

SO

2026

The Productivity Paradox

As expectations of efficiency rise, are AI gains real or are we heading towards a productivity paradox?

Redefining Diagnostics

Insight from Dr Caroline Parker, Co-founder of the Forensic Genomics Innovation Hub, on making complex science accessible to all.

The Underground Battleground

How access to critical minerals is shaping global policy and funding, and what this means for the innovation economy.

Be Unapologetically You!

Lauren James and Amy Lee explain how Women in Tech Hampshire empowers female professionals in the technosphere.

MOVING AHEAD

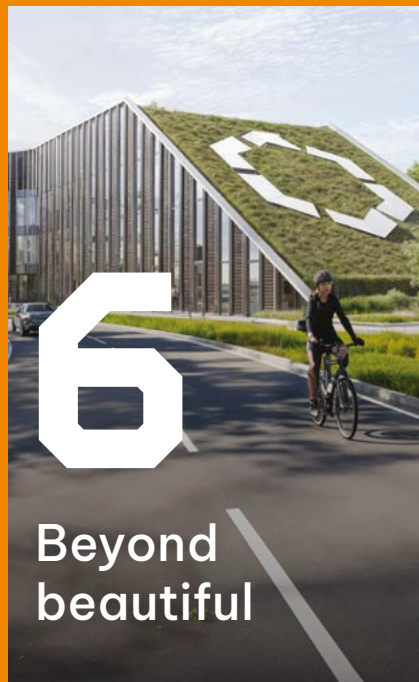
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SO...

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It has been a pleasure to have been a part of the Science Park's journey and I wish everyone that I have worked with during this time continued success.”

FAREWELL

“This will be my final column for SO Magazine, as I step down this year after nearly 16 years at Southampton Science Park. It feels fitting to reflect on my very first piece, when I set out what I hoped to bring to the Park on becoming CEO in 2019. Much has happened since then.

Across the estate, many physical spaces have been transformed. Beginning with the redevelopment of a disused radiator factory into the Engineering Centre – a specialist environment for light industrial research and development – to reimagining the Innovation Centre with a welcoming entrance, relaxed collaboration and social areas, improved Fusion catering facilities and flexible desk space in a new Incubation Centre. We've also refurbished Kenneth Dibben House and the Greek letter buildings and rolled out solar energy across the Park.

Most recently, seeing Infinity Labs progress from outline sketch through planning permission and breaking ground to topping out has been a real highlight. I look forward to returning to the Park later this year to see these new laboratories open.

But Southampton Science Park has never just been about buildings. At its heart, it is all about people. People with previously unimaginable ideas and the curiosity to work out how to make them fly. People with talented teams who have boundless creativity and ambition. And my own colleagues in the Science Park office who work to create a thriving, supportive and friendly environment for all. I have been immensely proud of what my team achieves every day.

Another highlight for me is being involved in the Catalyst business accelerator since inception. This has provided more than 130 start-ups with the early support they needed to move forward with confidence. It's always good to see some of their growth stories featured here.

Now it's time for a change. Time for me to explore many more parts of the world that I've yet to reach, and to spend time with family and my musical pursuits. And time to pass on the privilege of leading this remarkable place to Michael, who I know will be an excellent custodian of all that makes Southampton Science Park special – and turn the dial even further.”



Dr Robin Chave

“I’m delighted to be joining Southampton Science Park – it’s such a special place.

The mix of start-ups and blue-chip companies, the collaboration of researchers and serial entrepreneurs and the intersection of academic and commercial worlds create an environment with huge potential for sparking innovation. All this happens within a beautiful, leafy setting – and very much on a human scale, where there’s a palpable sense of community and familiarity.

Having worked in the higher education sector as well as across a range of private-sector roles related to innovation, I’ve developed a strong appreciation of how universities see the world, the challenges companies face in securing funding to scale up, what investors look for, and the important role that places such as the Science Park play in enabling all parties to achieve their goals.

That experience has underlined how critical it is to have a strong vision and strategy – a shared mission for all stakeholders. I also believe it’s important to cultivate an outward-looking attitude: aligning our provision with national growth initiatives and learning from peers around the world will maximise the Park’s broader impact, both social and economic.

In pursuit of that agenda, the long-term masterplan for the Park, developed by Robin and the Board, presents an exciting prospect. Supported by a management team that’s full of enthusiasm and ideas, there’s lots of scope for creating more high-quality innovation space for science and technology businesses in accordance with market needs.

My first priority, though, will be to do a lot of listening. I’m hoping to learn from customers, staff and other stakeholders and to challenge my own ideas about how best to move forward. With that in mind, I’d welcome people getting in touch and I look forward to working with you in this very special place.”

Michael Aston

**Michael Aston, CEO,
University of Southampton Science Park**

“

I’m very optimistic about the coming years at the Park. I look forward to continuing to serve our resident companies as they grow, to developing new and specialised facilities for niche technologies, strengthening our environmental and social performance, and to leading a best-in-class operational team to deliver all this.”



BEYOND BEAUTIFUL

The Science Park has marked a major milestone in the build of Infinity Labs, its latest commercial development which is as beautiful as it is beneficial to the Central South innovation economy.

Infinity Labs will deliver innovation-driven businesses the infrastructure, access to talent, connectivity and ecosystem needed to scale faster and compete at a higher level. It offers the chance to do career-defining work in an environment designed to support innovation, wellbeing and quality of life.

Named in recognition of the limitless potential successful technology businesses offer the local economy,

this stunning flagship facility will provide high specification laboratory, office and collaboration space under one roof, set within one of the UK's top four science parks.

Following a traditional topping out ceremony in April, construction is on target to complete before the end of 2026. Potential resident businesses are encouraged to enquire early.

DOWNLOAD
BROCHURE



"Southampton Science Park is the only commercial space in the Central South region that is dedicated to the needs of science and technology businesses. This multi-million-pound investment further boosts our offering by providing the vital laboratory space needed to equip the local economy for growth and enterprise through scientific discovery, and we are excited to welcome our first residents to this flagship development."

Dr Robin Chave,
Former CEO - Southampton Science Park

"Infinity Labs is a clear statement of ambition – for this Science Park, for Hampshire, and for the wider South Central economy because, if we are serious about supporting the UK's industrial strategy, then we need places like this. Places that are purpose built. Places that connect businesses to talent, to research, to opportunity. Places that allow innovation to move from idea to impact. Infinity Labs delivers exactly that."

Cllr Nick Adams-King,
Leader - Hampshire County Council

"We are proud to be part of a hero project like this, one that will have such a lasting impact on the region's scientific and economic landscape. Infinity Labs is more than a building – it's a platform for innovation and discovery."

Jon Daines,
Managing Director - Amiri
Construction, main contractor

"Infinity Labs is all about creating a place where science, technology and R&D businesses can come together, collaborate and grow. By combining flexible lab space, office, and collaboration space in one environment, the design encourages innovation and the exchange of ideas. The angled green roof really brings that energy to life, expressing movement, creativity, and connection. We are thrilled to be part of this exciting development and to contribute to a space that fosters innovation and connection."

Amy Bourne,
Design Architect - Scott Brownrigg

"The Central South is a hub of innovation and economic prosperity, boasting a diverse array of industries from technology to maritime. As an area rich in talent and resources, it serves as a prime location for business investment, making it a focal point for both national and international growth. Southampton Science Park sits at the centre of this activity, and this prestigious development exemplifies its role perfectly – it will be a fantastic addition to our regional economy."

Leigh-Sara Timberlake,
Group CEO - Business South

"Few cities have the wealth of natural assets, connectivity, quality of life and scale of opportunity that Southampton offers. It is one of the fastest growing cities in the UK and a major investment hotspot. The Infinity Labs development at Southampton Science Park is a shining example of our great city of opportunity, taking the next steps to a future of innovation, vision, and inclusivity."

Cllr Sarah Bogle,
Leader and Cabinet Member for Economic
Development - Southampton City Council

"Renowned for its outstanding natural beauty, the River Test and its tributaries, flourishing market towns and villages, Test Valley is hard to beat as a place to live and work. It is also an economically vibrant area, where we support a wide variety of businesses to thrive. We look forward to welcoming the new residents at Southampton Science Park's Infinity Labs to this beautiful part of the country."

Cllr Phil North,
Leader - Test Valley Borough Council

"Infinity Labs creates real-world pathways for research, talent, ideas and ambition to translate into commercial and regional impact. Its close proximity and links to the University of Southampton and leading innovation networks will connect occupiers to an exceptionally high-value talent pipeline and I have no doubt that its exceptional setting will help these businesses to support and retain high performing talent."

Professor Mark Spearing,
Vice President of Research and Enterprise,
University of Southampton

"The new Infinity Labs building is impressive and beautiful. It is such an iconic looking building, and a real testament to the Science Park's determination to grow, to bring high quality jobs to this area, and of course, to make sure that there are facilities that our scientists will use and desperately need. I can't wait to see the finished building!"

