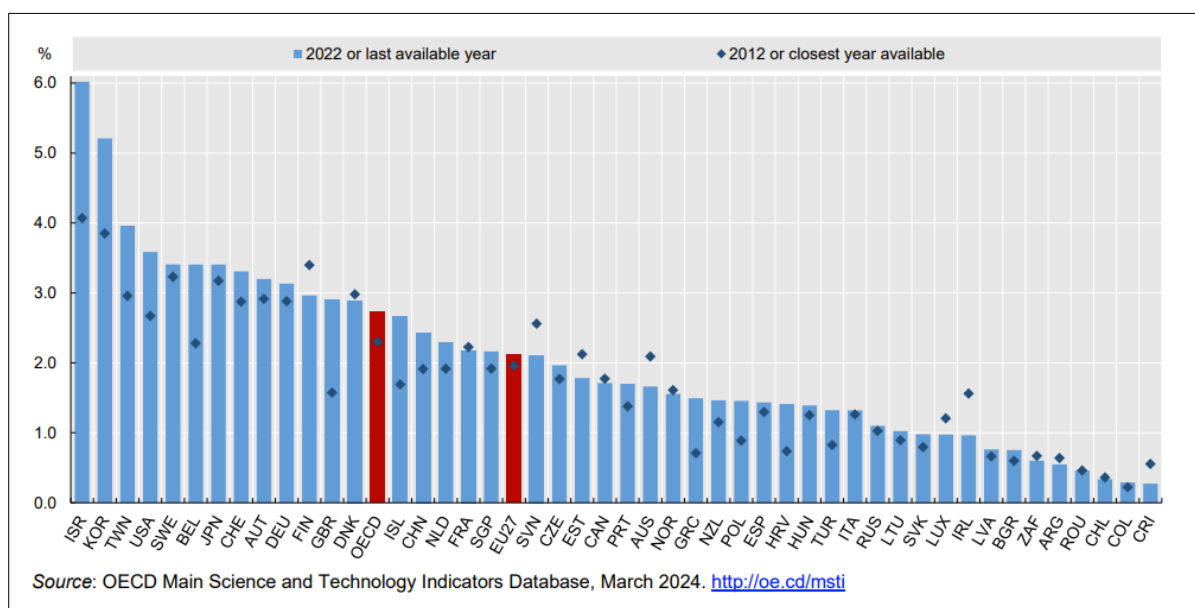
Growth in the EU27 area stood at 2.2% (half of its 4.4% growth in 2021), with its two major economies, Germany and France, growing at 1.9% and 0.5% respectively, while Italy's GERD declined by 3.8%. Faster growth in R&D in the OECD was driven by the United States at 5.0%, Japan at 4.9% and Korea at 8.9%. China did not report to OECD official estimates.



**Figure 2. Gross domestic expenditure on R&D, selected economies, 2000-2022 USD million in constant PPP prices**



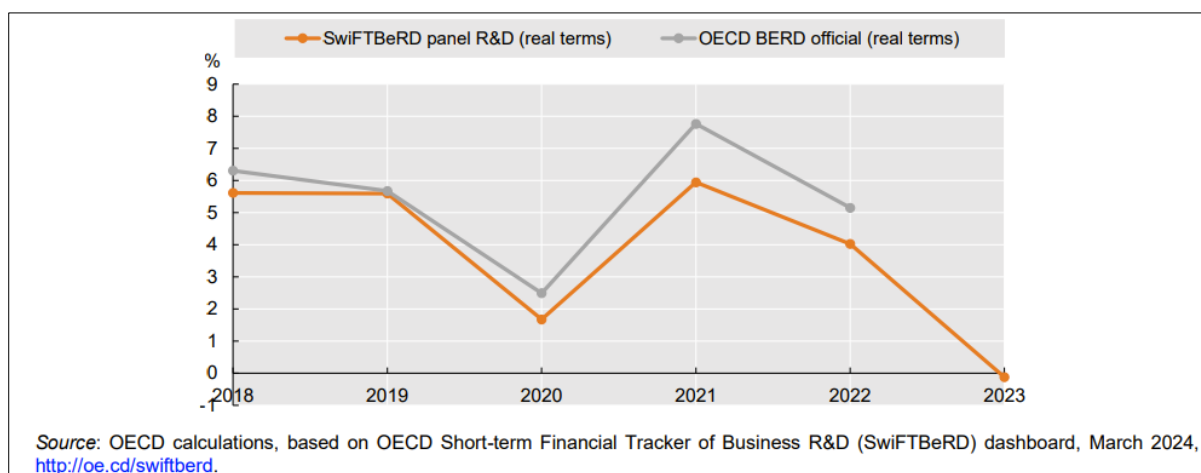
**Figure 3. R&D intensity: Gross domestic expenditure on R&D as a percentage of GDP**



