SO 2025

Warp factor speed
Computing but not as we know it: a quick guide to quantum

Below zero
Working with nature as a solution to climate change challenges

Accelerating innovation
Expanding business support for early stage businesses

Detecting brilliance
Insight from Grant Crossingham of Symetrica, the University spin-out that has revolutionised global security

INFINITE POTENTIAL

A visionary development will position businesses in the Central South region at the forefront of national ambitions for life science leadership

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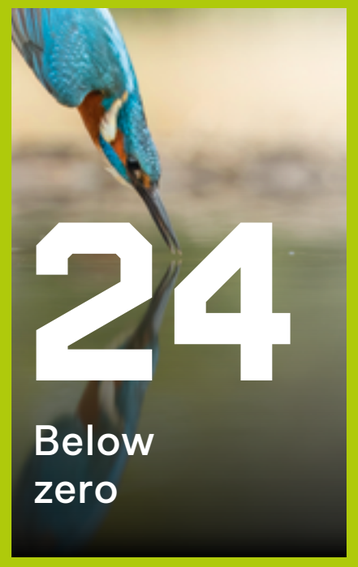

SO...

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WELCOME

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Southampton has emerged as a blazing beacon of opportunity.

While already a consistent and significant contributor to the south central economy, the city’s potential for significant growth is clearly signposted.

Southampton ranks third in PWC’s Good Growth for Cities Index, delivering an enviable gross value added (GVA) contribution that is forecast to continue and to outpace much of the rest of the UK.

Similarly, it has been pinpointed by BDO as a top five super cluster for medium-sized tech businesses with a palpable thriving sense of community among innovators and entrepreneurs.

There is serious central government investment flowing south too. Recent funding has included £11 million to establish a Cornerstone semiconductor research hub at the University of Southampton, part of a broader UK National Semiconductor Strategy. £32 million was awarded to create two new research centres in quantum technology and defence innovation. And let’s not forget AI. Here, there’s been a £15m boost for an AI for Sustainability (SustAI) Centre and a further £31 million granted to establish a Responsible AI UK Consortium. The technology and innovation emanating from these research centres will undoubtedly secure further investment, create more jobs and generate a ripple effect across the region.

Our new R&D facility, detailed in the pages that follow, will strengthen this drive and support the wider aims of Southampton Renaissance, another transformative local initiative positioning the city as the destination for innovation, culture, enterprise and sport on the south coast.

In the context of global trading and economic uncertainty, there’s certainly a lot of confidence being placed on the talented people and considerable natural assets that abound here in Southampton.

This confidence is consolidated by new policy frameworks.

At the national level, the UK’s Modern Industrial Strategy, published in June 2025, targets the eight sectors that government believes will generate high growth. These are: Advanced Manufacturing including aerospace, advanced materials, automotive, and space; Clean Energy Industries, including offshore wind, hydrogen, and carbon capture; Life Sciences incorporating MedTech; Digital and Technologies with an emphasis on AI, quantum technologies and cyber security; Professional and Business Services; Financial Services including FinTech; Creative Industries focusing on gaming, film, and the performing arts; and Defence covering drones and autonomous systems. Here at Southampton Science Park, we have resident companies driving innovation across all of these sectors, some of which is highlighted in this issue.

Locally, we should expect further momentum as a result of the government’s commitment to power devolution which it sees as a central pillar in its strategy to unlock economic growth. In February this year, it was announced that Hampshire is to be part of the Devolution Priority Programme, effectively fast-tracking decision making and empowering local communities to shape their future.

However you look at it, Southampton is not just a great place to do business now, it is building a resilient, innovative, and highly prosperous future, one that Southampton Science Park is very proud to be at the forefront of.”

Dr Robin Chave, CEO, Southampton Science Park

INFINITE POTENTIAL

In the summer of 2025, we will break ground on our latest development: a landmark research and development facility. It will be named **Infinity Labs**.

Southampton Science Park is proud to reveal details of a multi-million pound investment to create a flagship regional asset for scientific research and development. It will help to deliver the government's ambitions for the UK to become a global life science powerhouse through the provision of much-needed laboratory space.

The 3,400sq metre building, with a 70:30 laboratory:office ratio, has been envisaged by leading, award winning architects, Scott Brownrigg. Its revolutionary design symbolises fluidity, dynamism, and forward-thinking, representing the seamless flow of ideas and collaboration that will take place within it.

From the outside, the building's position and scale have been cleverly designed to respect the adjacent historic conservation area and provide an exciting outdoor environment expressing the connection between science and nature.

Passive design principles flow throughout. The use of sustainable building materials with low environmental impact, high-performance glazing, advanced insulation, renewable energy generation through rooftop photovoltaic panels and ultra-efficient heating, ventilation, air conditioning and water systems will all contribute to the building's low carbon footprint and achieve a 10% biodiversity net gain. A green roof will further enhance air quality.

Announcing the initiative, Robin Chave, Science Park CEO, said, "We are working hard to begin bringing this visionary project to life.

Impressive research conducted by our local universities and entrepreneurial innovators has led to life science expertise becoming a real asset for the Central South region, one that offers enormous potential for the local economy. Commercialising these ideas requires dedicated laboratory facilities and an innovation-led, nurturing environment.

Infinity Labs will cater for these needs and more, equipping businesses with high specification laboratories and offices within the supportive, innovation-fuelled ecosystem that exists across our Park."

The Future of Southampton Science Park

The Infinity Labs building is the first major development to arise from the Science Park's 25-Year Masterplan. This plan sets out a vision for how the Park can develop, boost the Central South economy, support government industrial and environmental strategies, and help attract and retain talent in the area.

The Southampton Science Park Masterplan:

1. Builds on the concept of enabling an agile business growth journey across the Park.
2. Increases capacity to benefit more businesses but without extending the current land footprint.
3. Supports the national net zero target and keeps energy costs and impacts down for residents through building regeneration.
4. Creates more laboratory space to champion Britain's drive to become a global life science powerhouse.
5. Provides more opportunities to commercialise University of Southampton research and space for spinouts to thrive.
6. Encourages more sustainable commuting practices.
7. Offers a working environment that supports employee wellbeing and aids talent retention.
8. Maintains the Science Park's leadership position and reputation for quality.
9. Protects the local environment and onsite conservation area.
10. Attracts funding and enhances the Central South economy and growth prospects.

To discuss opportunities for your business at Infinity Labs, please contact:

enquiries@science-park.co.uk.

WARP FACTOR SPEED

A little over ten years ago, the UK set out to become a leader in quantum technologies, cementing this with a £1 billion public funding commitment and the establishment of a National Quantum Technologies Programme.

Turn the dial forward a decade and it appears that this foresight, ambition and investment is paying off.

A further cash injection of £2.5 billion announced in 2024 as part of a National Quantum Strategy reaffirmed the government's commitment to building on these strong foundations, citing quantum as one of the Department for Science, Innovation and Technology's '5 priority technologies of tomorrow'. This updated strategy sets out a comprehensive approach to incorporating quantum technologies into a number of areas including computing, sensing, timing, imaging and communications, with a focus on developing hardware platforms, software and components. Five new Quantum Research Hubs have been created to move this forward.

Roger McKinlay, Quantum Technologies Challenge Director at Innovate UK, is quoted as saying, "We set out to create a quantum industry, not just quantum widgets. It is industries, not inventions, which change lives."

Close to home, the University of Southampton was awarded significant funding to launch two research centres to train PhD students and increase the talent pool of skilled quantum innovators, seen as critical in transforming Britain into a quantum-enabled economy by 2033. And, in a fantastic boost for the region's role in quantum leadership, a spin-out from the University, Aquark Technologies, raised seed funding of €5 million to accelerate the global adoption of its proprietary quantum sensing technology.

Why? A quick guide to Quantum

The basis of computing, as most of us know it, is the processing of binary information: one or zero, on or off. Quantum computing is radically different. Using tiny particles called quantum bits, or 'qubits', it creates superfast computers and sensors that are capable of processing a huge number of computations simultaneously. The outcome is high performance, super powerful and the epitome of efficiency, facilitating complex calculations at lightning fast speeds. Exciting stuff!

The potential of this is even more so. The expectation is that ten years from now, quantum will be mainstream, affecting our lives in many ways from banking and finance to healthcare, transport and utilities management.

Quantum is opening doors to solving problems previously thought insurmountable but could it unlock the biggest challenge of all? Could it solve the climate emergency?

Yes, it looks like it could well do. The World Economic Forum has published *Quantum for Society: Meeting the Ambition of the SDGs*, a report on the possibilities of quantum technologies in relation to sustainability challenges. It believes that quantum could well be the breakthrough that is needed to find innovative solutions to achieve the 2030 Sustainable Development Goals, capable of tackling decarbonisation, developing clean energy, access to water and sanitation, reducing inequalities, advancing healthcare, and guiding responsible consumption and production.

The World Economic Forum's Quantum Applications Hub, a 'one of a kind experiential platform', looks to increase awareness of quantum's potential, drive adoption and champion transformation.

Slow down or speed up?