The Rt Hon Caroline Nokes,
MP for Romsey and Southampton North

Gamechangers

REDEFINING
DIAGNOSTICS

Dr Caroline Parker has over 20 years' experience in private forensics, family DNA testing, clinical genetics and infectious diseases across Europe and South Africa. She co-founded the Forensic Genomics Innovation Hub (FGIH) in March 2020 to make scientifically validated and clinically actionable tests for early detection of health risks more accessible to consumers and practitioners. Here, she tells us about her experiences of becoming a successful business owner.

What inspired you to transition from working for global life science corporates to setting up your own business? What problem did you set out to solve?

There were a number of reasons, but the main driver was that it was clear to me that there was a large gap in the forensic science market in the UK.

After many years of working in private forensics and clinical genetics in Sub-Saharan Africa, and seeing developments across Europe, the USA and South Africa, I identified an opportunity for a company that specialised in bringing genomic technology, routinely used in clinical genetics, into specialised forensic casework. So, pulling on my many years' experience and the contacts I had in the UK in these fields, I set about building that company.

Has your vision changed since, and if so, why?
Very much so.

The FGIH was founded solely on the basis of providing forensic genomic analysis in cold casework and specialised casework to the leading forensic providers in the UK.

The Forensic Science Regulator in the UK, whom we had a good relationship with, had a budget to adopt more revolutionary technology to solve crimes where DNA evidence was key. However, our company was incorporated just weeks before COVID hit! Long story short, but this budget was quickly reassigned to support furlough schemes and the NHS, clearly a far greater need at the time.

With the budget withdrawn and our start-up less than a year old, we pivoted quickly, leveraging the skills and instrumentation

that we already had in-house to support the pandemic response. FGIH quickly became an accredited satellite COVID PCR testing facility within the private testing market.

After the pandemic, everything changed again! Unfortunately, forensic DNA testing returned to established methodologies because the public funding set aside for new technologies was no longer available. By this time of course, we'd made excellent new contacts in the healthcare industry through our COVID PCR testing service and our clients in this sector asked what else could provide.

Four years on, the FGIH is a prominent private molecular diagnostic company offering many different health and wellness tests to over 100 clinics, private companies, medical professionals and the general public.

How challenging was it to shift from a business-to-business mindset to a consumer-facing marketplace?

COVID made everything more challenging for many companies but, having just established the business when the pandemic hit, the timeframe to adapt brought this challenge into clear focus.

Personal customer service is something our company is extremely passionate about. Working with people – from helping to solve crimes that give families closure, to supporting families with genetic conditions – is something I've always enjoyed, so it was not too difficult to shift towards addressing a mix of both business and customer needs.

Communication is critical in this respect so, as a scientist, how do you go about translating complex science into a clear, easily understood offering to members of the public?

Yes, communication is key to the business both within it and with our customers. Talking has never been a problem for me – all our team will tell you that! In fact, I was recently called on to contribute to the TV programme “Killer at the Crime Scene” explaining how forensic genetic genealogy helps to solve crimes.

“

I really enjoy educating people and training clients on what we do, and this approach is something that I believe distinguishes us from our competitors.

Far too many test kits are made available to the public that result in more questions than answers, or worse, give inaccurate, unsubstantiated results. We only provide tests that are clinically recognised and reliably provide actionable results. Scientific credibility and validation are the essence of our work and AI is now helping us to create even more accessible articles and tools that help to educate consumers on how it works and why this is important.

What’s been the most rewarding moment in your start-up journey so far?

To be responsible for our own destiny and watch the company grow motivates me more and more. Initially, the pandemic gave our brand new laboratory an unexpected opportunity to make a positive impact in the community and demonstrate what we could deliver. It’s now clear that our clients love the service we provide and the business continues to gain momentum from word of mouth recommendations.

Reflecting on your journey as a business leader to date, what advice would you have given yourself at the outset?

Looking back, I would say, don’t try to introduce a product or service that you imagine your customer needs, and don’t try to do everything at once. Take your idea and assess the demand for it, understand what the customer is looking for and then build this one step at a time. This approach creates a strong framework that you can use to test and introduce your next idea.

What drew you to Southampton Science Park to establish your business? Do you think the choice of location plays a role in creating a successful company?

I am from Chandlers Ford. I did my PhD in human genetics at the University of Southampton, and I then worked for Promega UK who are based at the Science Park. Consequently, returning to the UK after 15 years working abroad, Southampton Science Park was the logical location to bring my business idea to fruition. It’s a beautiful place to work and it’s in a great location, with easy access to other major cities and Southampton Airport.

“

The excellent reputation of Southampton Science Park extends beyond the park itself and offers an element of prestige to current and prospective clients.

What's next for FGIH?

Healthcare is undergoing major shifts, for example: AI-enabled diagnostics, digital health, decentralised trials, preventative care, longevity, personalised medicine, home-based care, and value-based healthcare. With our team's expertise across these areas, and our passion to provide direct to consumer/practitioner clinically actionable tests, we are uniquely positioned to build on these market dynamics.

Thinking about home-based care, if you could change one thing about how people approach their health today, what would it be?

Stop buying online tests! Yes, that is coming from me, who sells tests online! Many people are increasingly disillusioned with the NHS and their ability to access health services, understandably leading them to take action themselves. But there are lots of products available online that are quite simply not scientifically sound. They can be misleading and even detrimental to someone's mental health. I encourage everyone to take control of their own health but the classic saying 'you get what you pay for' is true. A clinically actionable test is not likely to be cheap. It's valuable. The fundamental science behind the tests, and the credentials of those providing them is key. So my advice is to please check what you are investing in and be very wary of online reviews – healthcare isn't the same as choosing a restaurant!

A self-proclaimed 'Duracell bunny', how do you yourself stay healthy and energised as you juggle work and family life?

Simply put, I don't sit still for long. I like to run but, when you're running a rapidly growing company, getting time to do this is not so easy these days. Walking in the park at weekends with my husband (co-owner of FGIH) is my main exercise now, and also a time when we can brainstorm!

My son, who is 17 years old and very supportive of the demands our business puts on our home life, has himself learnt two very important life lessons so far: one is how to prepare a Gousto meal, and the other is that 'there is no replacement for effort', both of which will benefit him in his life ahead!

fgih.co.uk

A PHENOMENAL FLUME

The Future Towns Innovation Hub at Southampton Science Park has become home to REAL, one of the largest and best-equipped tilting flumes in Europe.

Conceived by the University of Southampton School of Engineering's Associate Professors Gustavo de Almeida and Gerald Müller, the REAL is 22m long, 1.80m wide, 1.10m high, and achieves a flow rate of 1.40 m³/s.

This incredible structure provides a large-scale research environment to study how infrastructure performs under realistic river, coastal and marine conditions. It can recreate flowing water, waves and moving sediment to test structures such as bridges, flood defences, ports, and offshore wind foundations. By combining currents, wave action and river and sea bed processes in one controlled setting, the flume allows researchers to understand how infrastructure can become stressed, damaged, or unstable over time.

Business Support

EXPERT ADVICE

The companies that participate in Southampton Science Park's Catalyst business accelerator programme benefit from the insight of world-class coaches and speakers with wide-ranging academic and commercial experience. Here's a taster of the valuable advice they receive during the programme and as an alumnus.

Phil Sharpe on Uncovering Value

"Everything you do as a small business founder and future CEO – your business plan, your financials, marketing, recruitment strategies and team culture – should flow from your value proposition. Get it right at the outset and it will guide and streamline your decision making, keeping your business on track to optimise growth potential.



Put simply, business is transactional; it's about two parties trading value. This value exchange is the essence of any commercial operation, no matter whether you're Microsoft, McDonalds, a market trader or a tech start-up. Customers will only buy from you if their perception of the value they expect exceeds the price that you are charging. It is impossible to set this value, or price, unless you know what your customers think and how they feel about what you have to offer. It's about psychology, not technology: customer drivers typically break down into 70% personal, 20% social and 10% functional.

Determine exactly who your customer is

As an early stage business, all of your time and effort should be spent understanding your prospective customers. Consider that your value proposition may not be targeted at your ultimate user or beneficiary, but to a channel customer. Who should be your priority? Tease out the difference between the user, the customer, the influencers, and other players in the value chain.

Investors look to support companies that are focused on securing these solid customer insights which address uncertainties and reduce their risks. Identifying and communicating exactly what your target customer values is the foundation of funding decisions. Making assumptions is business lethal.

Keep it simple

The best value propositions are those that are: simple, genuine, provable, authentic and easy to remember. In science and technology, this often means stating something complex very simply. You should be able to do this within sixty seconds. Something is wrong if you can't do this. Keep coming back to simple.

Throughout the life of a business, the value proposition will be constantly tested and re-tested by a whole host of stakeholders, including customers/users, investors (shareholders, banks, families, government bodies), employees, regulators, influencers and competitors. Investing in time and effort at the outset to create a good value proposition is never a waste of time and effort."

Robert Dent on Building Teams

"The reason I have managed to make money from hairbrained ideas is through the teams I built around me. You are only one individual. You have only so much energy and insight; beyond that you need a good management team that can make a difference. All of what follows is easy to say, but harder to do. Nevertheless, it's a proven process that has underpinned my success."



