



SURREY
RESEARCH PARK
A University of Surrey Enterprise



2022

Annual Review

SRP Highlights



203

companies responsible for **10%** of Guildford economy



70

companies supported through the SETsquared Surrey Incubator



Average SRP occupancy throughout 2022

=97%



Second year of increasing financial performance with income

~£12M

and total return on investment of

25%



First new development since 2014, welcoming Alliance Medical to SRP



70,000FT²

of new development under discussion



28%

of companies provided work experience, took interns or employed placement students from the University of Surrey



SRP tenants responsible for

~10%

of University of Surrey's industry-funded research and innovation



ONE IN THREE

Surrey Business Award winners located at SRP



Supporting the next generation of entrepreneurs with

25%

of winners in Surrey's **"40 UNDER 40"** awards based at SRP



Costed sustainability roadmap developed to support

NET ZERO BY 2030



First dedicated innovation park nationally to join the Better Buildings Partnership to drive enhanced sustainability in commercial real estate



Helped create

"SPACE SOUTH CENTRAL"

the UK's largest regional space cluster

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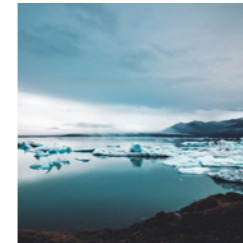
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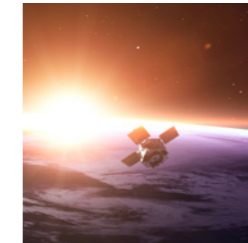
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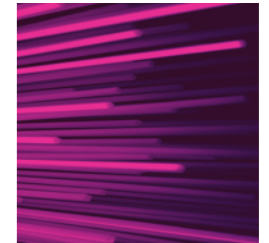
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Engaging with the University

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This annual report is our success story, highlighting the achievements of a Research Park that delivers results.

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Welcome

Kathy Slack, OBE was appointed Chair of Surrey Research Park Board in July 2022

A well-known figure across private and public sector bodies in Surrey and the Southeast, Kathy Slack was most notably the Board Director and Chief Executive of the Enterprise M3 Local Enterprise Partnership (EM3 LEP) for the previous decade.

"Since joining as the new Chair of SRP, I am struck by the many opportunities waiting to be harnessed by businesses and the University of Surrey, working independently or together.

Businesses bursting with innovation and ideas continue to be drawn to the Park, with new tenants such as Alliance Medical bolstering and complementing our community.

Of course, challenges still exist, whether it is skills shortages, energy prices or the continuing disruptions to supply chains but my sense, from talking to businesses, is that obstacles are tackled with the innovative spirit and tenacity to continuously improve and grow.

We are taking much the same approach. We have started our programme of planned improvements to the Park to enhance our sustainability work.

We are also working with the University to foster far closer links between businesses and the University and are delighted that over a quarter of our companies have provided work experience, taken interns or employed placement students in the last year.

This year, we have supported 70 companies through the SETSquared Surrey incubator, at the Surrey Technology Centre, and are also linking more companies into the emerging research and technologies of the University.

This activity reinforces the importance of the wider innovation ecosystem, which is a unique feature of this Park. Now the fourth largest University-owned Park in the UK, Surrey Research Park on its own represents at least 10% of the economy of Guildford. Together with the neighbouring Royal Surrey County Hospital and University, we have at least 20% of Guildford's economy in one square mile – truly an innovation district.

This Annual Report is our success story, highlighting the achievements of a Research Park that delivers results. This is not down to good fortune. It is down to the partners and businesses we work with, my fellow Board members, and the team at the Surrey Research Park led so ably by Grant Bourhill. Special thanks are due to Isabel Fox who chaired the Board so effectively up until July this year.

"I'd like to express my thanks to all for the work to date and for the drive, energy and enthusiasm we are showing in embracing the opportunities ahead."

“

This report celebrates the achievements of SRP companies. There is much to celebrate.

”



Reflection and outlook

Grant Bourhill, CEO of Surrey Research Park

This has been a positive year for SRP and our businesses despite a challenging external environment, and we have advanced the SRP agenda on multiple fronts.

We continued with high occupancy, averaging 97%, throughout the year. We enabled several customers to expand whilst providing security with long-term leases. Additionally, we have 70,000ft² of new development under discussion. Overall, this resulted in our second year of increasing financial performance, as measured by total return on investment (25%) and total return on asset value (14%).

Despite economic uncertainty, our outlook remains cautiously optimistic due to the breadth and quality of innovative companies at SRP, with clusters overlapping Government's priority areas, namely space; sustainability; animal and human health; and digital. Our Tenant pool is positioned well for growth as the country doubles-down on innovation as a driver of economic recovery.

This report celebrates the achievement by SRP companies. There is much to celebrate. From new RNA delivery mechanisms, to managing clinical trials of Lecanemab, hailed as a “historic moment” in Alzheimers treatment. From building new satellites, to changing the way animal cancer is treated. From developing a global atlas of environmental DNA data, to FDA approval for early-stage cancer detection. The list goes on, and it was unsurprising that SRP companies collected 5 of the 16 available Surrey Business Awards.

In our first development since 2014, Alliance Medical opened a cancer screening facility, containing a digital PET-CT scanner, one of only two in the UK. This will be used to improve health outcomes locally, in addition to research on cancer and dementia with the University, the Royal Surrey County Hospital and NPL.

We continued to strengthen links between SRP businesses and the University, for research collaboration and student talent flow, with a Working Group comprising Tenants and University colleagues helping drive this initiative. There have been several new activities already, with much to be achieved, and the direction of travel is positive.

During the year we welcomed Kathy Slack OBE as the new Chair of the Board. Kathy is a vocal champion for innovation, and I am delighted to be able to work with her.

Last year we completed a master-planning exercise that would rejuvenate the Park; support the University in its net zero by 2030 carbon target; deliver against increasing market expectation for sustainability, whilst ensuring compliance with anticipated regulation. The focus over the coming period will be securing finance and undertaking the requisite upgrades.

I have also been delighted with the continuing strong support from Angela Richardson MP, who visited SRP again during the year.

SRP is one of the largest University-owned Parks in the UK. Despite economic challenges, the future is positive as this is a place of innovators. A place of action. And a place where we get things done.

Surrey Research Park in numbers

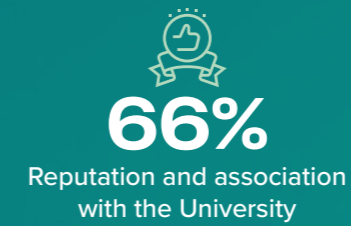
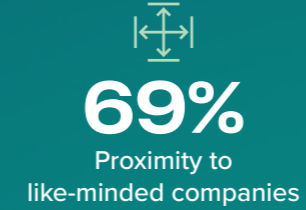
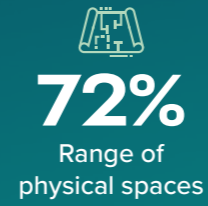
203 companies in total



SETsquared Surrey incubation hub, supporting high-growth tech start-ups



Top attractors for companies at SRP



Other attractors include ease of transport into London; the Park environment and surroundings; local facilities such as a sports centre, nursery etc.