So, at a time when we are all being urged to accelerate action in these areas, could there be any reason to put on the brakes? While it's unlikely that any country is going to take their foot off the gas, some are calling for caution.

Security is the primary concern, currently. Experts acknowledge that classical computers would take millions of years to crack the encryption algorithms that underpin our online world and create trust, confidentiality and privacy. A powerful quantum computer could do this in seconds, rendering existing security systems extremely vulnerable, with implications for everything from electronic payments and ecommerce to satellite communications.

It's no wonder then, that there is a need to build public trust to drive widespread adoption. A global survey by BSI, the UK's national standards body, of 10,000 people suggests that only 38% of respondents believe the opportunities of supercomputers and quantum outweigh the risks – a figure that drops to 30% in Germany and just 24% in the UK.

It's clear that an ethical approach to quantum's future development and deployment is needed. A 2024 whitepaper by EY and the University of Oxford's Responsible Technology Institute, *Towards Responsible Quantum Computing*, highlights the critical balance between innovation and responsibility advocating for a multidisciplinary, collaborative approach.

In a similar vein, the World Economic Forum created a Quantum Economy Network which works collaboratively with global quantum ecosystem to shape governance principles, guidance and practical frameworks. Regulation at national levels are sure to follow.

Max Planck accidently discovered quantum physics in 1900 when he realised that energy flows in discrete packets called quanta. His finding radically transformed our understanding of the fundamental laws of the universe, paving the way for quantum theory.

UK NATIONAL QUANTUM TECHNOLOGIES PROGRAMME

Vision

An evolved vision to create a "quantum enabled economy", in which quantum technologies:

- are an integral part of the UK's digital backbone and advanced manufacturing base.
- unlock innovation across sectors to drive growth and help build a thriving and resilient economy and society.
- contribute significant value to the UK's prosperity and security.

To achieve this, we aim to make the UK:

- a global centre of excellence in quantum science and technology development.
- the 'go-to' place for quantum companies or for global companies to locate their quantum activities.
- a preferred location for investors and global talent.

uknqt.ukri.org

NEWS FROM OUR UNIVERSITY

University of Southampton researchers are working in unchartered domains everywhere from under the sea into deep space in an intriguing line-up of new projects.

Dr Gwilym Rowlands collects a sediment core from a seagrass meadow in the Seychelles.

Mapping seagrass meadows

Who? Dr Gwilym Rowlands, Associate Professor for Marine Conservation and Management.

What? An ambitious international project to map, research and help protect seagrass in the Western Indian Ocean.

Why? Seagrass meadows play a crucial role in mitigating climate change by drawing down and storing carbon dioxide from the atmosphere, up to 35 times faster than tropical rainforests. Despite accounting for less than 0.1% of the seafloor, they store 10-18% of ocean carbon storage.

They also support biodiversity, forming vibrant coastal habitats that support a wide range of species, including sea turtles, seahorses, manatees, dugongs, and many fish species, with juvenile fish using the meadows as nurseries.

However, these meadows are declining at a rate of two football pitches every hour, due to coastal development, pollution, climate change, and shipping damage.

How? Satellite imagery analysis and field verification techniques will produce highly accurate maps of these vital habitats along a coastline of more than 6000 miles and spread across more than 800,000 square miles of sea area across Kenya, Tanzania (including Zanzibar), Mozambique, and Madagascar. Regional awareness raising and training will help to strengthen arising policy frameworks.

Tackling respiratory diseases

Who? Professor Paul Little, Professor in Primary Care Research and Professor Kay Wang, Clinical Prof in Primary Medical Care.

What? A national initiative to confront the UK's respiratory health crisis, reducing hospital admissions by 20% and also reducing disparities in respiratory care by 20%.

Why? Respiratory diseases are the third highest cause of death in the UK, with people from deprived areas seven times more likely to be affected. The UK's respiratory related death rate is the highest in Europe.

Lung conditions cost the NHS £11 billion each year and one in six NHS beds are occupied by respiratory patients. Waiting lists for care have risen by 263% over the past decade.

How? A new Centre for Applied Respiratory Research, Innovation and Impact (CARRii) will bring together leading academics, clinicians, industry experts, patients, and policymakers to drive innovations that will reduce hospitalisations, ease winter pressures on the NHS, and tackle alarming health inequalities. The University of Southampton is co-leading two workstreams on winter pressures: Reducing Risk and Infections and Optimising Clinical Care.

Listening to cities

Who? Dr Rafael Mestre, School of Electronics and Computer Science and Turing Fellow.

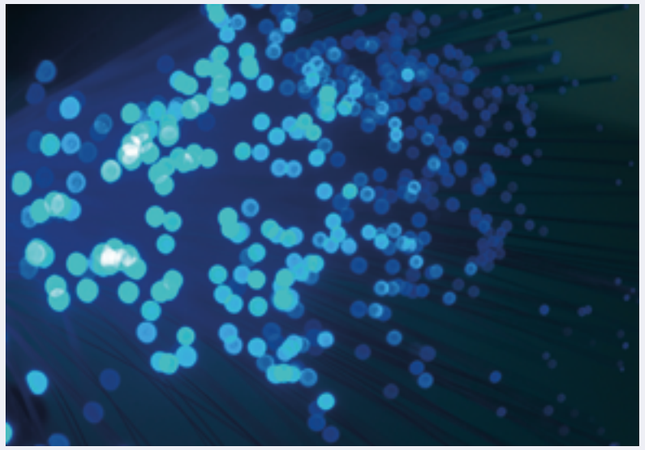
What? A multi-disciplinary project that will capture sounds and vibrations in underground optical fibre networks, enabling researchers to measure the 'sound of a UK city' for the first time.

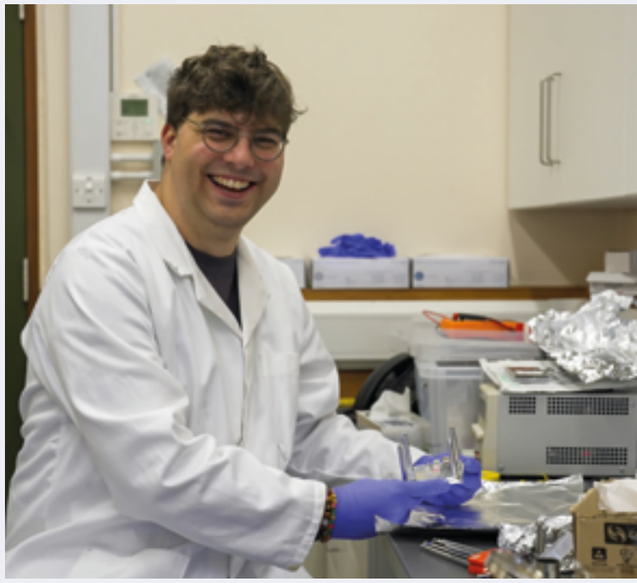
Why? To assess how an emerging technology, Distributed Acoustic Sensing, could provide real-time insights into changing conditions that may signal impending environmental hazards, such as flash floods, storm surges, or rising sea levels by continuously monitoring vibrations and disturbances in urban coastal environments. This capability could enable earlier detection of unusual hydrodynamic activity, helping authorities to prepare and respond more effectively.

How? Distributed Acoustic Sensing (DAS) will turn the underground optical fibre networks that support telecommunications into delicate sensor arrays that detect vibrations like sound or movements.

As light travels along a fibreoptic cable, a small amount scatters back due to natural imperfections in the glass, called Rayleigh backscatter. A vibration or disturbance anywhere along the length of the cable, such as from an earthquake, vehicle or even a footstep, influences this backscattered light which can then be analysed.

Research will take place across London and Southampton and the team will engage citizens in both cities through artistic exhibitions, policy workshops and panels to steer the direction of further DAS research.





Physicist Tim Fuchs with the experimental dark matter device

Explaining dark matter

Who? Mr Tim Fuchs, Senior Research Assistant, School of Physics and Astronomy.

What? An ambitious project which aims to unravel one of the universe's greatest mysteries: what exactly is dark matter?

Why? Dark matter was first discovered in the 1930s and still very little is known about it. This invisible force makes up about 85% of all mass in our known cosmos and has significant impact: the movements of stars and galaxies within the universe can only be explained by the gravitational influence of dark matter. Yet, as dark matter does not emit, absorb or reflect light in any meaningful quantity, it is undetectable by telescopes and remains largely a mystery.

How? An experimental device will be sent into space aboard Jovian-1, a satellite being developed by the universities of Southampton, Portsmouth and Surrey. This device will measure tiny signals by firing lasers through graphite sheets placed between magnets which, in zero gravity, are incredibly sensitive to small forces. If there is a sufficiently high density of dark matter, a dark 'wind' will softly push the levitated particles by a measurable amount, thereby detecting it for the first time. The dark matter device weighs just 1.5kg and will fly around the Earth in low orbit for two years to conduct its tests.