The OECD has developed a preliminary view of R&D spending in 2023, monitoring data from government budgets for R&D, provided by official contacts within countries, in combination with exploratory analysis of published quarterly reports and accounts for a panel of large business R&D investors.

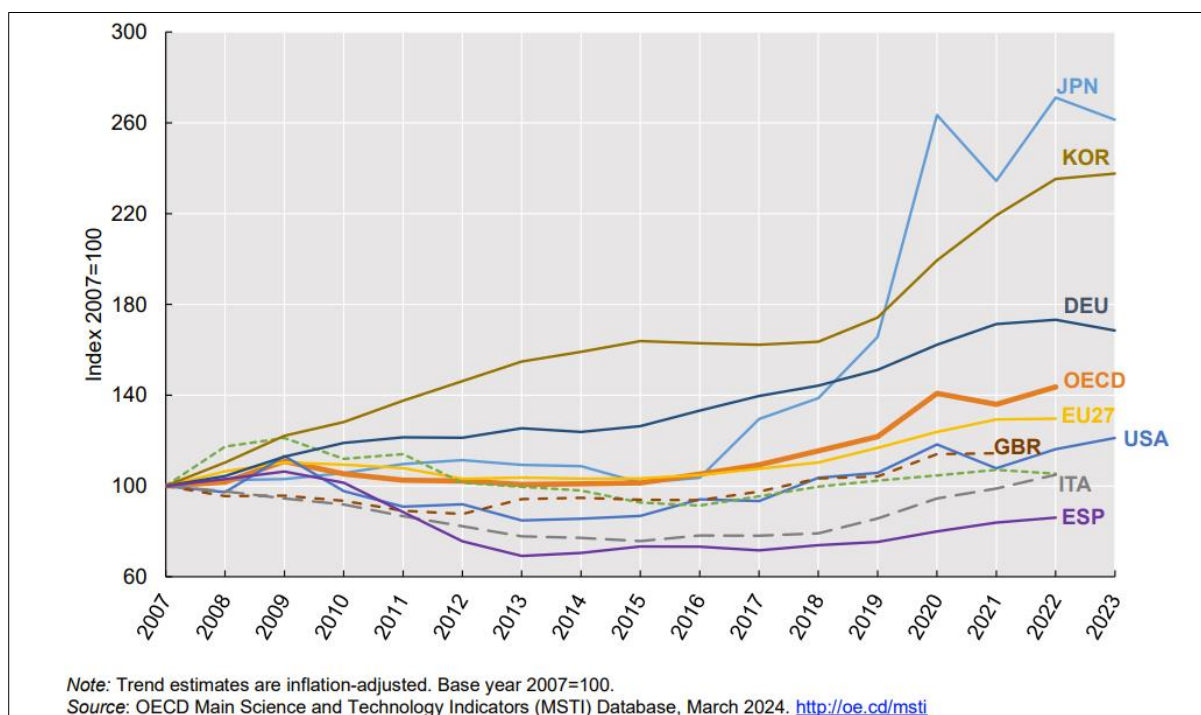
The OECD Short-term Financial Tracker of Business R&D (SwiFTBeRD) dashboard suggests that there was no real growth in business R&D in 2023, which is partly explained by sustained growth in price levels, as the SwiFTBeRD index rose by 6.8% growth in nominal terms. This was still a significant slowdown compared with 13.6% nominal growth in 2022. Unless BERD in companies not covered by SwiFTBeRD has evolved very differently, this anticipates a possible significant decline in R&D intensity in 2023 since the OECD Economic Outlook's GDP 2023 growth estimate for the OECD area is 1.7%.