Choose people who are more experienced than you

As a business founder, it can feel uncomfortable engaging with people who have more experience than you but it's something you'll absolutely need to do, so that they can pick up the ball and run with it. As early as interview stage, you want a candidate that can tell you what the marketplace will think about your product or service. Look to hire people who have experienced, at some point in their career, what it's like to work in a small, fast growth business.

Get to know the whole person you're interviewing, not just the version of that person that could be working with you. Understanding their values, what's going on in their lives outside of work and how

this impacts them is important: it will help you to manage them more effectively and retain them for longer. You're not looking for perfect alignment with your own values; you're looking simply to understand the overlaps. When things get tough, it's values – what drives someone – that make the difference to how, or whether, your business comes through it.

Communicate clearly

Leading a team effectively comes down to clear communication and understanding mutual expectations, remembering that your hires have expectations of you, just as you do of them. Make sure you're delivering on the support they need if you want them to deliver for you.

Celebrate successes

Always be respectful and have fun! As an entrepreneur, you're never going to feel that there's isn't something that needs doing. Your mind will always be on the next thing – it has to be, as you're concerned with strategy and future. But remember to celebrate what's being achieved in the here and now."

Robin Arkle on Embracing Failure

"We all know that we learn from our mistakes. But, in business, when the stakes are often much higher, it's fear of failing that tends to drive founders on. Far from looking upon setbacks as an opportunity to gain insight, innovate and grow, it's often quite the opposite. So, is there, and should there be, an appreciation and scope for small businesses to make mistakes?"

Certainly, all the mega tech brands of our time – Apple, Microsoft, Google – have well documented examples of flawed product development, but, with deep pockets and untapped resources to draw on, these situations are usually regarded as mere blips, all part of the journey to greatness.

It's different as a start-up. Early-stage businesses keen to attract financial backing need tangible progress on their side to gain attention and traction with the investment community. Securing favourable contract terms is all the more difficult when the innovation or technology is unproven and profitability is a mid to long term vision.

My advice?

Listen twice as much as you speak

We have two ears and one mouth and, from my very early career in sales,

I quickly understood the importance of gathering as much information as you can if you're going to solve your customers' problems. Consider everybody interesting and know that discussing challenges and exchanging ideas builds trust.

Learn to trust

Surround yourself with better people than you consider yourself to be, both inside and outside of the organisation. In building my management team, I had to learn to trust others and to tolerate a level of inconsistency (although cementing company culture, values and standards through training was an important pillar of our achievements).

No matter what stage your company is at, entrepreneurship is lonely. Entrepreneurial peer groups are really valuable. Surround yourself with other

excellent people in similar situations. Sharing experiences and ideas helps you to be nimble and to thrive.

Be sale-ready

Plan your exit early as part of your business plan. Be sale-ready, but also expect curveballs. In my business, I could never have predicted responding to challenges arising from Brexit or Covid-19. You simply cannot plan for everything that will affect your business, so you must be willing to change to thrive and achieve your end goal. Although deeply personal given how invested you've been in building a profitable company, be prepared for every decision that you've made to come under scrutiny during due diligence. And, when it comes to this point, lead with your head, not your heart."



THE UNDERGROUND BATTLEGROUND

Critical minerals are central to the technologies shaping economic growth and the transition to low carbon systems. Essential to everything from clean energy and transport to defence and advanced manufacturing, demand is rising fast.

It's no surprise then that these elusive elements, in a market characterised by supply chain concentration, geopolitical sensitivity and rapidly rising demand, are fast becoming underground battlegrounds.

Uniquely Critical

What's considered 'critical' varies from country to country. The raw materials that are considered vital for their economic and industrial strategies or for national security – but are not easily accessed – make each national list.

The 17 rare earth elements feature on many national critical minerals lists because they are vital to the manufacture of the microchips that power almost every element of today's society. Found in minerals and rocks, each rare earth element has a distinctive atomic structure and electrical and magnetic qualities which offer specific and unique properties. Although actually widespread, these elements are labelled 'rare' as they are hard to find in pure form, often hazardous to extract and difficult to process.

Supply

Having recognised the potential for a green revolution a decade ago and investing heavily in commercialising this opportunity, China dominates the rare earth processing market: over 95% of some rare earths are processed here, a near global monopoly. But here, competitiveness has often come with the price of lower standards, sparking environmental, social and governance (ESG) concerns such as uncovered toxic waste ponds, deforestation and soil erosion.

Investment

Environmental pressures and governance challenges, combined with political uncertainty, supply chain concentration and price volatility, elevate risk exposure for institutional investors, who expect high standards of accountability and compliance. In fact, critical minerals sit at the centre of what credit rating agency, Moody's, describes as 'the era of exponential risk' as all these factors reinforce one another and create complex exposures.

The London Metal Exchange expects to play an important role in investor reassurance, positioning itself as a key driver of ESG stewardship in the sector, combining sustainability standards with public supply chain disclosures. It is clear though that, if they are to mitigate investor concerns, tech innovators seeking financial backing should implement a multi-pronged, data-driven strategy that acknowledges the complex risks surrounding critical mineral supply chains. Risk assessments, scenario planning, stress testing and the use of established reporting platforms which demonstrate adherence to regulatory compliance and best practice ESG protocols will undoubtedly strengthen investor confidence.

Policy

With mining and processing increasingly concentrated in relatively few countries, governments globally are stepping in to reduce exposure to geopolitical and environmental shocks.

As the UK is a net importer of critical minerals, the government published a Critical Minerals Strategy – Vision 2035 policy paper in early 2026, setting out how it plans to navigate our vulnerabilities through optimising domestic production and building resilient supply networks. Here, success looks like:

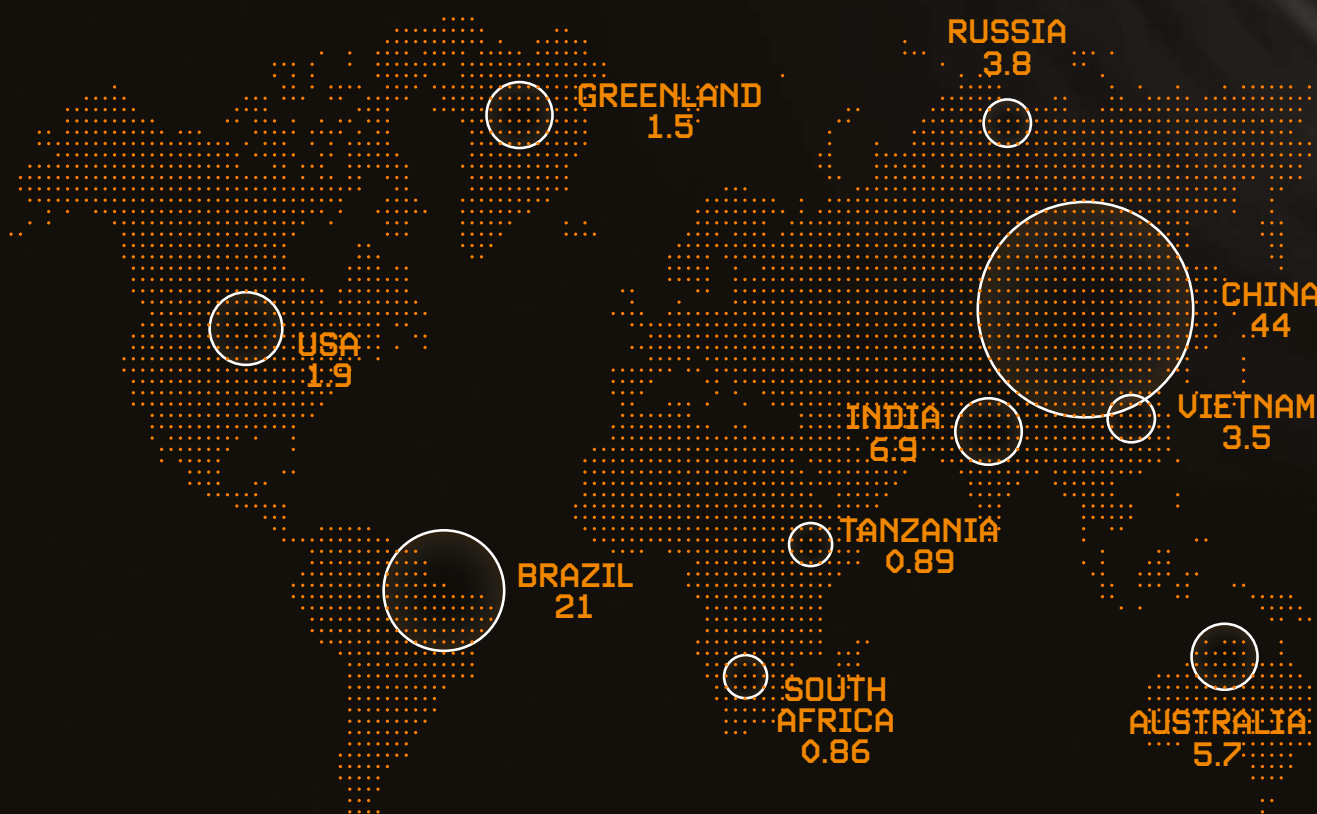
i) at least 10% of annual UK demand for critical minerals is met through domestic production, with the South West and the North East regarded as significant contributors;

ii) 20% of demand is met through recycling products to recover critical minerals;

iii) supply is diversified through partnerships with resource-rich nations, so that no more than 60% of demand is supplied by any one country.