Sustainability

The twin interlinked crises of climate change and environmental degradation are becoming increasingly pressing for societies around the world.

In this “Decade of Action,” it is inspiring to see the progress being made and the partnerships and networks being formed to share information and scale solutions.



Unlocking biodiversity data

At the cutting edge of biodiversity monitoring, **NatureMetrics** has experienced significant international growth and success this year.

NatureMetrics has undertaken DNA-based biodiversity monitoring in more than 80 countries and, to date, 47% of the company's revenue comes from overseas markets. Additionally, during the year NatureMetrics acquired Canada-based environmental DNA business, Precision Biomonitoring.

NatureMetrics has also been shortlisted as one of 15 semi-finalists for the \$10M XPRIZE Rainforest, in partnership with Dendra Systems and SYSTEMIQ LTD. Rainforests cover less than 10% of the earth's surface but are home to over 50% of the planet's biodiversity. However, there remains limited knowledge about the rainforest's complex ecosystem. The NatureMetrics partnership aims to measure the vast biodiversity of the rainforest using a combination of eDNA, portable labs, GIS, drone technology and robotics.

This year, new products from NatureMetrics included the world's first pollution tracker to improve river health. Further, having raised \$15M in May, NatureMetrics will be building a series of new digital products to enable its customers to set and monitor long-term targets on nature whilst further accelerating NatureMetrics expansion into international markets.

Enhanced intelligence to ensure biodiversity preservation

Nature is declining globally at rates unprecedented in human history. The rate of species extinctions is accelerating, with grave impacts on people around the world now likely. The EU Taxonomy has been developed to slow and reverse this decline by creating a classification system for sustainable economic activity.

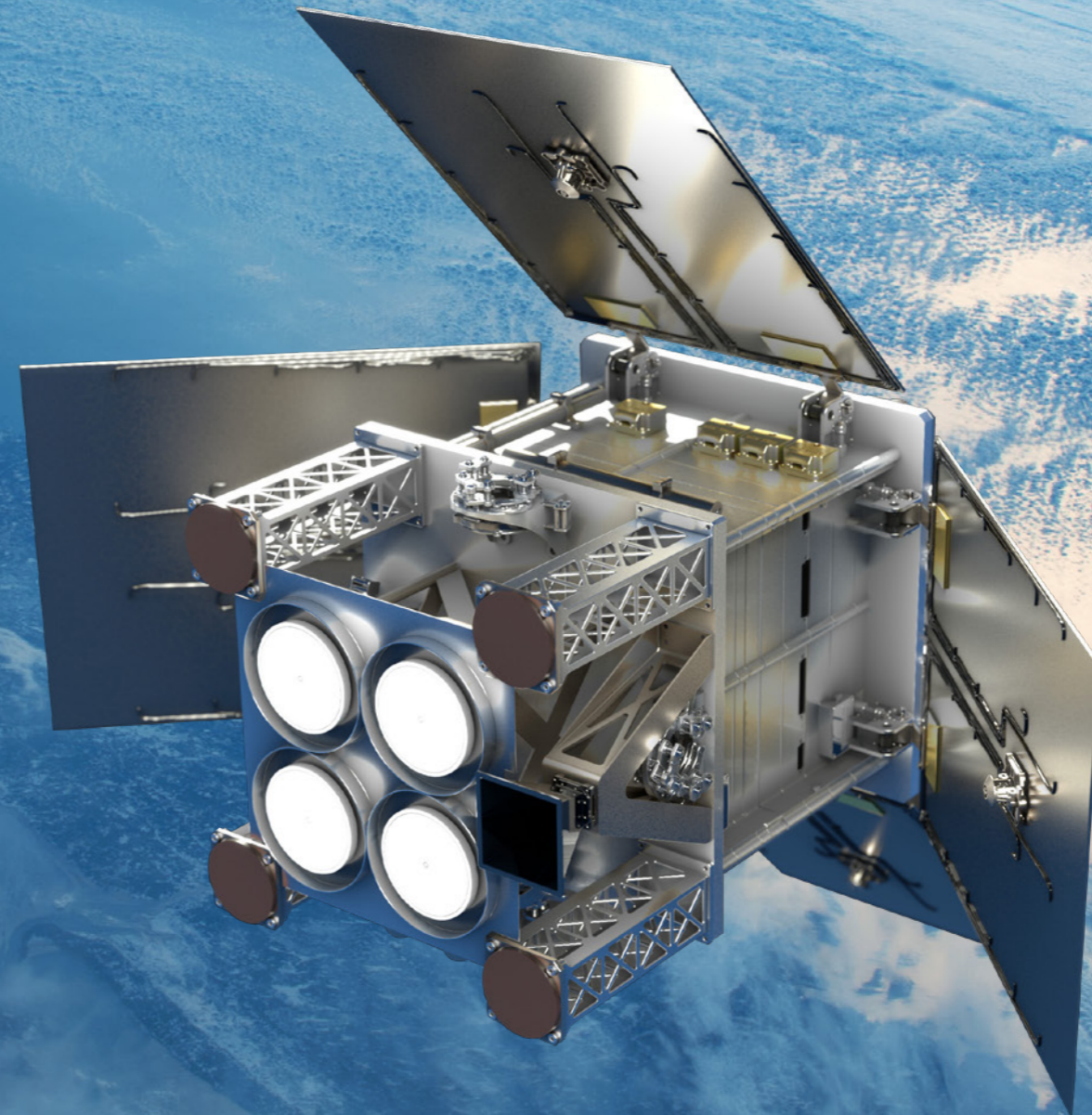
Thomson Environmental Consultants, a long-term resident of Surrey Research Park, has further developed its Thomson Interactive Map (TIM) to help clients understand how their sites may impact on areas of biodiversity sensitivity. It has also been helping one of the largest global construction product manufacturers ensure they 'do no significant harm' to biodiversity and comply with the emerging EU Taxonomy.

Measuring climate change from space

With funding from The European Space Agency, **Surrey Satellite Technology Ltd (SSTL)** is building HydroGNSS. The 55kg satellite will assist with the fight against climate change by measuring key hydrological climate change variables.

Using weakly reflected signals off the land, ice and ocean from global navigation systems, the HydroGNSS will take measurements of key variables including soil moisture, freeze-thaw state over permafrost, inundation and wetlands, and above ground biomass.

During 2022, SSTL completed detailed design ahead of manufacture in 2023 and planned launch in early 2024.