**Figure 4. Official and experimental estimates of annual business R&D growth, 2018-2023**



Although it has shrunk in importance over the past two decades and its distribution is very skewed across countries, defence continues to be the largest policy objective for public R&D funds across the OECD area, followed by General University Funds. The outlook for 2023 is still uncertain as several countries have not yet reported data for this year. As of March 2024, data on R&D budgets for 2023 are only available for a small group of OECD countries whose estimated growth is estimated at 0.7%. Provisional data on R&D budgets indicate a real-terms increase above 4% compared to 2022 in Austria, Mexico, the Netherlands and the United States, while a reduction of at least 8% in Czechia and Turkey.

**Figure 5. Government R&D budget trends, selected economies, 2007-2023**



To access the full report, click [here](#).

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## CHIEF is no more

IT HAS been announced that all businesses may now move their export declarations to the Customs Declaration Service (CDS). HMRC have previously confirmed that businesses will have three months from being contacted to move to the CDS. Businesses will therefore have until Tuesday 4 June 2024 to move to the CDS. After this date, customs declarations will no longer be able to be submitted through the Customs Handling of Import and Export Freight (CHIEF). If businesses have not already done so, they should take the following steps to prepare:

- Subscribe to the Customs Declaration Service to be able to submit declarations from their software to the CDS.
- Contact the software provider they will be using to submit their export declarations to see if they can authorise their software and start using the free Trader Dress Rehearsal.

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## HR News

### Many businesses unaware of new digital immigration and mobility changes

THE UK and the EU are both rolling out Electronic Travel Authorisation (ETA) schemes which will digitise visas and make overstays immediately visible to immigration authorities. The UK scheme was introduced in November 23 and the European Union's European Travel Information and Authorisation Scheme (ETIAS) will come into force in 2025.

The UK's ETA scheme started with Qatari nationals and will be extended in phases throughout this year. It provides digital permission to travel to the UK which will be needed by nationals from more than 60 countries if they want to board a flight, boat or train destined for the UK.

Working similarly to the ESTA scheme for short-term travel to the US, ETAs are an electronic-only authorisation and are needed by short-stay business and social travellers. The EU equivalent scheme will affect UK nationals travelling to the EU.

At the end of 2023, a survey of 100 large and small UK businesses on their preparedness for the ETA scheme showed just 3 per cent were fully prepared and 25 per cent were completely unaware of the scheme.

Historically, non-visa nationals have been able to travel into the UK and Europe relatively anonymously, with visa and immigration checks led by border force staff. Some 26 European countries, 22 of which are within the EU, restrict such nationals to a 90-day stay within any 180-day period, but once in the EU there has to date been little or no visibility or checks on the length of stay or the activities undertaken.

The digitisation of immigration regimes changes that. The length of a visitor's stay will be visible, and violations are likely to be acted upon or taken into consideration for future applications. Additionally, digitised immigration systems allow for the expeditious sharing of data between government agencies, such as the immigration, tax and labour authorities.

The EU is currently three years into a 10-year digitisation programme. In March 2023, the European Labour Authority (ELA) launched the Posting 360 programme, which aims to bring national authorities across the EU together to increase knowledge and expertise about social security and the posting of workers. This focus on the enforcement of the posted worker rules will lead to greater scrutiny and more frequent inspections, facilitated by a higher degree of transparency and increased collaboration.

Posted worker and social security compliance should be a key priority with companies that have employees working in other European countries or undertaking frequent short-term travel. While the UK is no longer within the EU or a member of the Schengen zone, data on travellers will be shared for security and health related purposes.

However, there are also likely to be more sensitive challenges; a senior executive with an unblemished career, but perhaps a teenage indiscretion for drink-driving or drug misuse, may find themselves subject to a request for more information or worse still, being refused entry to a country where once travel was easy.

## Changes to redundancy law for new and expectant parents

PREGNANT WOMEN and new parents will receive greater protection from being made redundant under the [Protection from Redundancy \(Pregnancy and Family Leave\) Act 2023](#), which came into effect on 6 April.