Britain has also joined the US, Australia and Africa to form The Critical Minerals International Alliance (CMIA) in a bid to dismantle barriers and diversify critical minerals supply chains to meet long term industrial requirements.

Top 10 Countries for Global Rare Earth Reserves, 2025 (million tonnes)



The UK has 34 materials on its critical minerals list

Aluminium, Indium, Niobium, Tantalum, Antimony, Iridium, Phosphorus, Tellurium, Bismuth, Iron, Platinum, Tin, Borates, Lithium, Rare earth elements, Titanium, Cobalt, Magnesite, Rhenium, Tungsten, Gallium, Magnesium, Rhodium, Vanadium, Germanium, Manganese, Ruthenium, Zinc, Hafnium, Natural graphite, Silicon, Helium, Nickel, and Sodium.

The UK's requirement alone for copper is forecast to almost double by 2035, while lithium demand may increase by more than tenfold.

COME ON DOWN!

The South Coast combines strong connectivity, skilled talent, and a high quality of life, with Southampton's global maritime links and Winchester's creative heritage attracting companies scaling beyond London.

More sunshine
than anywhere
else in Britain!

Waterfront cities,
vibrant market towns
and chocolate box
villages – always
ranked among the
best places to live
in the UK

The UK's gateway
to European and
global markets
through an airport
and two ports

Creativity and
modern culture
abound alongside a
rich seam of history
and heritage

Outstanding
natural beauty:
two national parks,
stunning beaches
and glorious
countryside

Resident Showcase

AccelerComm

LAYERING SUCCESS

AccelerComm is at the forefront of high-performance 5G across satellite, terrestrial, and hybrid networks.

Building a 5G network on the ground or in orbit requires tackling some of wireless communications' hardest challenges. The physical layer is where those problems lay and where performance is ultimately achieved or lost. AccelerComm's mission is to solve them.

A spinout from the University of Southampton, the company was formed after years of research led by Professor Rob Maunder developing and refining signal processing algorithms. These algorithms underpin its core 5G Layer 1 IP (intellectual property) technology which allows the processing of ten times more data per watt than software-only alternatives. It is deployed in thousands of commercial satellites, operating in demanding orbital environments that no terrestrial network faces.

The company's researchers, engineers, and commercial leaders are recognised specialists in radio access networks. With 56 patents and over £45 million in investment, they work at the leading edge of communications and aerospace with partners including Intel, AMD, Capgemini, Radisys, Altera and Lockheed Martin.

Forging ahead, AccelerComm, is already actively contributing to the emerging 6G non-terrestrial-network (NTN) roadmap, enabling customers to access next-generation signal processing IP before it becomes standard. It has opened a second office in California and remains at the Science Park, where it recently incorporated a new laboratory into its existing office space.

accelercomm.com

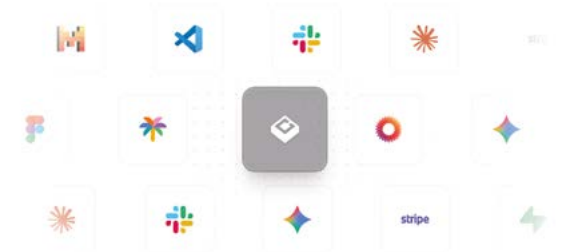
Comp AI

COMPETE COMPLIANCE

Comp AI has created a powerful, open source governance, risk and compliance platform which is breaking down barriers to growth for companies all over the world.

In increasingly unpredictable commercial settings, business leaders need to demonstrate risk resilience like never before if they are to enhance competitiveness and reassure investors. Compliance to mandatory and voluntary frameworks is an effective, but traditionally resource intensive, way to do this.

Established in 2025, Comp AI cuts through the time, cost and complexity of compliance with a powerful, open source Governance, Risk and Compliance platform. This solution automates and accelerates the process of adhering to frameworks like SOC 2, HIPAA, ISO 27001 and GDPR with pre-mapped controls that collect evidence and monitor risk continuously and in real time. Built-in tools provide a unified dashboard for managing policies, training, and vendor risks and deliver one-click audit-ready reports, all with the benefit of expert human support.



Due to the tangible, daily benefit it delivers to cross-company functions and its flexibility to scale in line with customer security needs, Comp AI's platform is suited to businesses of all sizes from seed-stage startup to global enterprise. It has the ability to unlock growth in a matter of days.

Comp AI's own growth echoes this. With offices in San Francisco and Southampton Science Park, the CompAI team has secured over 600 clients such as dub, Persona, and Docspring in just over a year.

trycomp.ai



Resident Showcase

TrouDigital



POWERFUL COMMUNICATION

TrouDigital is empowering organisations to connect, engage and educate their audiences around the world with next level digital signage.

All companies need to engage with their audiences meaningfully, accurately, and at the right time and place. Communicating effectively can be costly and challenging, particularly when trying to reach dispersed audiences such as non-desk workers. It can also become increasingly complex as organisations grow, launch new initiatives, or expand into new markets.

Digital signage helps simplify this challenge. It enables internal communications teams and department leaders to share multimedia content including images, videos, live feeds, dashboards, and web pages, helping important information reach the people who need it most.

TrouDigital's approach goes beyond software alone. Its end-to-end solution combines hardware, software, and support, tailored to organisations of all sizes. All that's required is a screen with an HDMI input, a media player, and the TrouDigital platform. From digital kiosks and window displays to interactive touchscreens, outdoor signage, and video walls, the platform supports a wide range of visual communication solutions.

Designed to be simple to use, organisations can manage thousands of screens from a single centralised dashboard. An intuitive drag-and-drop interface, built-in integrations, and flexible scheduling tools make it easy to create, manage, and deploy content across locations. Because the platform is cloud-based, users can update screens from anywhere while maintaining complete control over what is displayed and when.

Established in 2013 and one of the early companies to join Southampton Science Park's Catalyst business accelerator, TrouDigital has grown into a trusted visual communications partner for organisations across a wide range of industries. Customers including British Airways, Leonardo Hotels, The Entertainer, Morrisons, and the NHS use the platform to improve communication, engagement, and visibility across their organisations.

Today, TrouDigital helps organisations transform workspaces, enrich interactions, and communicate more effectively through screens with solutions that are flexible, scalable, and built around real-world needs.

troudigital.com

Data Revival

LABORATORY INSIGHT

Data Revival is transforming fragmented, largely unusable laboratory data into actionable insight, capable of empowering researchers to unlock next generation breakthroughs.

In laboratories and offices around the world, vast volumes of valuable scientific insight lie dormant, locked away in legacy systems and in diverse formats such as handwritten notes, databases, spreadsheets, PDF and images files. These resources sit in fragmented formats, largely siloed across systems and incompatible with today's digital chemistry tools. Yet, the potential value of these archives is significant, potentially vital in addressing global challenges.

Data Revival is channelling AI to unlock these data vaults, converting diverse resources into machine readable formats and so transforming fragmented archives into searchable, structured data that can be retrieved, analysed and deployed. The system is chemistry-aware, capable of recognising complex chemical structures from images, extracting reaction conditions from notes, and mapping sector-specific terminology across previously siloed sources to create relational and contextual links.

Sam Munday and Professor Jeremy Frey, Professor of Physical Chemistry at the University of Southampton and a Turing Fellow, founded the company in 2022, after working through the University's

own archive of decades of chemistry research locked away in over 2,000 handwritten laboratory notebooks.

Data Revival is now focused on building trustworthy AI systems for drug discovery and the wider scientific industries. Its proven, pinpoint accurate system has successfully analysed over 10 billion data points and processed over one million documents for global giants like GSK and Merck as well as leading research universities. One ongoing collaboration on green solvents has seen the team take decades of published chemistry research, freely available but largely unusable in its raw form, and turn it into a structured reaction dataset that is now helping to develop the next generation of green solvents for the chemical industry.

The company came to Southampton Science Park to benefit from its Catalyst business acceleration programme and has since established offices here. Co-founder Sam Munday has been awarded Innovate UK's Young Innovators Award and, early in 2026, the founders met the Shadow Minister for Science, Innovation and Technology in Westminster for a UK Tech Week roundtable.

data-revival.com

Management

AI: A PRODUCTIVITY PARADOX?

Artificial intelligence is sold as the ultimate efficiency tool. Behind the hype, many workers are feeling the opposite effect. As expectations rise, work/home life boundaries erode and 72-hour weeks become the norm, are AI gains real or are we heading towards a productivity paradox?

Research coming out of the Hass School of Business, UC Berkeley, conducted by Aruna Ranganathan and Xingqui Maggie Ye, suggests that, far from reducing workload, AI is having the opposite effect. Their eight-month study, conducted at a US-based technology company with about 200 employees, sought to understand how generative artificial intelligence tools changed work habits.