Heat-sensing satellites to monitor energy efficiency

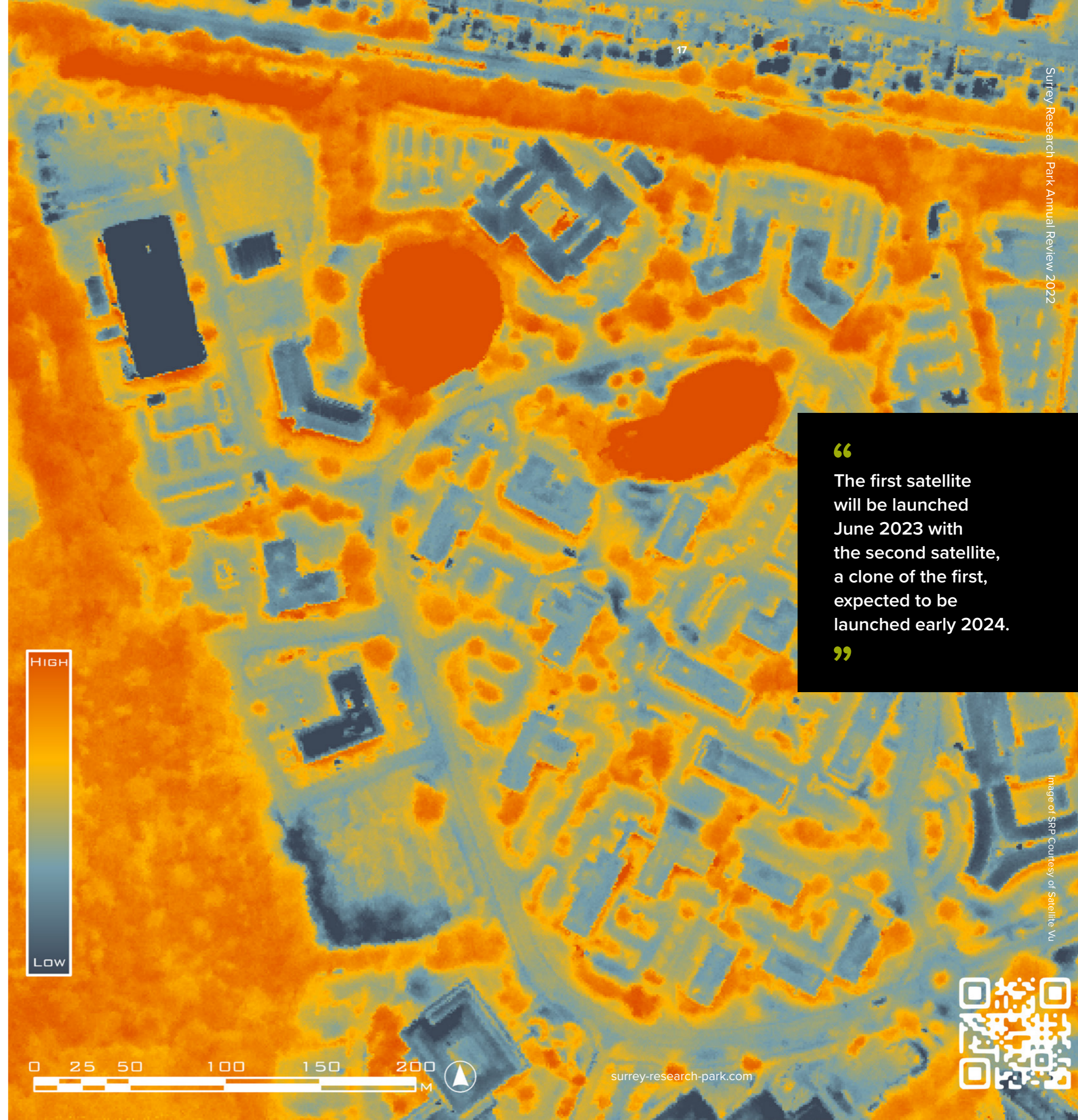
With buildings responsible for approximately 1/3rd of global CO₂ emissions, satellites are a key enabler in providing verifiable data sets on energy performance.

Surrey Satellite Technology Limited (SSTL) has been commissioned to build two mid-wave infra-red thermal imaging satellites for **Satellite Vu**. The satellites will collect thermal data multiple times a day, both day and night, from the natural and built environment at any location on the planet, enabling the measurement of heat signatures, with an accuracy of 2°C, and identification of heat loss from any building in the world.

The first satellite will be launched June 2023 with the second satellite, a clone of the first, expected to be launched early 2024.

Ultimately, Satellite Vu will form a constellation of eight satellites to provide near-real-time data sets to customers globally, accelerating the transition to a sustainable future.

At Surrey Research Park, we have been working with Satellite Vu to capture thermal imagery of our buildings to help us target and assess energy efficiency improvements, as well as provide tenants with feedback on operational energy use.



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The first satellite will be launched June 2023 with the second satellite, a clone of the first, expected to be launched early 2024.
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Powering up the EV revolution

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After deployment at SRP,
the company raised 100% of
its funding target of £500,000
in less than an hour.
”

3ti, the team behind the UK's largest solar car parks, has launched Papilio3, a pop-up mini solar car park, deployable in 24 hours and manufactured domestically from recycled shipping containers.

A prototype Papilio3 unit was deployed at SRP in May and will remain on site for at least the next 2 years, gathering market feedback.

The modular unit provides up to 12 EV charge points, designed to expand EV infrastructure rapidly and provide an effective workplace charging experience for EV drivers.

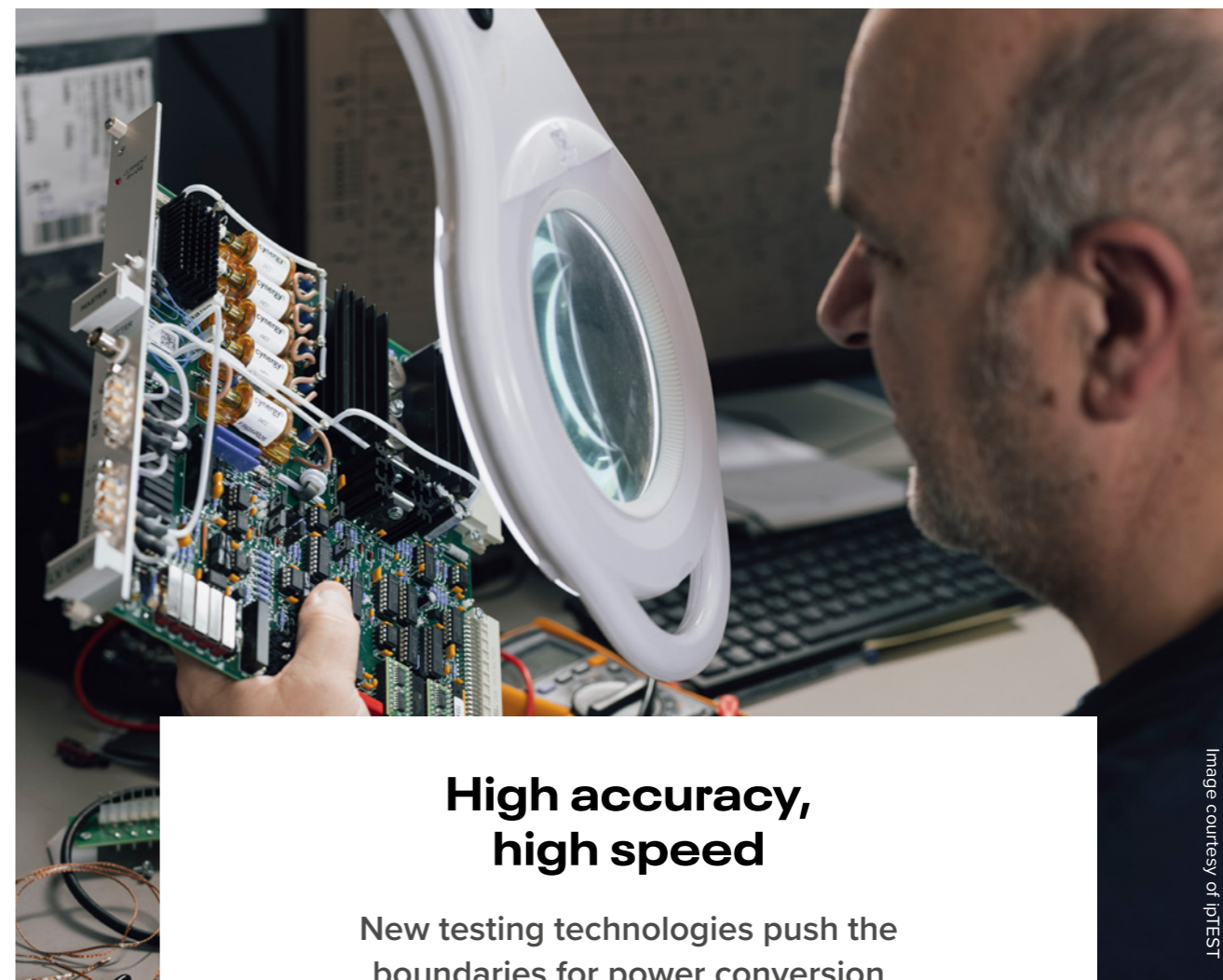
Papilio3 is available from **3ti** on a rental contract and therefore requires no capital investment by customers.