University of Southampton

A DAILY DOSE OF WELLBEING

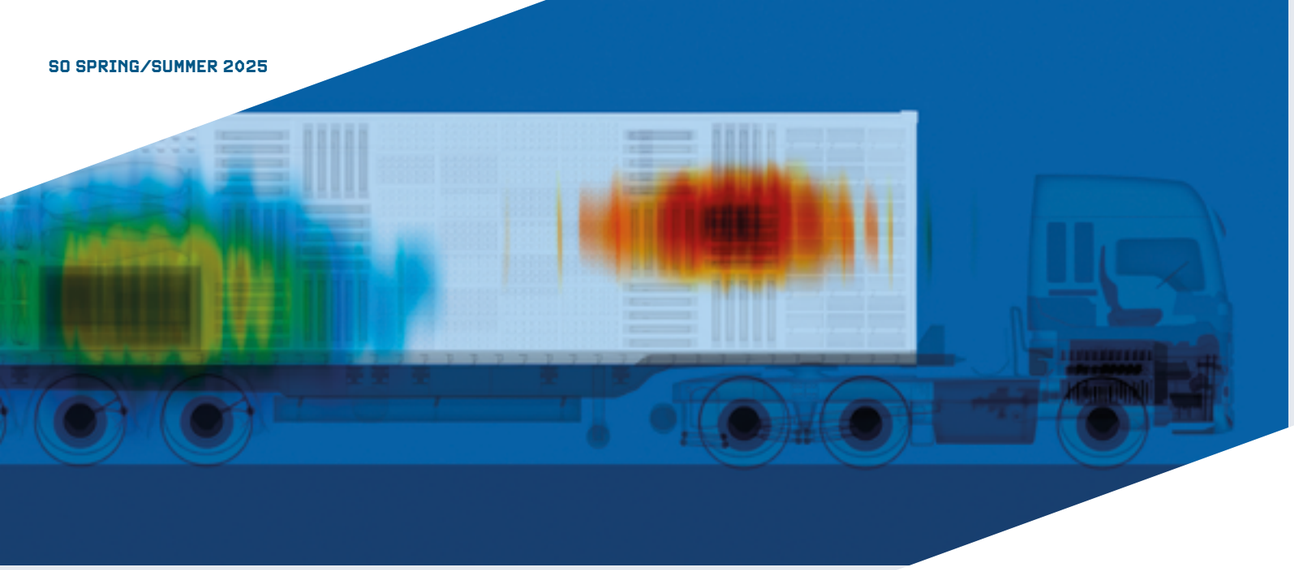
Within Southampton Science Park's boundaries is an historic, ecologically important 27 acre conservation area, space for all to enjoy for their daily dose of nature-fuelled wellbeing. An ever-changing but always beautiful mix of ancient woodland, meadow and ponds, find yourself in another world in the 'deer ring', a circle of pines.

DETECTING BRILLIANCE

Founder and Chief Technical Officer of Symetrica, Grant Crossingham, explains how the company transitioned from University of Southampton spin-out with intriguing research to global leader in operational security threat detection and identification, with teams in both the UK and the US. Its diverse product range spans fully integrated radiation detection handheld devices, backpacks, mobile units, static and modular portals, and software.

Symetrica has an impressive track record of rapidly turning innovative concepts into market leading capabilities and disrupting the status quo. How? That's a big question. It requires a group of exceptional people and teamwork. Finding the right people for the right job is critical and we have had excellent people on board right from the start, people who are committed to making the business work. Keeping focused on the customer is key too, our philosophy has always been to develop tech that solves problems for end users.

At the beginning, our three founding scientists had a technology that we thought was special. We didn't know if it would be disruptive, but hoped that it could be. The challenge was how to develop it and take it to market. We took an entrepreneurial course which opened our eyes to what it takes to start and run a business, and quickly realised that we needed a business partner to help assess, access and capitalise on market opportunities. There were a number of sectors we could have taken the technology into but we had to choose one. Security appeared to be the best option in terms of capability, time to market, and regulation – and so it has proved to be.



How difficult was it to secure the first order when there was little proof of concept to work with? When we started talking to potential partners, they couldn't see how our technology was applicable to them. From that point on, we set aside communicating the underlying technology – the how it works – to concentrate on showing them the results that they could achieve. We embedded our software into hardware so that we could demonstrate that we had found a way to identify materials that were security risks. That's how we won our first contracts in the US.

Why did you decide to break into the US before exhausting the UK market? We'd had some funding awarded by UK government; this was enough to keep our research and development moving forward, but ultimately not sufficient to scale. So, we looked for opportunities around the world where similar technology was being developed and identified that relevant programmes were being funded in the US. We jumped into tackling these briefs and the result was two contracts: one to develop handheld detectors and another for vehicle portals. The timing was good. Any innovative company has to have good technology, but it also needs to have a smidgeon of luck with timing.

Today, Symetrica technology is used by first responders and border forces, not just in the US but across Europe, South America and Asia. To what extent do you have to tailor the technology to different markets? It's true that every customer wants something slightly different, but we've learnt that you can't grow a company by working solely on a project basis because developing something new and specific for each new customer is very time intensive. That's why we have moved towards being a product-led company, with a clearly defined product offering that can more easily be tailored to customer specific requirements.

We will continue to develop our product portfolio, and plan to add to it yearly, alongside hardware and software updates. We're also actively working on how we will embrace AI into both our technology and business operations, although it's fair to say that we started using the fundamental techniques behind AI 22 years ago!

How did you set about transitioning to a product-led approach? It's about changing mindsets and company culture.

If you have an organisation where everyone is focused on delivering bespoke solutions and single projects at any given time, then pivoting towards asking people to work on a range of products for a range of customers simultaneously is a challenge. Your engineers have to move from the mindset of going back to the drawing board each time, to creating staged updates. There are also commercial and operational benefits in this approach, in terms of removing bottlenecks and stabilising cashflow.

To some extent, a company's culture changes naturally as people come and go and that's a positive thing: new people inject new ideas and ways of looking at things. This helps the company to develop and move it through the stages it needs to, to grow.

In a world of ever-changing threats, how does your R&D team keep ahead of these? It's important to balance the science and the market. You have to keep the customer at the forefront of course, but we also have a high number of PhD physicists in the company looking at new technology all the time, finding ways to make customers' lives easier by developing something they don't know they can have yet.

It's also about staying flexible. A good example is some work that we've done with the Home Office recently, where we provided a critical part of a collaborative solution. By integrating our x-ray image viewing technology, Sym-X, into the web-based Border Force Scan App, we created the capability for real-time x-ray image analysis to detect prohibited items, with centralised management and data collection, all without the need for additional training. This approach worked really well for all parties and the result has been recognised with a Global Customs Innovation Award.

And you've been presented with a King's Award for Enterprise for International Trade too, which is a great achievement. Thank you. It's always good for your work to be recognised with an award but it's not what drives us. Our mission is to be as successful as we can and continue growing the company. If more awards come along then that's great! We celebrated as a team when Nigel Atkinson Esq, HM Lord-Lieutenant of Hampshire visited to present the King's Award at our shiny new building here at the Science Park, which we are enjoying a lot.

A familiar face at Southampton Science Park, Symetrica has chosen to locate here twice. What drew the business here initially and how has the Park continued to serve your needs? We're pleased to be back here. It feels like we've come back home and we're where we should be.

We had to move off site for a while as we weren't located in an area where we could build the freestanding portals we needed for development work. We are now ideally positioned where we can erect two portals, one vehicular and one personal. These will be connected to our office command control centre for full demonstration capabilities and, of course, will facilitate future R&D which is very exciting.

Do you think location plays a role in creating a successful company? Yes. Image is important. As a high tech company you have to look high tech and this campus has that feel to it.

Also, if you want to attract good young talented people, then you have to be in a good location, easy for both staff and customers to get to, which Southampton Science Park is. It's also really good for our team to be able to participate in community events like the Christmas party and summer BBQ here.

How have you gone about creating a high achieving, cohesive 'one team' philosophy when operating two sites in two continents? We have dedicated human resources people to help look after the team and we have always had an open door policy as a management team. Everyone is empowered to talk to us and we are always open minded to what they have to say.

It does get a bit more difficult when you have employees overseas. In the early days, we took people from the UK to the US site to embed Symetrica's culture straight away and we built from there. It's a challenge though; even though we speak the same language there is an inevitable culture gap. You just have to try to keep everyone on the same page. Conferencing technology helps with this a lot.

Reflecting on Symetrica's journey to date, what advice would you give to founders of early stage or start-up technology businesses? What do you wish you'd known at the outset? Tricky question! First off, you have to be open to whatever opportunities are given to you. When you start a business you do not know what's going to happen, so be open minded.

Secondly, I'd say, be resilient to both upsides and downsides. It's a rocky road and there will be times when everything seems to be going wrong. Believe in the business and what you're doing and keep pushing through. If you do that and you have a little luck, you'll be successful.

Finally, always make sure you're surrounded by good people. If you're a technologist, make sure you have good business people working alongside you. Tech firms often fail because they don't have the right mindset to run a business and keep it running. Founders often remain focused on the tech and where they want it to go, rather than where the business needs to go. Find business people to lead you through the process of generating investment, protecting cashflow and scaling.