They found that found that employees embracing AI:

- **Raised expectations of themselves.** Because employees felt they had a 'partner' to help them through their daily workload, they introduced a new rhythm to their work, multi-tasking and working at a faster pace which gave them a sense of momentum. However, this continual switching of attention led to cognitive overload which raised expectations of themselves.
- **Generated extra work for colleagues.** Because they could receive immediate feedback and correction from AI as they worked, employees reduced their reliance on others, taking on a broader scope of tasks beyond the boundaries of their roles. The knock-on impact was that their colleagues conversely spent more time reviewing, correcting and guiding outputs than they used to.
- **Forfeited recovery time.** Because the conversational style of prompting AI felt more like an informal chat than formal work, employees slipped small amounts of work into breaks, early mornings and evenings, deprioritising downtime and extending work deep into recovery time.

Ranganathan and Ye concluded that while this extra output initially looks like a win for business leaders, it is unsustainable.

They witnessed how workload creep, cognitive fatigue, burnout, and weakened decision-making meant that the productivity surge enjoyed at the beginning gave way to lower quality work, talent turnover, and other problems down the line.

Writing in Harvard Business Review, they commented, 'While leaders are focused on promised productivity gains, they may find themselves surprised by the complex reality and may not see what these gains are costing them until it's too late.' Or, as TechCrunch put it, 'the industry bet that helping people do more would be the answer to everything, but it may turn out to be the beginning of a different problem entirely.'

This study's findings built on other published research. For example, a US National Bureau of Economic Research study that tracked AI adoption across thousands of workplaces, found that productivity gains amounted to just 3% in time savings. A separate trial found that experienced developers using AI tools took 19% longer on tasks, but crucially, believed that they were working 20% faster.



AI and the 996 Culture

Longer working weeks are becoming the new normal. Sometimes referred to as '996 culture', the approach romanticises long working hours, typically 9am to 9pm, 6 days a week. Chinese companies embraced the concept and coined the phrase a decade ago as they led the charge towards developing advanced technologies.

In Silicon Valley, many see long hours as a strategic investment in career acceleration, prestige and future financial worth. They see it as a personal choice rather than a burden, whereby 'a few brutal years now can create longterm freedom later.' They compare their commitment and trade-off to elite athletes, academics on the cusp of a breakthrough or those in artistic or scientific flow states.

Some investors support this position, likening the current AI gold rush to other times when intensity was celebrated and romanticised such as during the dot-com boom or the early days of crypto. They believe that the dawn of AI is another of these points in time when 72 or more hour weeks should be expected; they are inherent in start-up culture.

Whether the rise of 996 working is framed as an 'AI-problem' or a 'start-up problem' is less important than its outcomes. Research consistently shows that, as hours go up, productivity initially increases – but once a threshold is reached, it starts to decline again as physical and mental exhaustion sets in: errors increase and creativity declines under chronic stress.

The consequences of high stress levels are well known. The World Health Organization and the International Labour Organization concluded that long working hours (more than 55 hours per week) increased the risk of dying of heart disease by 17% and raised the risk of a stroke by 35%, when compared to working a more standard 35–40 hours. The productivity sweet spot is widely recognised to be around 40 hours per week with a sharp productivity drop after 50–60 hours.



How to Manage Burnout

Advice from Solent Mind, Southampton Science Park Charity of the Year 2026, on signs of burnout and how to mitigate these.

Burnout rarely happens overnight. Early warning signs can include persistent exhaustion, growing negativity or detachment from work, reduced confidence or effectiveness, and difficulty concentrating or staying on task. The good news is that burnout is preventable.

Remember the basics:

- Exercise
- Balanced diet
- Sleep
- Boundaries
- Ask for help!

Don't forget how important it is to take a break

Breaks between tasks and meetings allow the brain to 'reset,' reducing a cumulative build-up of stress. As well as 'switching off', we also need to learn how to actually relax; a skill that we aren't taught. Try taking a few minutes to remember what makes you smile, what helps to bring balance, to keep stress from becoming chronic, what brings you joy.

If you are a manager, be vigilant

Many companies do not notice problems until top talent hands in their notice, but burnout doesn't always look like someone leaving. It can show up as reduced curiosity, quiet disengagement, and recurring health problems. While you can't directly influence employees' sleep and diet, you can help curb irreversible burnout by demonstrating awareness and adjusting working patterns.



How to Adopt AI Effectively

Advice from Dr John Flackett, Co-Founder of AiLab and recent speaker at a Southampton Science Park CEO Breakfast event, on the importance of leadership and education on AI in the workplace.

Many companies are currently trying to extract real value from AI in the workplace, but AI adoption often starts with enthusiasm before clear policies, governance and success measures are in place.

Over the past 10 years, through its AI training and advisory work, AiLab has often seen individuals experimenting with AI tools before their leadership teams have defined how AI should be used, where it can create value, and how associated risks should be managed.

This is why AI should not be seen purely as a technology challenge but as a leadership one.

To adopt AI effectively, leaders need to:

- Educate themselves on where AI can create genuine organisational value
- Set clear priorities for AI adoption while balancing opportunity and risk
- Upskill staff so that they understand both the capabilities and limitations of AI
- Put appropriate data governance and responsible AI use processes in place
- Keep pace with ethical, legal and operational considerations as AI tools evolve

Professional AI education, like that provided by AiLab helps decision makers ask the right questions, identify practical opportunities, and guide their organisations towards responsible and effective AI adoption.

The AI Balancing Act

Ranganathan and Ye noticed that employees in their study were unable to self-regulate, going on to advocate for companies to step-up responsibility, creating a best practice AI standard. This should set out not just how AI is used, but when it is appropriate to stop using it, encompassing intentional pauses, sequencing, and human grounding. They suggest that ‘the question facing organisations is not whether AI will change work, but whether they will actively shape that change – or let AI quietly shape them.’

So, are the concerns more rooted in managerial design, not AI itself?

An MIT Sloan Management Review, AI Can Reduce Workload When Used Strategically picks up on this theme. This peer reviewed research presents the argument that AI can reduce cognitive load and hours – but only when organisations redesign workflows, rather than layering AI on top of existing expectations.

Another report by McKinsey Global Institute, Generative AI Can Reduce Time Spent on Drudgery, used multi-sector data on a broad scale to support the view that AI can shorten working weeks through reducing time spent on mechanical and repetitive tasks like documentation, reporting, compliance, emailing and analysis – but only if companies don’t reinvest the saved time into more tasks.

In the UK, The Chartered Institute of Professional Development has published a position on responsible implementation of AI in the workplace, AI Can Improve WorkLife Balance When Implemented with Guardrails. In this, CIPD believes AI’s impact on workload is dependent on organisational design, not the technology itself. It advocates the use of AI alongside human judgement with clear, principled guidelines for ethical and sustainable use with enforceable boundaries.

In the end, AI doesn’t decide how work evolves—management does.

Partnership

STRENGTH THROUGH COLLABORATION

Southampton Science Park's Catalyst business accelerator is strengthened through financial support and expertise from a diverse partner network covering health innovation, marine science, university enterprise, and local and national entrepreneurship. This valued support helps the Catalyst team turn ideas into investable companies.

Health Innovation Wessex

Part of a 15-strong national network, Health Innovation Wessex works to bridge the gap between ideas and real-world impact. Its multidisciplinary team of clinical and non-clinical professionals supports the development and adoption of innovation in the health and social care sector to improve patient outcomes and drive value for the NHS. Nationally, since 2018 the network has leveraged £3 billion of investment into the economy and benefited around 5 million patients.



"We're proud to co-deliver Catalyst, to give innovators the tailored support and NHS insight they need to turn ideas into impact. Our team provides specialist teaching and mentoring related to innovation in health and social care, helping founders shape solutions that genuinely improve lives. Being part of a programme that accelerates commercial skills while building a supportive health innovation community is incredibly rewarding, and each cohort reminds us just how much potential exists in the region."

Peter Rhodes,
Senior Programme Manager,
Industry and Innovation

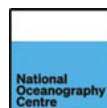
National Oceanography Centre

The ocean covers the majority of Earth's surface, regulating climate, absorbing carbon and sustaining life on a global scale. Yet vast areas remain unexplored, and the ocean's critical role is often underestimated. With over 60 years of research and technology experience, the National Oceanography Centre provides world-leading scientific and technical expertise aimed at unlocking the economic and societal potential of the most important natural resource for life on Earth.



"While NOC runs its own innovation programme, this is focused on advancing capabilities and technologies in ocean science, not growing this research into commercially viable businesses, as Catalyst seeks to. Through partnering with Catalyst, we can work to remove some of the barriers to market that many early-stage marine technology innovators face, facilitating the transition of foundation ideas into real-world solutions."

Mark Hamson,
National Oceanography Centre
Innovation Hub Manager



University of Southampton School of Healthcare, Enterprise and Innovation

Home to research-focused businesses tackling major issues in healthcare, the School of Healthcare, Enterprise and Innovation is a community of professionals with expertise spanning medicine, health, bioengineering and technology. This multidisciplinary team uses research findings to create practical solutions for healthcare systems and services, championing the development of those innovations that will generate social change and economic benefits.