After deployment at SRP, the company raised 100% of its funding target of £500,000 in less than an hour.

The company is aiming to support the UK's expansion of EV infrastructure ahead of the ban on the sale of new diesel and petrol vehicles in 2030.



3ti 'Papilio3' Pop-up Solar Car Park installed at SRP



High accuracy, high speed

New testing technologies push the
boundaries for power conversion

ipTEST develops high-speed electrical testers for power semiconductors which are used in various low-carbon applications such as electric vehicles, solar power and wind energy.

Power semiconductors are essential to converting energy both on and off the electric grid. New wide bandgap semiconductors have revolutionised the market allowing, for example, faster and more efficient EV charging - which has been employed by Tesla in their electric vehicle fleet.

However, testing these new devices is extremely difficult. ipTEST had to innovate and develop a new range of high-speed, high-accuracy testers that can meet the higher demands, known as the "M2" product range - capable of testing to 1200V and 1000A.

Demand for their testers has grown, allowing ipTEST to supply 3 of the top 5 largest global device manufacturers, namely Infineon Technologies, ST Microelectronics and Wolfspeed. This has led to significant revenue growth for ipTEST - a 6-fold increase since 2020, and the company is anticipating doubling revenue in 2023.

To support its ongoing expansion, the company has been investing in new advanced equipment and facilities at SRP, as well as cultivating local supply partners and collaborating with University of Surrey to secure engineering talent. To accommodate their growth, ipTEST have recently taken a second building at SRP.



Institute for Sustainability

UNIVERSITY OF SURREY

New Institute for Sustainability

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We must use our best expertise and passion to build a more sustainable and just society. It is the imperative of our generation.

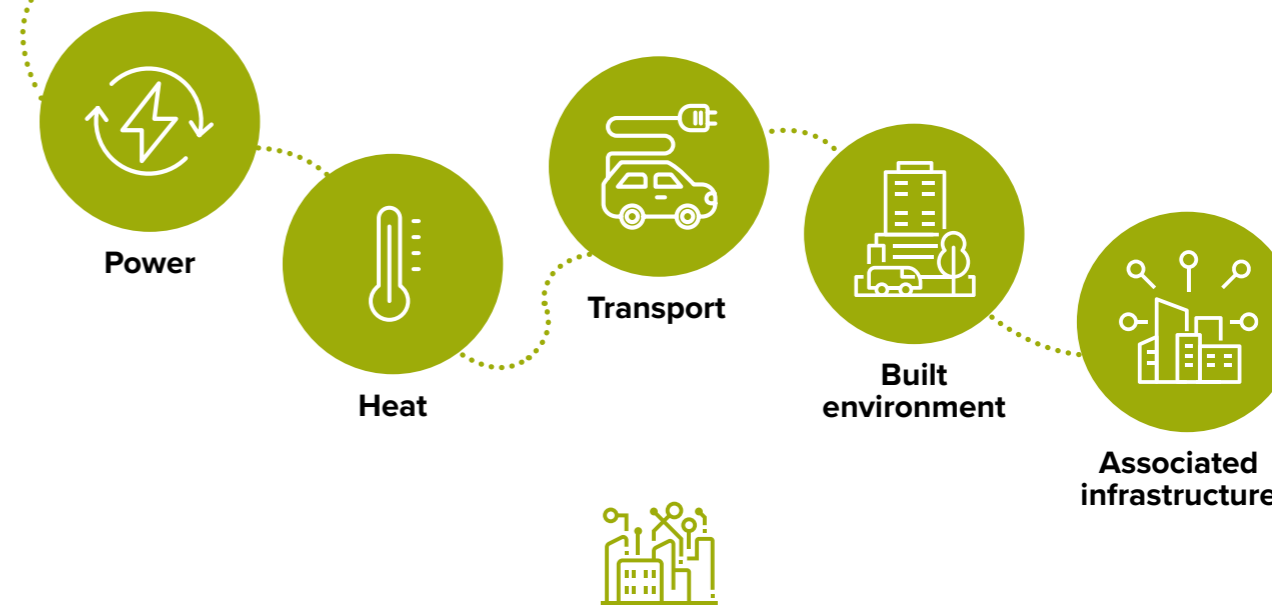
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Professor Lorenzo Fioramonti, Founding Director of the Institute for Sustainability, University of Surrey

The University of Surrey has launched a new **Institute for Sustainability**, building on several decades of internationally recognised work in this field. Working in partnership with a range of organisations, the mission of the Institute is to be a critical player in the global transition to sustainable living through interdisciplinary research and innovation, interacting pro-actively with policy and business communities.

SRP's net zero roadmap

The University of Surrey was one of the first academic institutions nationally to set an ambitious carbon reduction target of net zero by 2030. At SRP, we worked with our partners Stantec to develop a costed roadmap to net zero across scopes 1-3. The roadmap includes:



Working together for a sustainable future

Accelerating the deployment of sustainability solutions requires effective partnerships and knowledge exchange. To enable this, SRP became the first dedicated innovation Park nationally to join the Better Buildings Partnership (BBP). We chair a sustainability network of the International Association of Science Parks and have joined the UK Green Building Council.