And what advice would you have given yourself, personally? I wouldn't change much, but I might have told myself to be prepared for a long commitment. It's nice to think that you can grow, and even exit, a business super rapidly: sometimes you can, but don't give up if that doesn't happen. Be prepared to be in it for the long term.

symetrica.com

Resident Showcase

Curve Therapeutics

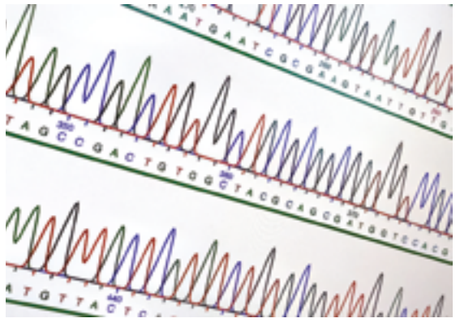
DRUG DISCOVERY

In 2024, Curve Therapeutics secured a £40.5 million Series A investment to develop its proprietary, gene encoded drug discovery platform and to advance its drug pipeline to the clinic.

Resulting from 20 years of research, Curve's Microcycle screening platform is reinventing drug discovery and creating new ways to treat cancer, and immunology and inflammation. The technology is revolutionary as it enables compound screening inside the real-world setting of a live mammalian cell.

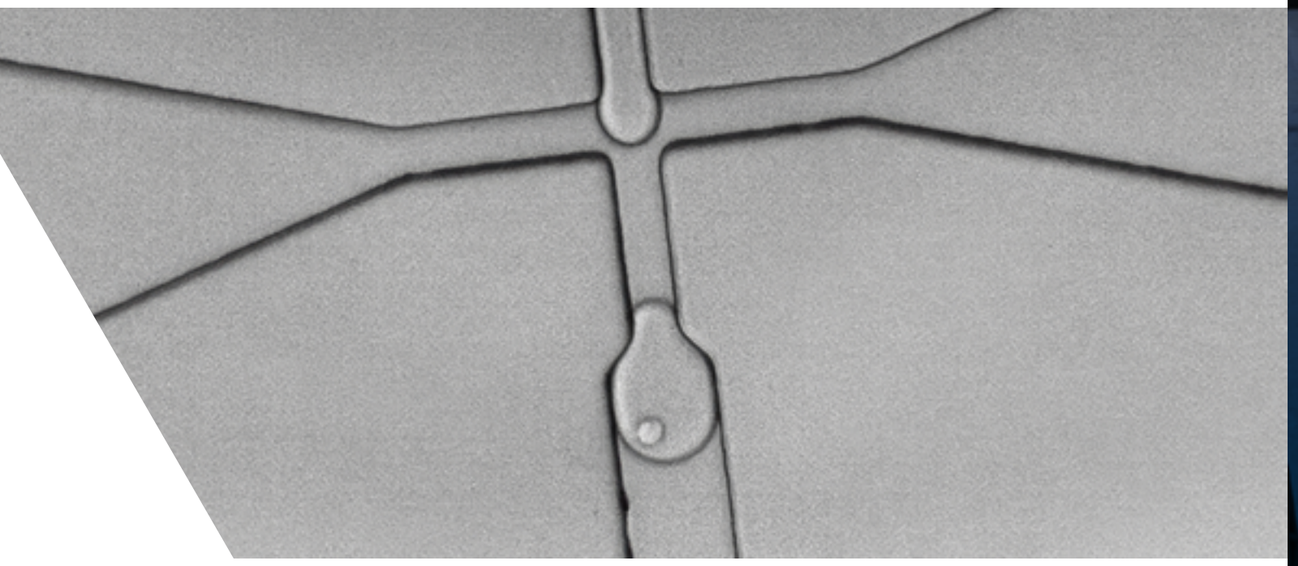
The Microcycle screening platform facilitates the direct discovery of biologically active molecules against intracellular targets that are present in all of their pharmacologically active forms.

There remains an urgent need to find new ways to combat chronic diseases including cancer and immunology and inflammation. The discovery of better drugs with improved efficacy and safety profiles remains a high priority for the pharmaceutical industry and Curve believes that its Microcycle platform creates multiple opportunities to improve patient outcomes.



In a pivotal moment last year, a world-class syndicate comprising Pfizer Ventures, Advent Life Sciences, Columbus Venture Partners, British Patient Capital and Epidarex Capital, invested £40.5 million in Curve. This cash injection has enabled the company to significantly expand its senior leadership team to bring a new wealth of experience and drive to accelerate its R&D and broaden relationships across the global pharmaceutical sector.

curvetx.com



Resident Showcase

Dynamon

DECARBONISING FREIGHT

Dynamon is leading ZENFreight, a £44 million project to accelerate the decarbonisation of freight transport in Britain.

ZENFreight, funded by UK government and Innovate UK, supports a national vision for zero-emission road transport. Its aim is to deliver a comprehensive zero emission infrastructure via a national network of depot-based electric charging and hydrogen refuelling stations, providing fleets with flexible energy solutions to maximise operational efficiency.

At ZENFreight's core is Dynamon's ZERO software, which provides detailed vehicle performance simulations and data analytics in comparison to traditional diesel counterparts. This approach ensures that vehicles are optimally deployed, routes are effectively planned, and costs are minimised. As well as demonstrating up to 78 vehicles, to be on the road by March 2026, the consortium will develop a nationwide network of electric charging and hydrogen refuelling locations across its 25 depots and 7 fleets.

With this project, Dynamon is collaborating with global industry leaders in logistics, truck manufacturers, original equipment manufacturers and infrastructure providers (Maritime Transport, DFDS Logistics, Gregory Distribution, Russell Logistics, Volvo Trucks, DAF, Scania, Daimler Truck, MAN, Envevo, Alpitronic, VEV, Voltempo), and research partners at Imperial College and Ricardo; a first in fostering innovation in sustainable transport.

Transport for London has also benefited from Dynamon's big data analytics, which demonstrated that 57% of TfL's fleet could transition to EVs with minimal changes, while achieving £1.2 million in savings by reducing charger requirements.

The company has won several awards including Best Sustainable Tech Company.

dynamon.co.uk

Resident Showcase

Audioscenic

SOUND IMMERSION

Audioscenic is collaborating with Dell, a leading technology company, to launch a world's first: The Dell 32 Plus 4K QD-OLED monitor featuring Audioscenic's Amphi Hi-D spatial audio technology, and with it, the potential to transform personal computing.

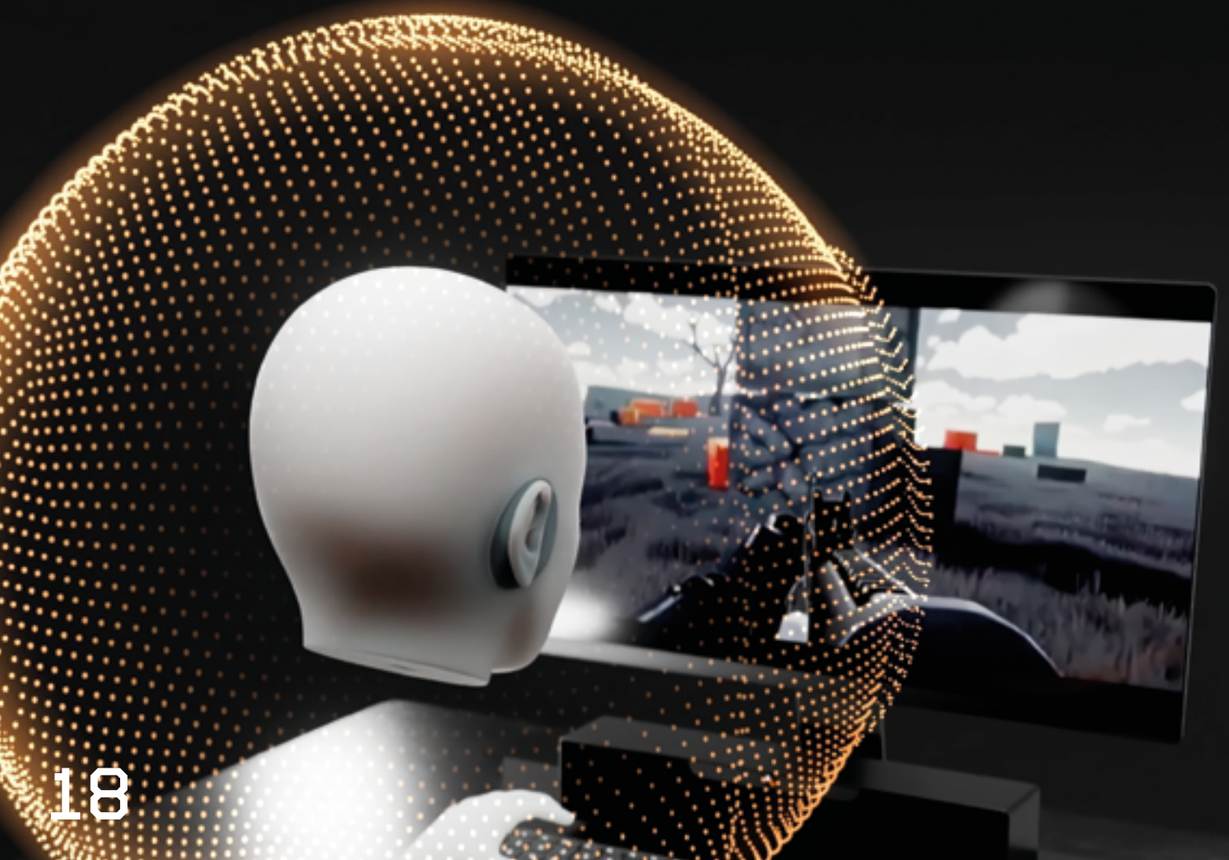
Since launching in 2016, Audioscenic has been on a mission to evolve spatial audio rendering by combining AI with advanced signal processing to deliver unparalleled immersive sound experiences.