“Supporting knowledge exchange from academia to the real world and fostering business connections are at the heart of everything we do. Catalyst has strong support from innovation networks, professional services firms and peer-group entrepreneurs, and we are pleased to be part of this excellent initiative. I have been asked several times to create a new entrepreneurship programme, but there is no need to reinvent something when we already have a best-in-class accelerator in our region in Catalyst.”

David Bream,
Director of Industry Partnerships
and Professor of Innovation

Test Valley Borough Council Provides funding via the UK Government Shared Prosperity Fund

Test Valley covers around 250 square miles of western Hampshire. Renowned for its natural surroundings, it is also an economically vibrant area where businesses are supported to thrive. An ambitious Economic Development Strategy supports enterprise goals and businesses across a wide range of sectors, from manufacturing and technology to professional services, tourism, food and agriculture.

The SETsquared Partnership

SETsquared is a unique enterprise partnership and a dynamic collaboration between the six leading research-led UK universities of Bath, Bristol, Cardiff, Exeter, Southampton and Surrey. Since launching in 2002, the organisation has supported over 5,000 entrepreneurs, helping them raise £5 billion in investment. Independent research has estimated the economic impact of SETsquared-supported companies to be £15.7 billion, with the creation of over 15,000 jobs.

Business Support

START-UP HEROES

Highlighting just a few of the many successful outcomes from the Catalyst business accelerator over 17 cohorts.

High Growth Business Network

This year, Southampton Science Park launched a Catalyst Alumni Network, marked with an event at Hotel du Vin. Here, founders of established companies from early cohorts connected with recent programme graduates for the first time, sparking ideas and igniting collaboration. Although at different stages on their business journeys, and despite operating in quite diverse sectors, discussion around the table amply demonstrated the value in sharing experiences of leading a science and technology company. Membership of this alumni group is automatic for all graduates of Southampton Science Park's Catalyst business acceleration programme.

science-park.co.uk/business-support/the-catalyst-programme

Absolar [2020 cohort]

Energy: Data-led approach accelerating commercial adoption of renewables. Absolar secured early commercial contracts, partnered with NatWest to stimulate customer funding, and was appointed to Ofgem's energy efficiency framework. It beat off several FTSE 100 companies to win a British Data Award, among others.

absolar.co.uk

Audioscenic [2017 cohort]

Entertainment: Revolutionary immersive spatial audio technology. Audioscenic received many industry accolades including several best-in-show awards at the famous Las Vegas Consumer Electronics Show. It substantially expanded its team following Series A investment, and now partners with global IT leaders including Dell.

audioscenic.com

Labl.It [2022 cohort]

Hospitality: Integrated food labelling system enhancing safety in commercial kitchens. Labl.It's system is trusted by household hospitality companies and is in use in over 3,000 kitchens across the UK. The company has won multiple awards, grew to take on a second office and a bigger team which continues to innovate patent pending tools for safer kitchens.

labl.it

Renovos [2016 cohort]

Health: Unique nanoclay gel transforming orthopaedic surgery outcomes. Widespread recognition for Renovos's technology led to a Biomedical Catalyst grant from Innovate UK. It was granted Breakthrough Device Designation by the US Food and Drug Administration for its lead product.

renovos.co.uk

Utonomy [2015 cohort]

Energy: Machine-learning-led technology reducing leakage in gas networks. Utonomy secured a grant from Ofgem's Strategic Innovation Fund to develop an Intelligent Gas Grid with SGN. It secured significant Series A funding and expanded internationally, partnering with utility giants to optimise gas networks in the UK, across Europe and the US.

utonomy.co.uk

Vape Guardian [2023 cohort]

Health: Smart, accurate, integrated vape detection and air monitoring systems. Since developing its first clean air device in 2022, Vape Guardian now operates globally with offices and products in schools, leisure spaces and retail outlets in the UK, Europe, the US, Canada, Australia and New Zealand. It was awarded SME of the Year.

vapeguardian.com

Xim Lifelight [2015 cohort]

Health: Preventative healthcare through mobile device-led vital signs monitoring. Lifelight was integrated into the NHS's myGP app and adopted by one of Europe's largest health insurers. It secured Innovate UK UKRI funding to develop its proposition and won multiple awards including Science and Tech Company of the Year.

lifelight.ai

YouSeq [2018 cohort]

Health: Molecular multi-target DNA testing. YouSeq offers the world's largest range of qPCR and NGS tests which use bioinformatics, expert assay design, and rigorous validation for quality and performance. It was Britain's second fastest-growing private technology company in the Sunday Times 100 Tech 2025.

youseq.com

SWITCHING OFF DIESEL

Southampton Science Park has removed dependency on a diesel-run generator for its site-wide back-up system and switched on a more sustainable solution that cleverly integrates on-site solar generation, battery storage and grid connectivity. This low carbon approach to supporting critical infrastructure removes dependency on fossil fuels for mission-critical infrastructure during

short-term power interruptions. Projects of this nature are uncommon due to their technical complexity and the investment required to deliver effective systems that meet both critical operational requirements and wider sustainability objectives. It was made possible through partnership working with Absolar and Technologywithin.



Gamechangers

BE UNAPOLOGETICALLY YOU!



Women in Tech Hampshire (WiTH) was founded and continues to be run by Spectrum IT Recruitment to encourage diversity in the tech space. It was the brainwave of Lauren James and Amy Lee who were united by a passion for empowering women in technology to achieve their potential. The group is now a thriving network of over 1,200 female professionals and growing organically. Here, they explain why changing the system, not women is paramount.

Let's start with the big picture. In your view, what is still broken for women in the tech industry today?

Amy: Regardless of age, skills, backgrounds or privileges, clear themes come out of WiTH events as to why there is under-representation of women in the sector. The 2025 Lovelace Report called this out, highlighting how many women in tech reach a certain level and then leave because there's no clear career progression or genuine approach to flexible working.

Lauren: Authentic commitment is a big issue. Women should be hired because they're the best person for the job, not to meet a diversity quota. And it's so important to follow through on what is promised when hiring – family-friendly policies, for example. If you don't, women are often unable to stay and progress in their roles, and there's an economic cost to that for all businesses. There's not enough understanding of what women need to thrive in tech but we also appreciate that you can't expect someone to spot an issue unless they've experienced it personally.

Systemically, what needs to change to overcome these challenges?

Lauren: This is a two-sided issue which needs to be tackled both at home when young and in later life at work. The dream gap is well-evidenced: often by around age five, girls stop seeing engineering and tech roles as options because they're not exposed to them. This isn't just about upbringing; it's about what they see, access to mentors, and cultural micro-exposures that build over time. Positive role models and visibility of careers in technology are needed while brains are still developing.

Amy: In the workplace, there must be a recognition of conscious and unconscious bias, but you'll only recognise it if you have been exposed to it or are given the opportunity to learn about it. We also strongly encourage allyship. So, even if you're not the target of a bias but you witnessed it, stand up in that moment. People always regret the things they don't say more than the things they do.

What trends are you seeing in how women are entering and advancing in technology roles?

Lauren: AI is already creating some interesting dynamics. Everyone must start embracing AI or the skills gap will continue to widen. The reality is that AI is only as good as the person using it, and that's where many of women's strengths become so valuable. Critical thinking, context, and empathy all play a key role in getting the best out of AI.

More broadly, the tech industry is increasingly recognising the importance of non-technical skills. While technical expertise remains essential, successful teams also rely on communication, project management, stakeholder engagement, and leadership. As technology becomes more embedded in every part of a business, these skills are becoming just as important as technical capability, creating more opportunities for people from different backgrounds and helping to challenge traditional perceptions of what a career in tech looks like.

Thinking about when you created WiTH: was there a specific moment that made you think, this needs to happen (and we're going to be the ones to do it)?

Amy: Lauren and I have worked together for over 10 years and have become friends inside and outside work, so we know the challenges we've each faced in our careers. Personally, moving from healthcare recruitment (which has mostly female candidates) to tech recruitment (which has mostly male candidates) was a real culture shock. I remember thinking: where are all the women in this sector?!

Lauren: We'd seen the great work that Women in Tech Dorset were doing and soon realised that there was nothing comparable in Hampshire. That's when we decided to build something and give Hampshire women a platform. We pitched the idea to our director and he was all-in straight away, immediately seeing benefits for the whole industry. Since then, our whole team has been incredibly supportive. WiTH is a passion project, and something we love running as part of Spectrum IT. It's authentic and we're doing it for the right reasons.

Winning the Best Diversity Network at the SheCanCode Power Up Awards was recognition of this. What else does success for WiTH look like?

Amy: Providing a platform and human connection. Through meeting others, we know that some WiTH members have started their own business or taken new jobs because they've learned to value what they bring to their work. They've realised that they do belong in tech.

Lauren: Creating genuine actionable impact. If someone attends one of our events, learns about the problem, hears about solutions and goes back to work to make a difference, then we're having an impact.

What challenges have you faced in gaining traction for the group?

Amy: Encouraging more men to attend our events is the biggest hurdle. We want to stress that backing women doesn't take anything away from men. We want change to happen, but how can we expect male colleagues to be better team players and leaders if they don't understand a woman's reality? We know that, for a man, coming to a WiTH event is unknown territory. They worry that they won't feel welcome and it's not a safe space for them. That's how many women feel in the technology sector. That's the point.