Sustainability Working Group

A Sustainability Working Group comprising a cross-section of SRP companies and University staff drives both knowledge exchange and the uptake of a range of sustainability solutions across SRP. Within just a few months of operation, the group is already sharing case studies, offering expertise, and investigating enhanced approaches to Park-wide lab waste.

Space

Satellites are crucial for commercial, civil and defence applications, with UK organisations generating over £16 billion in income annually.

Surrey has been synonymous with space science and innovation for decades and this is only set to grow.



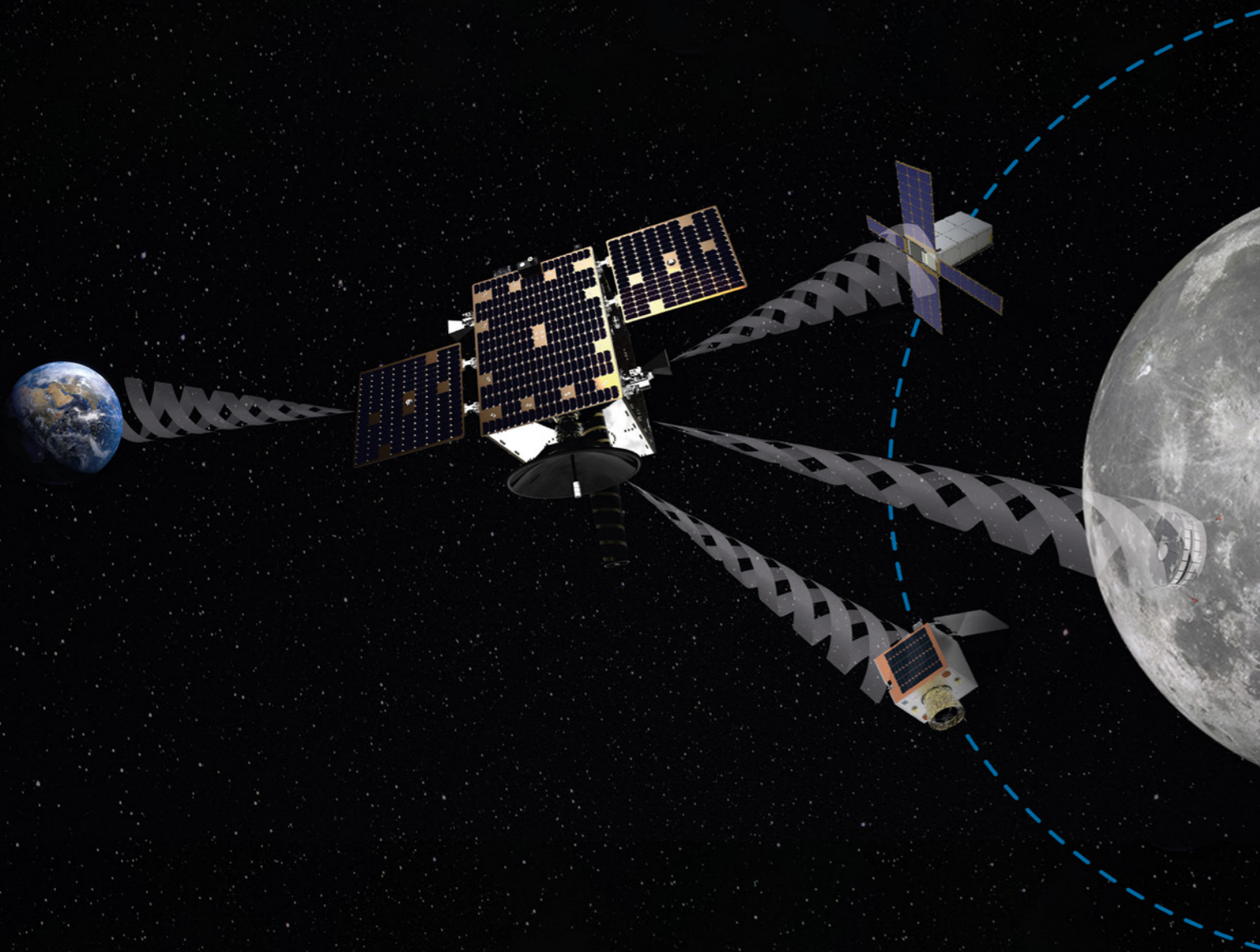
“
Space is a strategic focal area for the University of Surrey, covering many disciplines, and we will continue with our long heritage of working closely with industry.

”
Professor Bob Nichol,
Pro-Vice-Chancellor and Executive Dean
Faculty of Engineering and Physical Sciences,
University of Surrey

Mission to the Moon

Improving communication links

One of the most exciting missions currently in-build at **Surrey Satellite Technology Ltd (SSTL)** is the Lunar Pathfinder, which will serve as a telecommunications relay satellite for future missions to the Moon. Due for launch in 2025, Lunar Pathfinder will operate in a highly elliptical 'Lunar Frozen Orbit', designed to optimise coverage and provide communications links for rovers and other payloads operating around the Moon's South Pole, the primary focus of future Lunar exploration missions.



Strengthening the UK's sovereign space capability

Innovation in Space for Advantage on Earth

The **Azalea Cluster** collects optical, radar and RF data, analyses this in orbit using onboard machine learning, then delivers resulting intelligence rapidly to wherever it's needed

Synthetic Aperture Radar
Capturing advanced radar images night and day, through any weather

Cluster Computing
Processing all data received on the multi-sensor satellite cluster to look for intelligence and transmit this to where it's required

Radio Frequency, Send, Receive and Detection
To track signals on Earth as well as provide secure communications

Digital Intelligence
Taking conventional detailed images

SAR Satellite Imagery

BAE SYSTEMS

Three multi-sensor satellites from BAE Systems & In-Space Missions, and one SAR satellite in collaboration with ICEYE

BAE Systems Digital Intelligence Azalea Satellite Cluster

Over the last 12 months **BAE Systems'** space investment has accelerated with the announcement of its new multi-sensor satellite cluster, Azalea. This follows the acquisition of In-Space Missions last year.

The Low Earth Orbit satellite solution was revealed in September, as a state-of-the-art capability designed to collect and process optical, radar and radio frequency (RF) data.