The company's Amphi technology has set a new benchmark in spatial audio with position-adaptive 3D sound. Through an image sensor like a webcam, Amphi can analyse the alignment of the listener's ears relative to a monitor screen. With this real-time position data, Amphi uses beamforming technology together with cross-talk cancellation to beam sound precisely to each ear. This process enables listeners to perceive a 3D soundscape that extends well beyond the physical speakers.

At CES 2023 in Las Vegas, Audioscenic Amphi debuted on the Razer™ Leviathan V2 Pro soundbar and was recognised as Best in Show. The following year, Acer, a top-ranked PC maker, embraced the technology for its SpatialLabs View 27 series of stereoscopic displays. On the Dell 32 Plus, Amphi Hi-D, for High-Dimensional sound, uses an array of speakers that takes the perception of 3D to the next level.

Bringing AI-enhanced Hi-D sound to everyday computing has the potential to transform conference calls, games, movies, music and more into immersive experiences, delivering 'an enveloping sphere of life-like sound'.

audioscenic.com



ACCELERATING INNOVATION

CATALYST

UNIVERSITY OF SOUTHAMPTON SCIENCE PARK

Catalyst is Southampton Science Park's highly regarded, prestigious business acceleration programme for early-stage innovation-led businesses.

Over fourteen cohorts, Catalyst business acceleration programme, run in association with SETsquared, has benefited nearly 100 companies who have between them since created 260 new jobs and raised investment of more than £66 million. Bucking the national trend for start-up failure, 85% of companies that participate in Catalyst continue to trade, most remaining and delivering employment opportunities in the south central region.

The Science Park has now partnered with three of the region's most exciting research organisations – Health Innovation Wessex, the National Oceanography Centre and the University of Southampton's School of Healthcare Enterprise to build on this success. Funding support is also provided from the UK Government via Test Valley Borough Council through the UK Shared Prosperity Fund, and by Hampshire County Council's Hampshire Growth Hub.

This expanded collaborative approach is enabling Catalyst to run twice yearly and support double the number of entrepreneurs. Online applications are welcome at any time.

Celebrating Cohort 14

In March, the Science Park hosted a showcase event to congratulate the latest set of graduating Catalyst companies. The diverse range of businesses made significant progress against their aims.

- **Aurora**
  Founders Dr Andy Taylor and Nicky Taylor
  A novel approach to treating osteoarthritis and improving quality of life for the one in six people in the UK who suffer the disease. Catalyst supplemented the team's medical expertise with valuable insights into areas where they had little experience, resulting in a defined business plan, a focused investment strategy, and grant funding success.

- **Concerto Television**
  Founder Julian Rigamonti
  Bringing classical music television to worldwide audiences through streaming services. This founder had already succeeded in business with a classical music subscription service but needed help to pivot to a new business model. "Catalyst helped me to channel in the right direction and I have just closed my funding round today, achieving exactly what I'd asked for."

Health Innovation Wessex · NOC Innovations · University of Southampton · Hampshire Growth Hub · Test Valley Borough Council · Funded by UK Government

85% of the early-stage businesses that Catalyst has worked with are still trading, in comparison to the national picture which shows that 81% of the 50,000 UK start-ups each year cease operations.

- **HealthRoam**
  Founders Natalie Coleshill and Simon Lane
  Already a successful business professional, Natalie came to Catalyst with an idea to transform connectivity across healthcare systems to improve roaming capabilities, collaboration, productivity and communication. She remarked on the programme's impact for her new venture in terms of building relationships to develop opportunities. She left having closed a substantial initial contract.

- **Hummingbird Insurance Services**
  Founders Ben Peters and Steven Zwinkels
  An AI software platform-based business that enables fleet managers to reduce costs and loss ratios, and aggregate data for ongoing efficiency. The pair arrived with a wealth of insight into the complex commercial fleet insurance sector and three business models which needed channelling in the right direction.

We have a long and fruitful relationship with Southampton Science Park and the University of Southampton, working together to support high-potential companies. Our involvement with the Catalyst partnership is a logical extension of that, generating the ability to provide greater support for start-ups and furthering our ambitions to accelerate the adoption of viable solutions.
Frank Ratcliff, Director of Industry and Innovation at Health Innovation Wessex

- **Id3as**
  Founders Adrian Roe, Steve Strong and Dom Robinson
  Turning a service business into a product business is said to be one of the most difficult things, but that's what this team came to Catalyst for support with. Working to build iterative solutions while managing inevitable revenue disparities, the team was kept on track with this transition by the accountability of having a Catalyst mentor working alongside them.

- **Mytender.io**
  Founders Jamie Horsnell and Samuel Aaron
  An AI-led platform to help companies be more efficient and successful when tendering for government contracts. Arriving at Catalyst with a strong business proposition and critically, a great deal of drive, motivation, confidence and energy, the team leaves with a solidified product offering aligned with a value proposition and an already impressive client base.

- **Novatura**
  Founders James Harcourt, Thomas Mitchelmore, Max Taylor, Niall Morrison and John Baker
  A young, ambitious software development agency team with impressive clients and projects secured across a range of sectors, is developing products and building valuable intellectual property. "We were technical people with no business expertise; Catalyst has been a big skills uplift for us and now we're all onboard and committed to the business for the long term."

- **QuJiT**
  Founders Michael Forrester and Susan Forrester
  Both physicists, these founders had a lot of quantum engineering research and expertise, an open mind to all ideas about how to commercialise it. They leave with a viable business proposition, a roadmap for protecting their intellectual property and avenues to take it to market.

Novatura won the Catalyst 'Best Pitch' prize and was awarded 6 months Gold membership of the Science Park's Incubation Centre.

We are delighted to partner with the Catalyst programme at Southampton Science Park. This collaboration aligns perfectly with our mission to support and accelerate the growth of innovative businesses across Hampshire. By leveraging the strengths of both our organisations, we aim to provide impactful support to early-stage companies, helping them overcome barriers and achieve their full potential.
Chris Burchell, Strategic Growth Manager of Hampshire Growth Hub, Hampshire County Council

- **NuoNano**
  Founder Mehrdad Alibouri
  An advanced materials science company that has a patented process to address a market need for high-quality, low-cost, sustainable graphene in lithium-ion battery production.

Welcoming Cohort 15

In the same month, a new line-up of high potential innovative businesses took their places.

- **Dxtrus**
  Founders Tim Crook and Lucy Williams
  A medtech business that has developed an individualised, semi-immersive approach which improves access to support and rehabilitation outcomes for patients with hand injuries.

- **Genie**
  Founder Ivaylo Vassilev
  A medtech business looking to scale its app-based approach to helping people with long term conditions and who are isolated, through social prescribing, education and support.

- **Identimab**
  Founders Michael Bennett and Tom Wilkinson
  A medtech company that has created a revolutionary concept that enables clinicians to reliably pinpoint the most effective drug for the treatment of inflammatory diseases.

- **Kargenera**
  Founders Salim Khakoo and Thejas Nagaraju
  A medtech University of Southampton spinout developing natural killer cell therapeutics, designed to activate the immune system during cancer treatment and potentially other diseases.

- **SOLead Energy**
  Founders Ewan Fraser and Richard Wills and Andy Cruden
  A University spinout with a low cost, environmentally benign approach to energy storage, effective for integrating renewable technologies and securing energy supply.

We know from our decades of work with spinouts, that taking the leap from academia into business is a major transition that brings with it significant challenges. Working alongside likeminded early-stage businesses and being located in a commercial setting like Southampton Science Park can make a significant contribution to making this adaptation a successful one. **Professor Cheryl Metcalf, Head of School of Healthcare Enterprise and Innovation, Faculty of Medicine, University of Southampton**

- **Soter Software**
  Founder Ngozi Chinye
  A process engineering company with a software platform which equips process safety engineers with advanced hazard and operability data for efficiency and effectiveness.

- **Zer0 World**
  Founder Nasrin Khanom
  An edtech business helping companies to integrate sustainability principles and compliance into their operations by providing accessible and effective training to upskill employees.

We are excited to be partnering with Southampton Science Park's Catalyst programme, which will allow us to provide structured support for early-stage marine technology development. Through Catalyst, we hope to remove some of the barriers to market that many ocean technology innovators face and facilitate the transformation of foundation ideas into real-world solutions.
Phil Bishop, Head of Commercial Development, The National Oceanography Centre

A VIEW FROM WESTMINSTER

The Rt Hon Caroline Nokes MP, Member of Parliament for Romsey and Southampton North and Deputy Speaker of the House of Commons speaks of her recent work with the scientific community.