Under the new Act the window of time during which a

worker is protected from redundancy will be extended to safeguard pregnant employees from the time they disclose their pregnancy to their employer until 18 months after the baby is born. It will also apply to employees returning from shared parental leave or adoption leave.

If there is a prospect of redundancy, then a suitable alternative job must be offered. Failure to do so could be automatic unfair dismissal and discriminatory.

Organisations should review and update their HR policies, procedures and training materials to reflect the new law. While the new rule does not completely prohibit the redundancy of existing employees, it does impose stricter criteria under which this might occur. Employers must prove there are no suitable alternative vacancies and that the redundancy is not related to the employee's pregnancy or maternity leave.

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## Company News

# UK quality and precision - the foundation of Graticules Optics' success

IN THE realm of optics, where precision is paramount, a UK company, Graticules Optics, has stolen a march on its international competitors. By blending traditional British quality with astute innovation, it is delivering a unique service for its partners in microscopy, optics and spectrometry.



The name 'Graticules Optics' was a good choice when the firm was established over 70 years ago says Director, Neil Blackford. "While reticle, reticule and graticule have the same scientific meaning; a pattern on a piece of glass, the word reticules has come to conjure images of antique ladies' handbags which wouldn't have been a good choice for a company whose focus is on the forefront of scientific exploration."

Graticules Optics' earliest roots can be traced back to the first World War with Julius Rheinberg, a member of the Royal Microscopy Society who was well known in the field of microphotography. He invented a grainless photographic emulsion which attracted the attention of the Ministry of Defence



and as a result he was tasked with developing and supplying gratings for their gun sights. His nephew, Leslie Rheinberg, subsequently took over the company and started the range of photolithographic products, which today stretches from grids on glass to film and metal foil,



catering to an extensive clientele spanning light microscopy, electron microscopy, metrology, defence, aerospace, and instrumentation sectors.

Neil Blackford joined in late 1990s and with Mark Smetham who is in charge of operations, he forms the core of a small team with big ambitions. “We are mainly concerned with putting micropatterns onto pieces of glass or foil materials, to a very high standard, which are used in microscopes and a wide variety of other markets for measuring, counting, attenuation, aligning and calibrating. For instance, customers need to calibrate microscopes, so we provide stage micrometers – basically very accurate scales which scientists and technicians use to verify the measurements of their eyepiece reticle or camera system, and give traceability to international quality standards. Our kit works with all the major brands; Leica, Zeiss, Nikon, Olympus as well as the multitude of other manufacturers.”

The company is now based in Tonbridge, Kent where it employs 27 people, and where all the manufacturing is done and it is the quality of its products which is most important to the Graticules team. The company is accredited to ISO 9001:2015 Quality Management System and the philosophy of the business is simple: To deliver first class