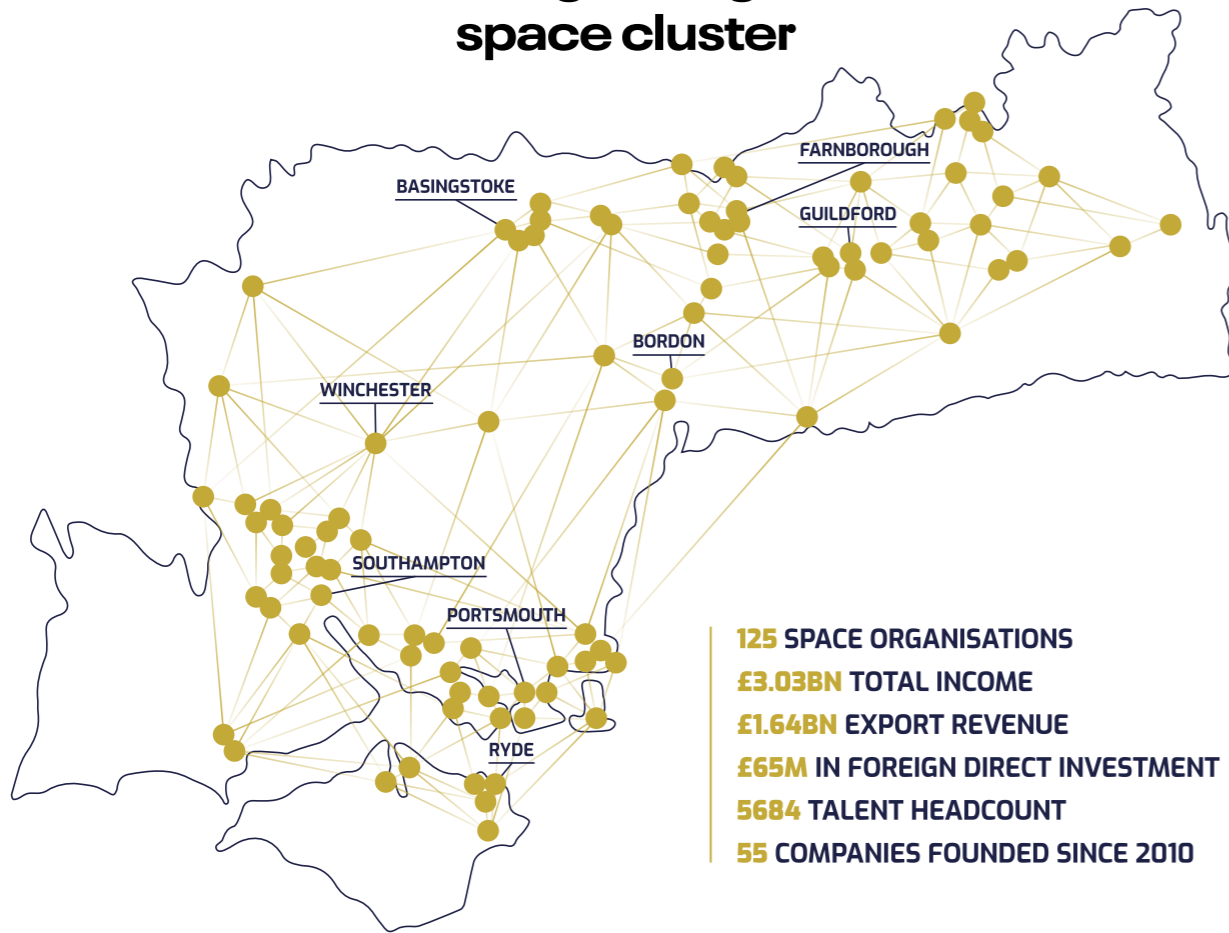
Existing space-based sensors require multiple terabytes of data to be transferred to Earth before being processed and distributed. The traditional transfer process can take many hours and is reliant on intermittent RF links and the availability of suitable ground stations. The Azalea™ system saves valuable time by combining and analysing data in space.

Unlike conventional, single-purpose satellites, the cluster can be fully reconfigured whilst in orbit in the same way a smartphone installs a new app; this ensures it can deliver future missions and expands the lifecycle of the satellites.

The ability to deliver intelligence, as well as high-quality imagery, from space will aid forces on land, sea and air, while a partnership with Finnish company, ICEYE will provide advanced synthetic aperture radar (SAR) technology as part of the overall offering.

This latter strand caters for high-resolution imagery of the planet's surface at any time of day and through any weather condition, to quickly detect instant changes including floods and forest fires.

Launching Space South Central, UK's largest regional space cluster



The Space South Central Regional Cluster Network

During 2022, a range of industrial and academic partners came together with Surrey Research Park to create **Space South Central (SSC)**, the UK's largest regional space cluster, officially launched at the Farnborough International Airshow in July.

The SSC region accounts for approximately £3bn of national space-related turnover and employs over 5,600 people. South Central has demonstrable capacity in almost all of the UK's recognised space capability, with the aim of the cluster to bring this capability together to maximise economic value.

Space South Central will:

- Create pilot activity, opening up existing high-quality facilities to external companies and providing specialist resources to assist companies in developing innovative space solutions.
- Bring regional skills delivery partners together to help close current skills gaps.
- Support end to end mission capabilities, education and training.
- Facilitate levelling up through regional economic growth and collaboration nationally.

“

Space South Central exemplifies the vision set out in the National Space Strategy of a sector working together to showcase UK skills and capabilities, catalyse investment, and enhance our international reputation.

”

Dr Paul Bate, CEO of the UK Space Agency

AMD joins forces with NASA to overcome challenges of space exploration

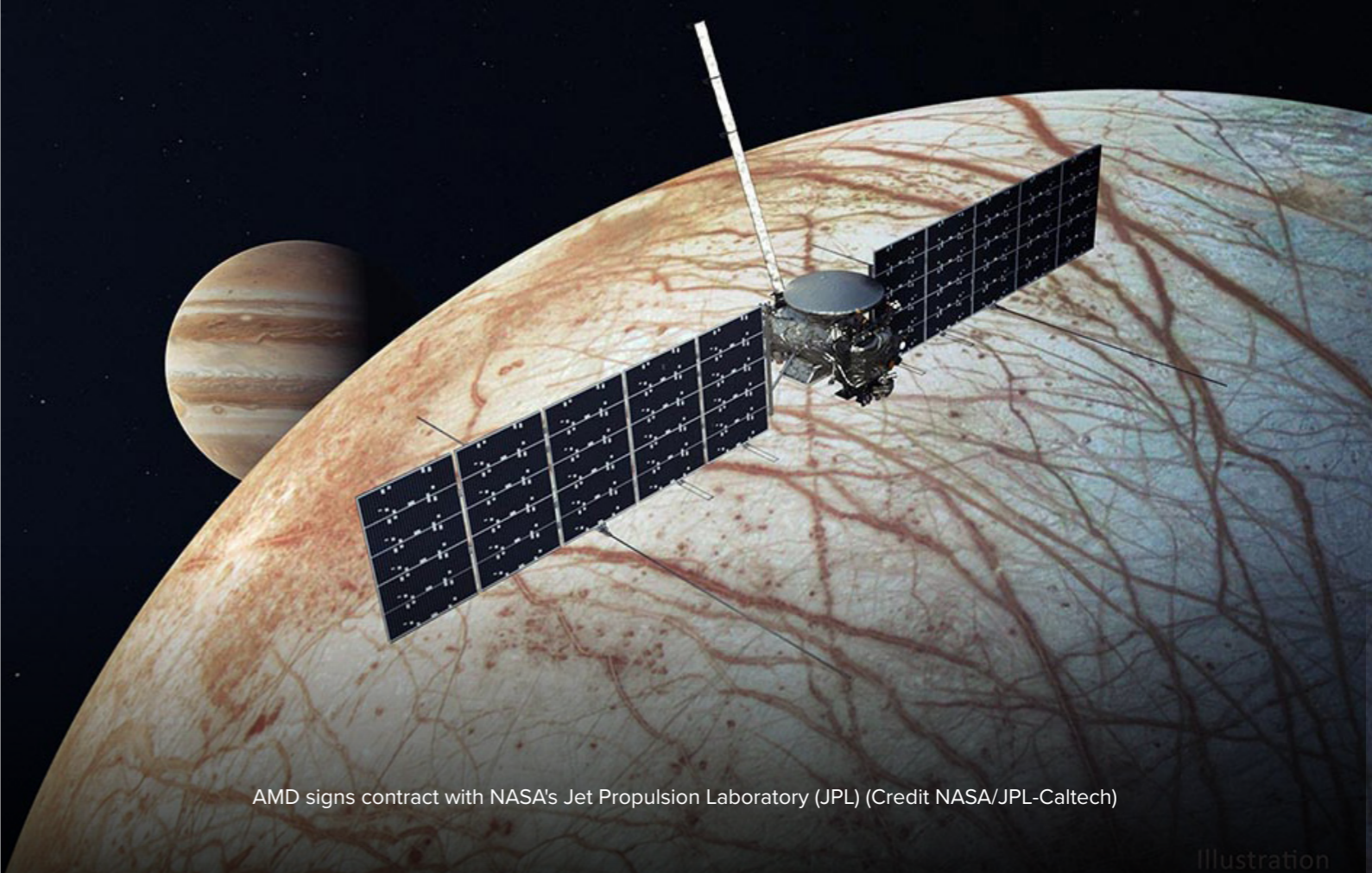
Advanced Material Development (AMD) is working with NASA's Jet Propulsion Laboratory (JPL) for its Europa Clipper spacecraft electromagnetic compatibility test campaign.