Lauren: It makes me sad that many women don't know about the group or assume it's not for them because they don't have a 'tech' job title. Many women are quick to put themselves down. "I just" is a phrase I hear a lot from women who may not be on the leadership team but nevertheless, are critical to their company's success as a project manager or software engineer for example. Whatever your role, WiTH is for you.

Do WiTH events feel different to other networks that you've been involved with, and if so, how?

Amy: We're consciously not hierarchical. It's organic; our topics and events are shaped by the community as we hear about their pain points.

Lauren: Yes, we are definitely less corporate and more educational. Appropriate times and locations for our face-to-face events matter, so as many people as possible can attend, but we always share write-ups for those who can't make it.

What one practical thing could a tech business owner do right now for current and future female colleagues?

Amy: Listen. Just listen to everything. Assume nothing. If you make assumptions, you won't learn because you don't have the facts. Have difficult conversations without being defensive. Be creative and open.

And, if there was a single piece of advice you could give a woman working in the sector?

Lauren: We would really struggle to give just one piece of advice, so here are five pieces of advice! Join a community or build a network. Trust your abilities – you deserve to be at the table. Have confidence and be your biggest cheerleader. Take up space. Be unapologetically you!

Droplet Scientific

THE FULL PICTURE

Droplet Scientific has developed portable analysers which are set to be transformative in clinical point-of-care biofluid testing.

Traditional blood and biofluid sampling, coupled with offline analysis, provides only part of the picture upon which clinicians must make decisions. These delayed, intermittent measurements are snapshots in time, missing the real-time dynamics and trends that are critical for accurate diagnosis and precision treatment.

Droplet Scientific's next-level technology transforms this process. Its microfluidic portable analysers provide automated, continuous monitoring of a wide range of targets – including glucose, lactate, hormones, and other clinically relevant biomarkers – in real time and in high resolution. Within the analyser, assays are performed and detected optically, delivering continuous, accurate, and drift-free results comparable to standard laboratory measurements. Further, the analysers connect seamlessly to a variety of sampling probes, enabling monitoring from tissue or organs of the body.

For clinicians, the solution offers fast, easy to use, reliable and cost-effective biomarker measurements to empower decision-making. For patients, it has the potential to accelerate and improve treatment pathways for better outcomes.

Beyond clinical and point-of-care use, the same technology offers powerful benefits for life science studies, such as cell culture monitoring and organ-on chip systems.

Droplet Scientific participated in Southampton Science Park's Catalyst business accelerator programme before moving to laboratories in Epsilon House in 2025. The team's new facility provides space to scale its R&D and manufacturing capabilities and spark collaboration. The company recently showcased its technology at MEDICA, the world's premier medical technology event.

dropletscientific.co.uk

Resident Showcase

NuoNano

POWERING UP GRAPHENE

NuoNano has developed a low-cost method for producing premium quality graphene at scale to improve lithium-ion battery efficiency.

Graphene is a single-atom-thick layer of carbon arranged in a hexagonal lattice. Although the thinnest material known, it is also 200 times stronger than steel and has excellent electrical and thermal conductor properties. When applied to lithium-ion battery production, this technology can improve battery performance by 20%, extend lifespan, and accelerate charging.

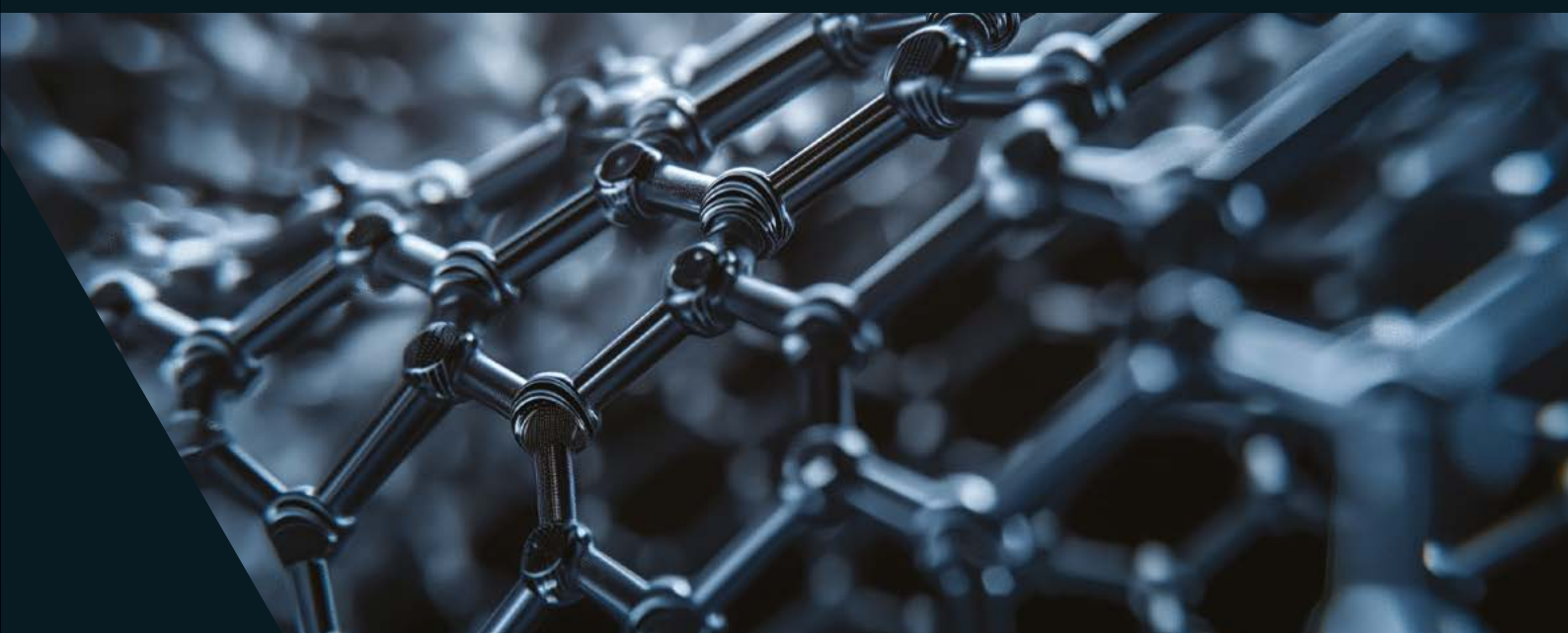
In electric vehicles, this is game-changing, but manufacturers in the sector face significant supply chain challenges. These arise from difficulties in securing high grade, consistent graphene at scale that delivers stable integration with existing technologies, cost-effectiveness, and sustainability.

Advanced materials specialist, NuoNano is addressing this critical market need for premium grade, low-cost graphene through its revolutionary, patented SUPLEX process. This breakthrough production method is capable of delivering high quality, defect-free, stable graphene dispersed in organic or inorganic solvents at scale.



NuoNano was the first company to take up residency in one of Southampton Science Park's high-specification small laboratories at Epsilon House, a move that founder Dr Mehrdad Alibouri described as a step change in his ability to foster business growth. The company recently won an Innovate UK grant for its work on graphene batteries, scoring very highly against funding criteria.

nuonano.com



BirthGlide

EASING TRAUMATIC BIRTHS

BirthGlide has created a novel device to help alleviate complications and the use of traumatic procedures during labour.

Around one third of first-time mothers encounter a complication in the second (pushing) stage of labour. These complications often lead to assisted delivery by forceps or suction, or to an emergency caesarean section. These procedures are not only traumatic for mother and baby but they also carry further risks of tears, bleeding, pain and infection. They could potentially even have life-long impacts, like brain damage to the baby.

BirthGlide has invented a patented, novel device designed to reduce the occurrence of complications during second stage labour and these resulting

traumatic procedures. This ingenious device is developed for ease of use at point of care, and could be used to assist with the majority of the 134 million births globally each year.

Its use will help prevent unnecessary distress to mother and baby and there will be benefits for health services too, through reducing the resources needed for expensive unplanned procedures requiring teams of specialists, additional theatre hours and extended bed stays on busy labour wards.

birthglide.com



BREAKTHROUGHS

Interesting science you may have missed

You Should Bee Dancing

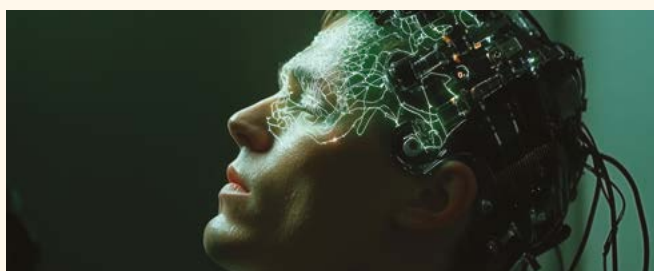
It's been known since the 1960s that when honey bees discover a good food source, they return to their hive – and dance! Officially dubbed the 'waggle dance', their rapid, repeating abdominal routine signals to their colony how to find the food it has found: the direction of the dance relative to the sun tells other bees in which direction to go, while the duration of the performance indicates the distance. The waggle dance is famous for being one of the most advanced forms of social communication in the animal kingdom.