Caroline Nokes with Dr Stephen Harden and Dr Tom Roques

"The last few months in Parliament have seen an influx of scientists coming in to talk to MPs about evidence-based policy making. Evidence Week is always a highlight, but it was swiftly followed by the STEM for Britain competition, numerous debates and Urgent Questions on AI.

I had the pleasure of visiting the Royal College of Radiologists Conference on Artificial Intelligence in Healthcare in February. It was absolutely eye opening and certainly gave an insight as to how AI could be used effectively in diagnosis, and perhaps in so doing, clear some of the backlogs in the NHS, or at the very least give clinicians tools to enable very rapid prioritisation. One of my constituents, Dr Stephen Harden, is President-Elect of the Royal College. It is always great to see local people at the forefront of science and innovation nationally and internationally.

Southampton has, of course, a global reputation for excellence at the University, and it is never a surprise to find Southampton students competing in the annual STEM for Britain competition. It was, however, a pleasant surprise to meet one who is working on something I both understood and is of very real relevance locally. This year's Engineering Finalist from Southampton is conducting research on storm surge barriers.

As part of this year's Evidence Week I met a group of researchers from Southampton to get their insights into young people's attitudes to vaping. For some, that is a political hot potato, and there is an argument in favour of vapes as an alternative to smoking. But we are all worried about the addictiveness of nicotine, the flavours, packaging and pocket money prices of disposable vapes. The legislation in force from June was promised by the last Government and has been enacted by this one, and I very much hope it proves to be effective.

The Life Lab at Southampton has been a great tool to help local pupils understand the impact their choices might have on their wellbeing in later life. It is the sort of initiative that just quietly gets on with helping future generations, who are under-siege from all sorts of influences in real life and online. There has been much discussion about the Netflix drama Adolescence in Parliament, and I am convinced that both at home and in the classroom, we need to give young people the opportunity to make the best decisions they can.

With researchers at Evidence Week in Parliament

Which is where the challenges of social media come in. There is so much misinformation and blatant disinformation that it can be no surprise that some people, especially young people, do not know where to turn. Which I guess brings us straight back to Evidence Week and scientists, you have to be able to trust the science. (Although I will never forget a constituent telling me he had invented a device that defied the laws of physics!)"

A VIEW FROM WINCHESTER

Councillor Nick Adams-King, Leader – Hampshire County Council, explains how the Council is working to grow Hampshire's economy.

Councillor Nick Adams-King

"Hampshire County Council (HCC) is collaborating with the Hampshire Prosperity Partnership to ensure the region's economic success both now and in the future.

The Hampshire Prosperity Partnership was established in 2024 to unite stakeholders to drive initiatives for county-wide economic growth. The University of Southampton's Vice-Chancellor, Mark E. Smith, serves on the Board, providing a vital link between education and business. Since its launch, the Partnership has updated the Hampshire Economic Strategy for 2025-2027 to focus on sustainable growth across the county's six economic capitals. These are:

1. Physical Capital: Enhancing Hampshire's physical assets and infrastructure to support economic growth.
2. Natural Capital: Preserving the health of Hampshire's natural environment and biodiversity.
3. Human Capital: Investing in Hampshire's residents and workforce, with a focus on skills and health.
4. Knowledge Capital: Leveraging the value derived from knowledge, relationships, and innovations.
5. Social Capital: Fostering community cohesion and collective action.
6. Institutional Capital: Strengthening relationships and governance through joint efforts across sectors (public, private, and education).

A Hampshire Skills Partnership has also been established to ensure Hampshire maintains a competitive economic advantage and is employing an evidence-led approach to identify priorities for investment and activities to 2027. Emerging priorities include: pathways to employment, business support, elevating high potential sectors and clusters and the formation of a new Super Cluster network, and fostering a deeper understanding infrastructure and energy needs. An Economy and Growth Plan is in development to detail resulting initiatives and activities.

The University and HCC are working together to promote business growth and innovation in areas such as the recently launched South Central Regional Defence and Security Cluster, the AI Growth Zone expression of interest and the Future Towns Innovation Hub. The Council is also partnering with the Science Park to support the Catalyst business accelerator programme.

Ensuring businesses have the necessary local skills is a key focus for Hampshire County Council's Economy and Skills team, offering numerous services to enhance skills development for employers and residents, such as apprenticeships, Skills Bootcamps, and as the local delivery partner for the Government's Connect to Work programme. The team also delivers the Government Careers Hub service, helping young people find the right career and training opportunities.

Hampshire County Council supports business growth through the Hampshire Growth Hub, a government-funded scheme for small businesses.

For more information about the strategies,programmes, and activities on offer, visit www.hants.gov.uk or email economic.development@hants.gov.uk."

The Hampshire Prosperity Partnership Board

As the world continues to warm, business leaders are being called on to go below zero. It's time for hard truths: is the world a better place because your company is in it?

Until relatively recently, the environmental narrative has been largely focused on limiting measures: reducing carbon, reducing waste, reducing water use and so on; dialling everything back to achieve a goal of net zero.

Yet, before this goal has been reached by any company, anywhere in the world, the goalposts have been moved back. Experts are now calling for businesses to go much further than simply limiting their environmental impacts; they want to see companies adding to the environment, giving back more to the world than they take out.

Why? Because progress on the bold actions that scientists have been calling for since 1988 – and expressed eloquently by the publication of the World Economic Forum's Sustainable Development Goals in 2015 – have not been acted upon to keep pace with accelerating climate change.

Fear of reduced economic competitiveness has, by and large, distracted business leaders, policymakers, investors and consumers from taking sufficiently courageous and decisive action. Most remain focused on short term profit rather than adopting a long term holistic strategy to secure sustainable, responsible growth.

BELOW ZERO

The fact remains that all businesses depend directly and indirectly on nature, but nature is being degraded faster than at any other time in human history. Each year, according to natural capital accounting principles, the planet produces up to $72 trillion worth of 'free goods and services' that are essential to a well-functioning global economy, such as clean air, clean water, food and recreation.

FACT > NASA climatologist James Hansen's research on climate change and subsequent testimony to US Congress in 1988 was a pivotal moment in alerting politicians and the public to the concept of global warming and the greenhouse effect.

Net positive

Net positive goes a step further than net zero but reflects a seismic shift in sustainability thinking and action.

The concept is simple. Businesses should put back more into the environment and society than they take out, thereby not just neutralising their impacts, but working actively to create a net benefit. It emphasises regeneration, restoration, and contributing positively, not simply avoiding damage. This will require systemic change in cultural attitudes, population empowerment and novel approaches.

Forum for the Future, the World Wildlife Fund and The Climate Group are leading on this with a multi-stakeholder coalition called the Net Positive Project. Organisations involved recognise that business is a marathon, not a sprint, along new routes that are still emerging. The destination for each is the same: to become thriving organisations that deliver benefits that extend far beyond traditional organisational boundaries.

They share an ambition to grow their brand, have strong financial performance, attract the brightest talent and plan for long-term success by going beyond risk avoidance and incremental improvements and embrace innovation. Several countries have also agreed a Nature Positive Global Goal to mobilise the necessary action to halt and reverse rapidly escalating nature loss by 2030.

#NETPOSITIVE PRINCIPLES

A new way of doing business

CLIMATE GROUP · FORUM FOR THE FUTURE · WWF

Natural capital is being eroded at a rate faster than the planet can replenish. At the same time, issues of inequality and poverty are only getting worse. Businesses need to restore natural capital and build social capital; to put back more than they take out. This new approach is called "Net Positive," and these principles spell out, in business terms, what it means.

Evidence
The positive impact is clearly demonstrable if not measurable

Innovation
The organisation invests in innovation in products and services, enters new markets, works across the value chain and in some cases, challenges the very business model it relies on

Transparency
Reporting on progress is transparent, consistent, authentic and independently verified where possible. Boundaries and scope are clearly defined and take account of both positive and negative impacts. Any trade-offs are explained

Partnerships
Organisations enter into wider partnerships and networks to create bigger positive impacts

Influence
Organisations publicly engage in influencing policy for positive change

Inclusive
An inclusive approach is adopted at every opportunity, ensuring affected communities are involved in the process of creating positive social and/or environmental impacts

Material impact
The organisation aims to make a positive impact in its key material areas

Best practice
As well as aiming to have a positive impact in its key material areas, the organisation also shows best practice in corporate responsibility and sustainability across the spectrum of social, environmental and economic impact areas, in line with globally accepted standards

#theBIGshift
A Net Positive impact often requires a big shift in approach and outcomes, and cannot be achieved by business-as-usual

No trade-off
Net Positive is delivered in a robust way and no aspect of a Net Positive approach compensates for unacceptable or irreplaceable natural losses, or ill treatment of individuals and communities

Throughput
Every opportunity is used to deliver positive impacts across value chains, sectors, systems, and throughput to the natural world and society

Restorative
Where key material areas are ecological, robust environmentally restorative and socially inclusive methods are applied

Infographic courtesy of Forumforthefuture.org

BELOW ZERO CONTINUED

For businesses, making this transition is complex. There are further challenges in tracking and reporting on progress, given the interconnectivity of global supply chains and significant variation in regulatory frameworks to adhere to: it's been reported that there are more than 600 different sets of environmental metrics for businesses to work with. There is no doubt that this complexity is impeding progress and simplification is required. In this respect, the Nature Positive Initiative, which is working to develop a single clear set of metrics will be warmly welcomed.