AMD's proprietary thin-film coatings technology, a radio frequency (RF) absorbing nanomaterial that can be applied to a variety of substrates, can identify if the spacecraft's sensitive ice-penetrating radar will operate properly at key frequencies to meet scientific objectives.

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The Europa Clipper spacecraft, scheduled to launch in 2024, will perform dozens of close flybys of Jupiter's moon Europa, gathering detailed measurements from multiple instruments, including the radar instrument, to investigate whether conditions on the moon could support life.

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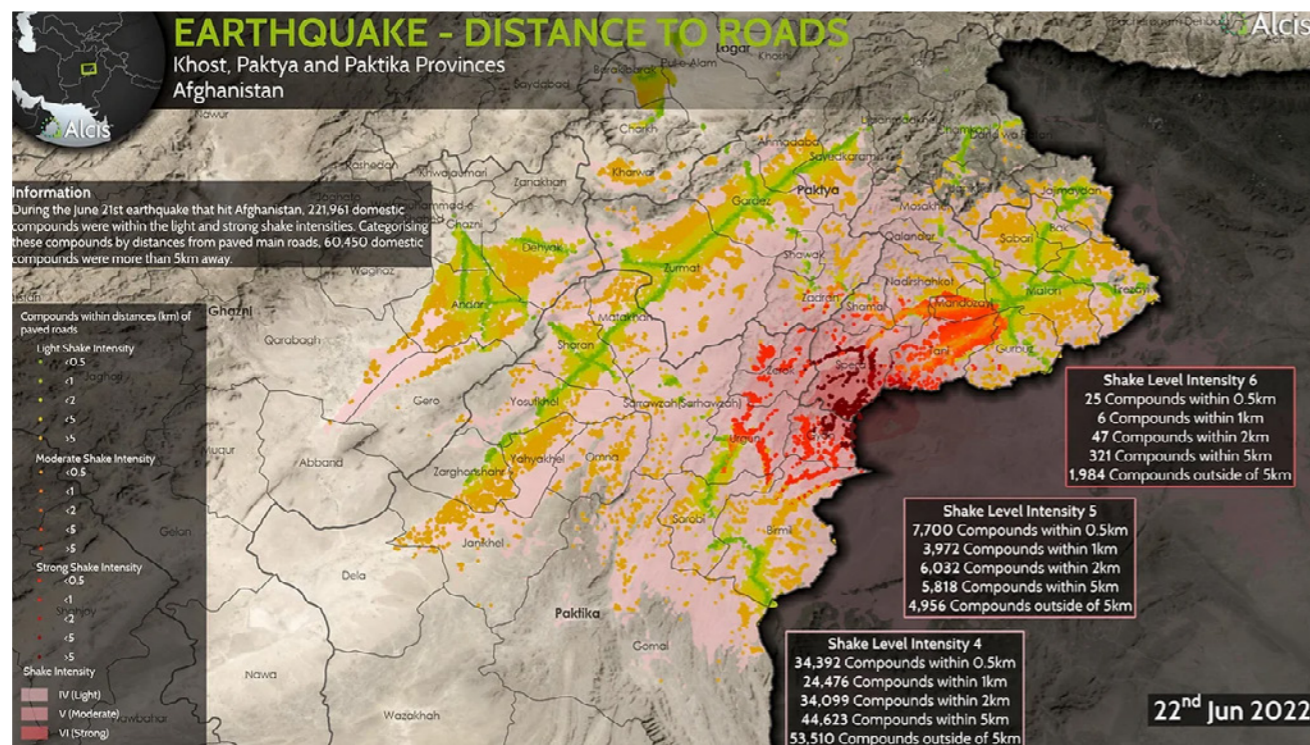


Aiding disaster response

On 18th July, a 5.1 magnitude earthquake struck a remote area of Afghanistan.

Geographic Information Services provider **Alcis** was able to provide immediate assistance.

Combining their unique database of every house in Afghanistan with other open-source data and satellite imagery, the team analysed travel distances from homes to health centres to produce an online mapping portal for humanitarian agencies to use in rescue efforts.



“
Geographic Information Services provider Alcis was able to provide immediate assistance.
”

Pioneering smarter satellite communication

Clutch Space Systems Ltd, a provider of software for ground stations for satellite communications, secured funding to collaborate with the University of Surrey to design, develop and test a prototype of a digitally controlled antenna system that would enable smarter and more efficient communication for low Earth orbit satellites. Their solution allows a single antenna to track and communicate with up to 20 satellites simultaneously.

The next generation system will provide 100% global availability, at greater than 100 times lower cost, with more than 20 times the capacity of traditional systems.

Dr Tim Brown, an academic in Radio Frequency Engineering at the University of Surrey, added: “We took on the project as an engineering problem to find a viable alternative to using massive dish antennas on the roofs of buildings in order to reach satellites and coordinate from multiple earth stations.”

Clutch Space have very recently signed an agreement with Luxembourg-based Kleos Space, to demonstrate the new micro ground station network.

“
With the growth of LEO satellites there’s a growing demand for low-cost antenna solutions suitable for satellite links to be scattered over the globe. This work plays an important part in that world-changing engineering plan.
”

Dr Tim Brown, Senior Lecturer in RF Antennas and Propagation, University of Surrey



Digital

Digital technology continues to reshape our world at unprecedented speed, creating opportunities across various sectors and applications.