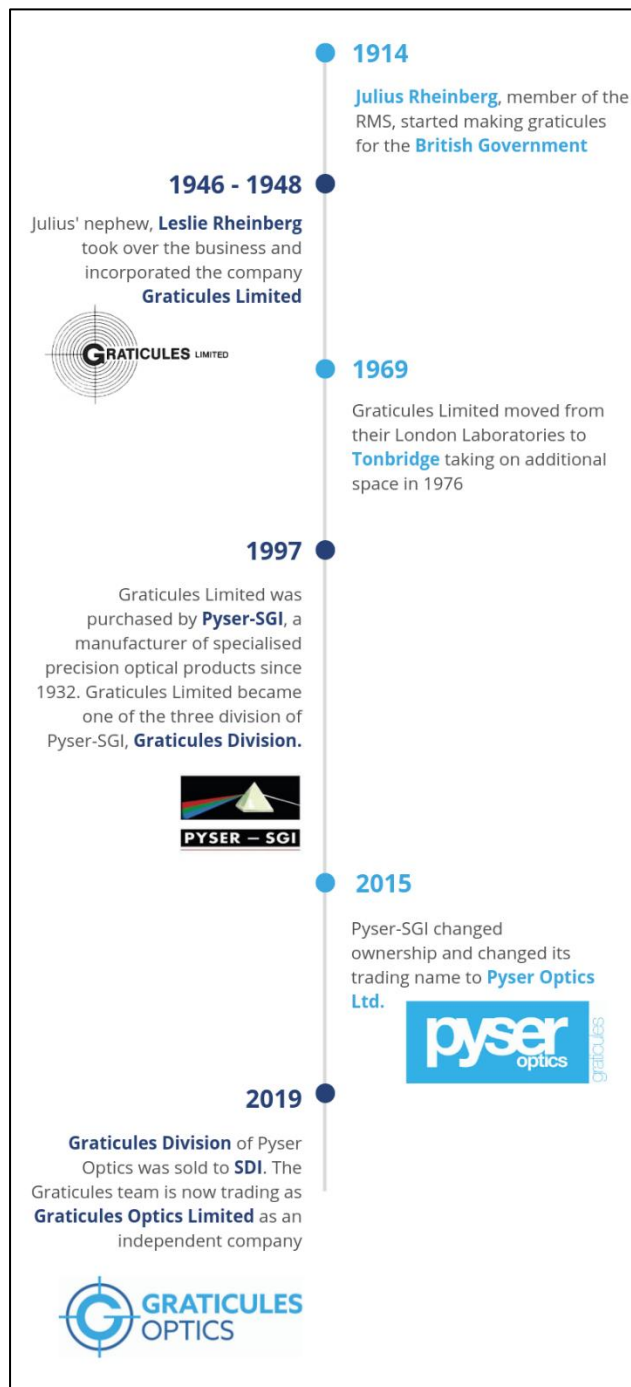
**products and services to customers, on-time and to specification.**

The original Graticules Limited company was purchased in 1997 by Pyser-SGI, a company specialising in precision optical products for the Defence and Broadcast industries. But in February 2019, Graticules became one of the growing family of companies joining the SDI Group PLC umbrella when SDI bought the Graticules Division of Pyser Optics.

“Joining SDI has been great for Graticules,” says Neil, “since then we have been able to re-invest the cash we generate into the business. We have been able to invest in new tech and we are at the forefront in developing new products particularly for life science and materials analysis, which use higher magnification electron microscopy.

We provide the support grids upon which samples are placed and the holes allow electrons to pass through to the detector, they are consumable items, made from a variety of metals, and we supply them worldwide.”

“Applications keep growing in this area where magnifications can be up to 5,000 or 10,000 times, and the user demands become more critical. Our customers could be working on cancer cells or asbestos fibres, metal composition, or now more frequently microchip wafers. That’s why we have such high worldwide demand in America, EU, Japan, Korea – they all have an abundance of electron microscopes.



“Two areas that have significantly grown in recent years are cryo analysis and wafer inspection, as demand increases for these analyses. These markets require very high-quality grid products and traceability of every analysis done.”

“People want quality and now they also want traceability,” says Neil. “This offers us a real growth opportunity. Lots of products now need to be marked with a unique data code so our customers need a data marking system which can provide a unique code on each product. We have invested heavily in this area and can now, uniquely, generate these miniature codes. We think this will be one of our biggest growth opportunities. It’s so big we are just scratching the surface at the moment but we will be moving ahead as the market develops.

“We also supply precision slit products into spectrometers. These are used as entrance lists to provide a defined beam of light through to the grating or detector. The quality of this slit determines the accuracy and definition of the instrument. This is also a rapidly growing market, particularly in the US and EU.”

Outside the lab industry, Graticules supplies the metrology sector with calibration scales, grids and alignment products, many of which are supplied

with Certificates of Calibration, again for traceability of measurement.

Neil’s immediate ambitions for the company is to focus on the US market well known for being very parochial, protective and difficult to get into. “We are looking for opportunities to set up or acquire in the US and one of the advantages of being in an organisation like GAMBICA is that we can meet other companies who are in a similar market but don’t compete. We are looking for companies that we might be able to work with – so if you are already in the US market successfully or want to work with us on getting there – do reach out.”

You can reach Neil at Graticules Optics on [Neil.Blackford@graticulesoptics.com](mailto:Neil.Blackford@graticulesoptics.com)

To learn more about Graticules, you can reach their website [here](#).