FACT > Traditional Hawaiians think of the past (wā mamua) as in front of us because we can see it and the future (ka wā mahope) as behind us. This way we learn from the past to step into the future.

Nature as a solution, not a problem

Arguably, it is easier for businesses to introduce new technology than to introduce cultural change and new thinking amongst colleagues. Looking to nature itself is a proven first step in innovating along these lines. Here, there is unbounded potential for exciting breakthroughs.

How are these for nature-inspired innovation?

The Eastgate Centre, Harare, Zimbabwe
Credit: David Brazier, CC BY-SA 3.0 via Wikimedia Commons

Biomimetic Architecture: The Eastgate Centre in Harare, Zimbabwe, is the country's largest office and shopping complex. It stays at a regulated temperature all year, yet it uses no air-conditioning or heating. Inspired by how termite mounds regulate temperature through a process of opening and closing vents, the architect created a structure that draws in air and warms or cools it with the building mass, depending on which is hotter – the building or the air.

Kingfisher Bullet Trains: With speeds in excess of 300km/h, Japanese bullet trains are icons for speed and efficiency, but they generated a huge sonic boom every time they emerged from a tunnel due to changing air pressure. Drawing inspiration from the kingfisher, experts in travelling between the mediums of air and water with very little splash, engineers adopted a long beak-shaped nose for its Shinkansen bullet trains. This has significantly reduced noise pollution, with the added benefits of 15% less electricity consumption and 10% faster speeds.

Birch Tyres: Tyre manufacturers buy over 70% of the world's rubber and, while natural and synthetic rubber can both be used, both carry environmental issues associated with large-scale deforestation and the use of carbon-intensive fossil fuels. A Swedish company has found a solution to this sustainability issue. It is transforming birch bark, a byproduct of the pulp, paper, and sawmill industries which would otherwise be burned, into a fully functional polymer that mimics synthetic rubber with a significantly lower environmental footprint. The expectation is that it will cut CO_2 emissions by over 90% compared to fossil-based alternatives.

Birch tyre factory inspection
Credit: Nokian Tyres

BREAKTHROUGHS

Interesting science you may have missed

Bubbles float the answers

An international team led by the Italian Institute of Polar Sciences at the University of Venice is hoping to explain how climate works, how it changes, and the consequences of this for life on earth – by looking into bubbles!

Ice cores are of scientific interest because they trap bubbles of air and particles that reveal levels of greenhouse gas emissions and temperature variations, helping scientists to plot how climatic conditions have altered over time.

This is why the project team has excavated a 2.8km long cylinder of million-year-old ice from deep within the Antarctic. They hope to reveal what happened 900,000 to 1.2 million years ago when an unexplained change occurred in the length of time between cold and warm interglacials; the cycle increased from 41,000 to 100,000 years. At the same time, our human ancestors nearly died out, dropping to an estimated just 1,000 individuals.

Mapping this connection between climate change and near-extinction will present important insights and offer projections for our own futures.

Alef full-size car low-altitude flight test
Credit: Alef Aeronautics

Cars take to the skies

"Where we're going, Marty, we don't need roads..."

A US aeronautical company has created a flying car, the stuff of science fiction.

Once just a drawing on a napkin, Alef Aeronautics has succeeded in its ten year mission to create a vehicle that is capable of vertical take-off, forward flight, glide landing and of course, conventional road driving.

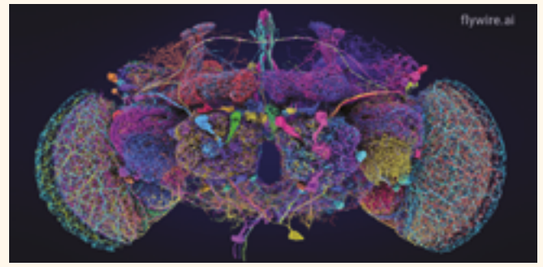
The Alef Model A is 100% electric, offers all-wheel drive, gimballed cabin, closed propellers and a full-vehicle ballistic parachute. It is set to achieve a driving range of 200 miles and a flight range of 110 miles.

With over 3,000 pre-orders, the company is entering agreements for mass production of the flying car, which will set customers back approximately £250,000 each.

Fruit flies show small is immense

An international human-AI collaboration called the FlyWire Consortium has completed a comprehensive map of an adult fruit fly's brain. This map, called a connectome, is the most detailed analysis of the brain ever produced and signals a huge leap in our understanding of how the brain works.

Despite being just the size of a poppy seed, a fly's brain is formidably powerful. This tiny organ manages incredible action complex motor control while walking or in flight, courtship behaviour, involved decision making, flexible associative memory, spatial learning and complex multisensory navigation. It has more than 130,000 cells with 50 million intricate connections.



The 50 largest neurons of the fly brain connectome.
Credit: Tyler Sloan and Amy Sterling for FlyWire

The scientists who have succeeded in mapping this immense number of connections have revealed 'a tangle of wiring that is as beautiful as it is complex'. In a first for neuroscience, they have identified the circuits used for specific functions and how they are wired together.

With the human brain being so much larger than a fly's, it will take many years to complete a human connectome, but the research is already suggesting groundbreaking possibilities for understanding human brain behaviour.

BRINGING PEOPLE TOGETHER

A vibrant community spirit abounds at Southampton Science Park with a wide range of social activities throughout the year. From sports day and running club to conservation area volunteer days and more laidback affairs like the summer BBQ, lunchtime quizzes and of course, a good old fashioned Christmas party, there are plenty of ways to connect with likeminded residents.

> thanks again to everyone who had a part in organising the event

> the team here really enjoyed it - it was one of the main topics of conversation this morning

> a brilliantly organised, efficient and fun event – we all loved it!

> a definite date in the diary for next year!

> a massive thank you for organising sports day - it was really good fun and lovely to see so many teams taking part

> the buzz was seeing so many companies coming together enjoying themselves

Resident Showcase

Elecosoft

BUILDING FOR THE FUTURE

Elecosoft, an established market leader in world-class software and related services to the built environment, acquired PEMAC, an Irish-based SaaS provider of computerised maintenance management solutions.

PEMAC's expertise in serving highly regulated industries, such as life sciences, chemicals, healthcare, food and beverages and energy, augment Elecosoft's established market leading software. The acquisition will enable the company to broaden its reach with market leading Computerised Maintenance Management Software (CMMS) solutions that are tailored to industry-specific needs and drive technological advancements that empower organisations to streamline operations, improve safety and compliance, and ultimately achieve their goals.

Elecosoft's move to the Science Park's Gamma House after a bespoke fitout, demonstrates long-term commitment to enhancing its R&D capabilities and growth plans.

As well as this strategic acquisition, the company expects its software to support the UK Government's New Homes Accelerator, an initiative designed to deliver against its commitment to build 1.5 million new homes. In 2024, it was estimated that there were around 200 stalled new home schemes but the pressure is now on for housing developers, planners and house builders to deliver quantity and quality at pace. Powerful software that improves task management, scheduling and collaboration, resource allocation, risk management, budgeting and financial management, and that offers robust reporting and analytics will play a vital role in unblocking stalled new build projects.

Elecosoft's suite of award-winning brands include the renowned Asta Powerproject and ShireSystem software solutions. They are trusted and used throughout the building lifecycle from early planning and design stages through to construction, interior fit out, asset management and facilities management, to support project delivery, estimation, visualisation, Building Information Modelling and property management.

elecosoft.com

Resident Showcase

Future Towns Innovation Hub

CLEAN WATER SOUTH

The Future Towns Innovation Hub is leading a Clean Water South project to improve river quality across the region, laying the foundations for a sustainable water future.

Healthy rivers are vital for biodiversity and thriving communities: agriculture, businesses, recreation and health all depend on sustainable, safe water supplies. Achieving this requires partnership working so, since 2024, the Future Towns Innovation Hub (FTIH) has been hosting Clean Water South events, growing a collaborative network. It is working very closely in partnership with the University of Portsmouth.

Attended by a range of stakeholders, the inaugural event laid foundations for future collaboration and covered topics such as nutrient monitoring, sewage pollution and land management. A key takeaway was that water quality is a civic issue which affects everyone and requires prioritisation in local and regional agendas.

A practical outcome of this first session was a localised project to address concerns about water quality in the Upper Hamble river, popular for recreational activities. Here, the FTIH and the University's Water and Environmental Engineering Group deployed water quality sensors powered by Microbial Fuel Cell technology, which uses microorganisms to generate electricity as they break down organic matter in the water, generating reliable indicators of water quality in real time. The next phase will see sensors deployed at key locations along the river and digitising the data outputs, enabling members of the public to make informed decisions before engaging in recreational river activities.