But according to a team of researchers from Britain, the US and China, there's more! Findings published this year have revealed that the waggle dance is not simply

a one-way communication. While dancing, the performer is also working to understand its audience and respond to social conditions on the dance floor.

How? During the display, other bees frequently touch the dancer with their antennae and bodies, physical interactions that help the performer sense how many bees are nearby and how engaged they are. When the audience is scarce, dancers wander around searching for listeners, but in doing so, their orienteering guidance become less accurate. The bigger the audience, the better the performance and the more effective the communication.

The conclusion? The idea of 'dancing like nobodys watching' does not apply if you're a bee!



Thought Control

We highlighted a decade ago that Science Park resident business Tekever was demonstrating brain-control technology for drones. But this year is predicted to be the year that brain computer interfaces (BCIs) will properly leave the lab and find their way into mainstream tech, signalling the beginning of 'mindfirst computing'.

Advances in AI are rapidly bringing the fields of neuroscience, technology, and linguistics together to harness neural electrical networks and make more accurate and efficient brain pattern predictions. Previously only imagined through invasive brain chip implants, this multi-disciplinary approach is giving rise to a new wave of hands-free, 'silent speech' interfaces that can be incorporated into wearable technologies. These enable users to access data, control devices, and communicate purely through thought control, blurring the line between thinking and doing. They can even respond to mood and intention and early telepathic communication between devices is emerging.

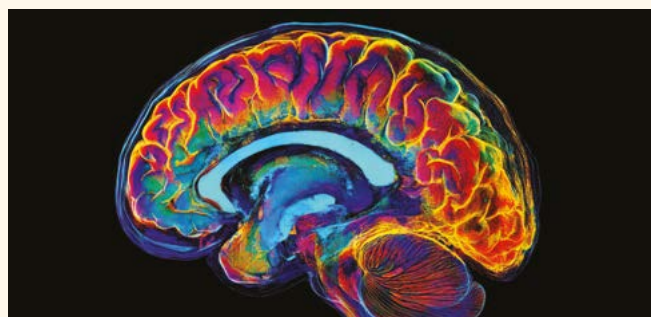
For some, this hands-free computing option could be beneficial to productivity at work. For others, such as those with paralysis, it promises to offer game-changing accessibility and unprecedented independence.

Is this the dawn of Telepathy as a Service?

Make Time for Tea

A 43 year, international study of over 130,000 participants has concluded that moderate caffeine intake likely reduces the risk of dementia, slows cognitive decline and helps preserve cognitive abilities as we age.

Researchers set out to explore how coffee and tea, which contain compounds such as polyphenols and caffeine, might support brain health. These substances are thought to help reduce inflammation and limit cellular damage, both of which are linked to cognitive decline.



Over the course of the study, 11,033 people developed dementia but those individuals who consumed higher amounts of caffeinated coffee had an 18% lower risk of developing it, compared with those who rarely or never drank it. These participants also reported lower rates of subjective cognitive decline (7.8% versus 9.5%) and performed better on certain objective cognitive tests.

The benefits of moderate caffeine intake appeared strongest at 2–3 cups of coffee or 1–2 cups of tea daily. This even held true for people genetically predisposed to dementia.

Time to put the kettle on?

NEWS FROM OUR UNIVERSITY

Researchers at the University of Southampton are taking on new projects to solve today's challenges.



Developing Sustainable E-Textiles

Who? Team lead: Steve Beeby, Professor of Electronic Systems and Devices.

What? A flagship £10m e-textile project developing technology-enabled clothes without harming the environment.

Why? E-clothes – those that can monitor health and fitness, improve patient outcomes, and enhance entertainment experiences – are in demand, but textiles and discarded electronics are among the most polluting industries in the world.

How? Researchers in electronics, sustainability, and textiles joined forces to discover how to integrate sustainability into e-textile product development from the outset. Cross industry collaboration in these sectors will address fundamental environmental challenges in high tech clothing: making the electronics in textiles wireless and imperceptible but also easily separated for a sustainable end-of-life, and ensuring e-textiles withstand everyday wear and tear. This involves using practical textiles, eco-friendly and natural materials, and reusable and recyclable electronics.

This five year project is in its infancy but the team has already developed a bespoke machine that can coat standard textile yarn with smart functional electronic materials.

Electrifying Railways Affordably

Who? Team lead: William Powrie, Professor of Geotechnical Engineering.

What? A far-reaching project challenging assumptions and developing technologies to reduce the costs of electrifying historic rail infrastructure.

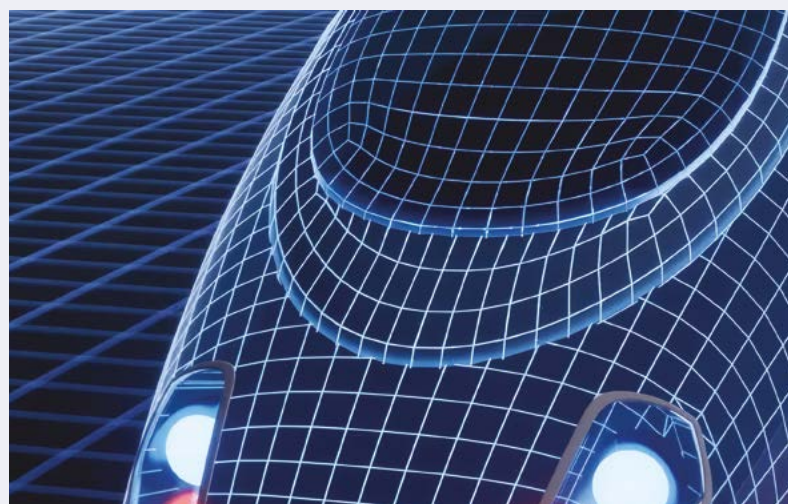
Why? Britain's railways are the most efficient way to travel on land and are vital to cutting carbon emissions, but the high cost of adapting Victorian-built railways to run on electricity has been prohibitively expensive, resulting in delays and cancellations to planned schemes.

How? Working in collaboration with the rail industry in the field and at the University's National Infrastructure Laboratory and Tony Davies High Voltage Laboratory, researchers challenged the assumptions that typically stall electrification projects.

Large clearance distances of 370mm had been specified between an overhead line to a bridge, to prevent the possibility of electric current arcing from one to the other. Research demonstrated that a clearance distance of just 20mm is safe when an electric-current-resistant coating is used in combination with specially developed lineside kit.

The team also halved the recommended depth of foundation piles for masts that support overhead lines, uncovering a cost-efficient method allowing for a maximum depth of just 5m.

This pioneering research won a Queen Elizabeth Prize for Higher and Further Education. It contributed to the government's decision to restart the UK's electrification scheme. This will save the economy around £600m.





Stabilising Underwater Robotics

Who? Team lead: Professor Blair Thornton, Professor of Marine Autonomy.

What? A pioneering project working to close the gap between robots and animals in underwater manoeuvrability and efficiency.

Why? Stability in dynamic and unpredictable oceans requires continual sensitivity and responsiveness. Unlike flexible fish and birds, the rigid bodies of autonomous underwater vehicles (AUV) robots struggle to maintain stability in this environment, expending large amounts of energy to counteract constant buffeting.

How? Traditional approaches have been about building 'tougher' robots to fight the ocean's power, but here researchers focused on finding smarter, softer machines that work in synergy with their environment. Drawing on the adaptive movements of birds and fish, they created a robotic wing that senses changes in water flow and responds by automatically adapting its shape. It uses flexible liquid metal wires encased in silicone to act like nerves, sending signals as the wing bends.

The concept harnesses the power of proprioception – the body's internal sense of position, movement, and force. This is how birds sense changes in air flow through their feathers, and fish feel changes in water flow through their lateral line system and fin rays.

The robotic wing's stability proved to be roughly double that of a barn owl's during glide, paving the way for more agile, safer robots that use considerably less energy to stay stable in turbulent conditions.



Accelerating Cancer Treatment

Who? Team leads: Dr Ali Roghanian, Associate Professor in Cancer Immunology & Dr Salah Mansour, Associate Professor of Immunology.

What? A transatlantic project developing an 'off the shelf' solution to accelerate the treatment of paediatric cancers that are often difficult to target.

Why? Many children and young people with cancers, such as bone sarcomas, acute myeloid leukaemia and medulloblastoma, a type of brain tumour, either do not respond to existing treatments or face life-long side effects from their use. Current immunotherapy cancer therapies rely on cells taken from the patient's own blood, which can take several weeks to prepare and, during this process, the patient may have become too unwell to receive them.

How? The team is developing a new immunotherapy specifically for hard-to-treat childhood cancers. Immune cells are engineered to target a protein called PRAME which cancer cells produce to help them grow and spread.

Cells are taken from healthy donors rather than from the patient, so that they can be engineered, stored and ready for use, offering an 'off the shelf' treatment that is effective, has reduced toxicity and can be actioned without the delays patients currently face in accessing treatment.

The goal is to develop therapies that not only improve survival but also protect the long-term health of young cancer patients.



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