The first Clean Water South event focused on academia. The second highlighted the role of industry, with inputs from Ofwat and Southern Water among others, leading to further projects and collaborations. The third event in the series focused on specific water initiatives right across the Central South region.

FTIH is a collaborative physical and virtual space working to deliver a place innovation journey, tackling complex problems by better understanding cross-sector challenges, finding opportunities for collaborative working, and facilitating the implementation and scaling of innovative solutions.

hub.futuretowns.soton.ac.uk

Utonomy

GREENING GAS NETWORKS

Utonomy has won a major contract with SGN to help bring gas networks closer to net zero.

Building on its long-standing collaboration with SGN, Utonomy will deploy its UtonomyOne remote pressure control system across SGN's medium pressure gas network on the Isle of Sheppey.

The aim is to increase the injection capacity of the network to enable the Sheppey biomethane plan to inject more biomethane over the year. Biomethane, a renewable natural gas produced from organic matter, is to play a significant role in decarbonising the UK's gas network. For this to happen, the natural gas governors feeding the network need to be regularly adjusted. Historically, these pressure adjustments have been made manually but this is costly and time consuming, meaning that biomethane sites are often not used to their full capacity.

Utonomy's solution alleviates this issue. UtonomyOne enables the natural gas governors feeding the networks to be remotely adjusted so that the pressure in the network is sufficient to provide security of supply but not so high that the biomethane plant connected to the network is unable to feed in. By adjusting the natural gas feed-in governors in this way, the injection from the biomethane plant can be prioritised over the natural gas feed-in, ultimately increasing levels of biomethane that can be delivered to the network.

SGN distributes gas to 6 million homes and businesses. It has 42 biomethane plants connected to its networks, currently able to supply the equivalent of 320,000 domestic households. Following this first installation on the Isle of Sheppey, SGN plans to roll out Utonomy's technology more widely to help it reach its target of supplying the equivalent of supplying one million domestic houses with biomethane by 2031.

utonomy.co.uk

TRANSFORMING TENDERING

mytender.io, University of Southampton spin-out, and graduate of both the University's Future Worlds initiative and the Science Park's Catalyst business accelerator programme, has secured seed investment of £250,000 from Fuel Ventures, making history in the process as the highest sum to be invested in a start-up co-founded by Southampton undergraduates to date.

mytender.io is disrupting the construction and facilities management industries with its AI driven software and attracting history-making investment in the process.

Founders Jamie Horsnell, Samuel Aaron and Joshua Aaron devised the AI-driven bid writing platform that will revolutionise outdated and time consuming tendering processes widely used by the construction and facilities management industries.

The company's mission is to empower all businesses with effective and efficient bid writing. It is expected that the technology will enable nearly 900,000 SMEs to respond to tenders in 75% less time and win a greater share of contract opportunities, which are valued at £30 billion each year.

The trio worked alongside bid consultants to build this platform to eliminate common concerns and frustrations when writing tenders and instead deliver the most intuitive and simple tendering software on the market with direct support to real people.

On leaving the Science Park's Catalyst programme, the start-up had already secured over 20 world-class clients, was beginning to build its sales and delivery team and was attracting attention from investors. The company was one of just twenty companies selected from a nationwide pool to participate in SETsquared's prestigious Investment Futures event in November.

This new investment will allow Jamie and Samuel to rapidly scale up sales and marketing activity, further develop the platform, and work on overseas expansion.

mytender.io

WHAT NEXT?

ChatGPT, generate a 450 word article on what business processes AI will have transformed by 2027 and where should companies yet to embrace AI, make a start?

Attach Search Reason

The transformative impact of AI on business processes by 2027

Artificial Intelligence (AI) is set to revolutionise business processes by 2027, driving efficiency, innovation, and competitive advantage across various industries. As AI technologies continue to evolve, companies that have yet to embrace AI must start integrating these advancements to stay relevant and competitive.

Key business processes transformed by AI

1. **Customer service and support:** AI-powered chatbots and virtual assistants will handle a significant portion of customer interactions, providing instant responses and personalised solutions. These systems will be able to understand and predict customer needs, improving satisfaction and reducing response times.
2. **Marketing and sales:** AI will enhance marketing strategies through predictive analytics, enabling businesses to target the right audience with personalised content. Sales processes will benefit from AI-driven insights, helping sales teams prioritise leads and tailor their approaches.
3. **Supply chain management:** AI will optimise supply chain operations by predicting demand, managing inventory, and identifying potential disruptions. This will lead to more efficient logistics, reduced costs, and improved delivery times.
4. **Human resources:** AI will streamline recruitment processes by analysing resumes, conducting initial interviews, and assessing candidate fit. Additionally, AI will assist in employee training and development, offering personalised learning paths and performance feedback.
5. **Finance and accounting:** AI will automate routine tasks such as data entry, invoice processing, and financial reporting. Advanced AI systems will also provide predictive analytics for financial planning and risk management, enhancing decision-making capabilities.
6. **Product development:** AI will accelerate product development cycles by analysing market trends, customer feedback, and competitor products. This will enable companies to innovate faster and bring new products to market more efficiently.

Starting points for companies yet to embrace AI

For companies that have not yet integrated AI into their operations, the following steps can serve as a starting point:

1. **Assess AI readiness:** Evaluate your current business processes and identify areas where AI can add value. Consider factors such as data availability, existing technology infrastructure, and employee readiness for AI adoption.
2. **Pilot projects:** Begin with small, manageable AI pilot projects in areas with clear potential for improvement. This could include customer service chatbots, predictive analytics for marketing, or automated financial reporting.
3. **Invest in data management:** Effective AI implementation requires high-quality data. Invest in data management practices to ensure your data is clean, structured, and accessible. This will enhance the accuracy and effectiveness of AI models.
4. **Upskill employees:** Provide training and development opportunities for employees to build AI-related skills. This includes technical skills for data scientists and AI engineers, as well as functional knowledge for business leaders and managers.
5. **Collaborate with AI experts:** Partner with AI experts and consultants to guide your AI strategy and implementation. Their expertise can help you navigate the complexities of AI technology and ensure successful integration.
6. **Establish ethical guidelines:** Develop ethical guidelines for AI use to ensure transparency, fairness, and accountability. This will help build trust with customers and stakeholders while mitigating potential risks.

By 2027, AI will have transformed numerous business processes, driving efficiency and innovation. Companies that start embracing AI now will be well-positioned to leverage these advancements and maintain a competitive edge in the evolving business landscape."

ChatGPT can make mistakes. Check important info.

THE SOCIAL SCIENCE SURGE

Social media has always accelerated through change, but within the science and technology sector, 2025 feels like a tipping point. New rules are emerging. Expectations are shifting. And the old playbook? It's already outdated.

What's changed?

In short, everything. Social no longer cares too much for visibility, and the focus has switched to value. Audiences are savvy. They're not interested in corporate fluff or jargon-heavy comms. They want insight, authenticity, and purpose-led storytelling. And they want it now.

There's a rise in B2B brands acting more human. That means thought leadership with real voices, behind-the-scenes glimpses into real innovation, and genuine community-building over pushy promotion.

What's working, currently?

Founder and expert-led thought leadership. Science and tech brands are putting real people in the spotlight. Lab leads, R&D teams, innovation officers... they're becoming the face of content and providing their reputable opinions.

Short-form video. Platforms like LinkedIn and even TikTok are being used to simplify complex ideas, show the human side of breakthroughs, and build trust. TikTok has even introduced a dedicated area for STEM, encouraging children and adults to utilise the app to learn.

We've even seen short-form collabs between scientists and high-profile individuals. Prince William filmed a video with 27-year-old creator Emanuel Wallace, known on TikTok as Big Manny, who has a Master's degree in biomedical sciences, showing how to extract DNA from strawberries.

The risks

Misinformation and oversimplification are big ones. In the race to keep content digestible, there's a risk of losing nuance. The challenge lies in making science accessible without diluting it. And of course, AI-generated content is a double-edged sword – speedy and efficient, but at the cost of originality, accuracy and brand protection if not handled with care. Another risk? Doing nothing. As competitors evolve, the cost of staying static increases. In a sector known for progress, your brand's online presence should reflect the same.

What's next?

Looking ahead, we see the rise of influence in science and tech. Not influencers in the traditional sense, but credible voices within niche fields who can shape conversations and drive trust. Partnering with them to co-create content will be a powerful tool. Cool Chemistry Guy is a good example of this, he's an educational influencer currently posting easy-to-digest experiments for a large audience on TikTok and Instagram. It's this kind of influencer that's making waves in the industry, using a big platform to simplify complexity.

Video content will continue to be popular, and whether it's collaborating with fellow experts or capturing a key interview piece, your audience will thank you for the easy to consume information, inviting a new wave of impressions and engagement.

We also expect more platform fluidity. More cross-posting between platforms like LinkedIn and possibly even Threads, where scientific and tech-savvy audiences gather. The message? It's not where you post, it's whether it's relevant and relatable.

Those who lead with clarity, creativity, and community, will stand out. Because in this new era, you don't need to be the loudest voice in the room, just the clearest.

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