This section highlights the innovative “digital ecosystem” at SRP and the wider region.



Award-winning IoT connectivity platform

Until now, IoT (Internet of Things) has been hampered by its complexity with device, global connectivity and security challenges.

Eseye's innovative new platform, Infinity, enables customers to easily scale and evolve their IoT deployment to suit their needs, empowering them to make the right carrier choices, wherever they are in the world.

With Infinity, organisations can right-size, change and optimise connectivity as their requirements, the market and technology evolve. Single pane-of-glass visibility and centralised reporting ensure the platform captures and manages everything, utilising analytics, and AI, which in turn reduces service overheads across global IoT estates, significantly cutting the total cost of ownership.



Driverless training enhances road safety

Winners of the 'Best Use of Technology Award' at the Motor Transport Awards, SRP tenants BOC, part of Linde Group, and Diverse Interactive joined forces to create a driverless training system.

The system utilises Linde's gas cylinder delivery vehicles and integrates **Diverse Interactive's** virtual reality technology. With proprietary eye tracking devices and motion simulation to provide a realistic and immersive driver training experience, the system improves safety for staff and the public.

The technology has already been applied to **Linde's** driver training and safety programme for its UK-wide network of hauliers.



Automating repetitive, hazardous or precise tasks

Inovo Robotics develops flexible automation for high mix manufacturing processes.

The novel modular robot arm can be easily reconfigured to perform a diverse range of tasks, adapting to new processes as business needs change.

The intuitive no code teaching system allows end users with no previous experience in robotics or programming, to quickly learn how to operate the robot. This significantly reduces integration costs and offers a level of flexibility needed for today's agile production environments.

Crypto evolution

Gold-i has significantly evolved its innovative Crypto Switch™ 2.0 which enables financial institutions to offer digital assets to clients and facilitates the distribution of digital asset liquidity to Gold-i's global client base.

In 2022, Crypto Switch™ 2.0 was integrated with Binance, one of the world's leading cryptocurrency exchanges as well as over 20 additional crypto exchanges and crypto market makers. This gives clients a range of options for accessing crypto liquidity, providing protection if individual venues collapse.

Strong digital defences

Surrey has been recognised as a Cyber Security Cluster this year and SRP is home to several cybersecurity companies including BAE Systems Digital Intelligence and Waymont Consulting.

BAE Systems Digital Intelligence is dedicated to supporting cyber missions with the enterprise-grade security relied on by governments to protect, detect and deter.

One of only a handful of companies certified by Government Communications Headquarters (GCHQ) and Centre for the Protection of National Infrastructure (CPNI) as quality-assured cyber incident response providers, the business focuses on supporting nations in their quest to become responsible and democratic cyber powers. It enables organisations to build strategies against crime, fraud and theft, protecting citizens and reducing reputational risk.

The business tracks 130+ Advanced Persistent Cyber Threat groups.

Delivering solutions to financial crime

BAE Systems Digital Intelligence Division was launched at the beginning of 2022. Home to 4800 world-class data, digital and cyber experts, its headquarters are located at Surrey Research Park. Working across several application areas, the Division applies its expertise to customers globally and is located in 16 countries world-wide.

While most people will think of BAE Systems being associated with the defence and intelligence sectors, the Division is also applying its deep engineering and digital capability to preventing money laundering and financial crime. The scale of economic crime in the UK is unknown, with the Treasury Select Committee stating that it could run into the tens or hundreds of billions of pounds per year. The challenge is made all the greater as the speed and volume of transactions continues to rise.

In March the company reported that it was trusted by more than a third of the global top 100 banks, while working with over 200 financial institutions to protect them from risk using digital platforms that use robust behavioural profiling, anomaly detection and machine learning analytics for quicker and more accurate identification of fraud. Working with Zurich Insurance, for example, they have identified 500 new frauds across various product lines worth £5m.

In July, BAE Systems sold their “NetReveal” financial crime detection platform to AI software company SymphonyAI.



AI research solving real world problems

The **Surrey Institute for People-Centred AI** has gone from strength to strength since its launch last year. The Institute aims to build on the University's 35-year history in AI by building a new multi-disciplinary approach to research in AI that has its primary goal of using AI to address human and societal challenges.

Director and Co-Founder Adrian Hilton comments:

“

We have now assembled our core team of new academics, with fields of research that span law, social sciences, natural language processing, Green AI, tax systems and omics – to name a few. We have developed strong links with a variety of commercial and governmental entities (such as the Alan Turing Institute) who are interested in bringing the people-centred approach to their domains. We are running workshops with a variety of external partners to provide insight and ideas to our challenge-based approach to research, ensuring that the work we do is rooted in solving real-world problems. As such, we work closely with Surrey Research Park to encourage companies to leverage the AI and AI-related knowledge that we can offer, and to help to steer our research directions in ways that positively impact the local community and economy.

”

Human and animal health

The Covid pandemic brought into stark focus the impact of zoonotic disease. However, it also highlighted the extraordinary power of science and innovation.

Animal health and human health, and their inter-connectivity, is becoming increasingly important as the global population expands, with climate change causing environments to degrade with mass-scale migrations bringing animals and humans ever closer together.

Surrey is already a world-class focal point for animal health. At Surrey Research Park we have a growing cluster of animal health companies, including Europe's leading animal oncology centre.

Our human health capability is already significant with 30% of SRP companies working on human health, in partnership with the nearby Royal Surrey County Hospital and University.

We are in a prime position to drive enhanced research and innovation, helping the region and UK capture an increasing share of the global animal and human healthcare markets, while crucially exploring linkages and exploiting opportunities between the two.

“

The University of Surrey is pursuing a one health – one medicine strategy, and our partnerships at SRP help improve animal and human health, while offering enhanced student employability.

”

Professor Paul Townsend, Pro-Vice-Chancellor and Executive Dean for the Faculty of Health and Medical Sciences, University of Surrey



Veterinary Medicine R&D for the 21st Century

272BIO Limited, an innovative animal health company, will be joining the growing cluster of excellence at SRP in mid-2023.

Formed 3 years ago, 272BIO is a biotherapeutics company developing treatments to tackle diseases across animal health. Antibody therapeutics represent a bio-friendly alternative to the use of antibiotics and other chemicals, potentially harmful to the environment and the food chain.

272BIO uses llama-derived V_HH antibody technology with its relatively low production costs in microbial systems to develop highly innovative treatments.

272BIO uses innovative protein design and engineering to produce the best antibody therapeutic drugs for veterinary medicine.



New era for personalised cancer care

Over the last six years **ANGLE plc** has worked towards, and received in 2022, US Food and Drug Administration (FDA) clearance for their Parsortix[®] PC1 Clinical System for use with metastatic breast cancer (MBC) patients.

This marks a significant achievement as the first ever FDA cleared product for harvesting circulating tumour cells from MBC patient blood samples for user-validated subsequent analysis. This creates new possibilities in the era of personalised cancer medicine, with the ability to repeat a non-invasive liquid biopsy to assess metastatic breast cancer.

During the year, Angle expanded into a new lab facility at SRP.

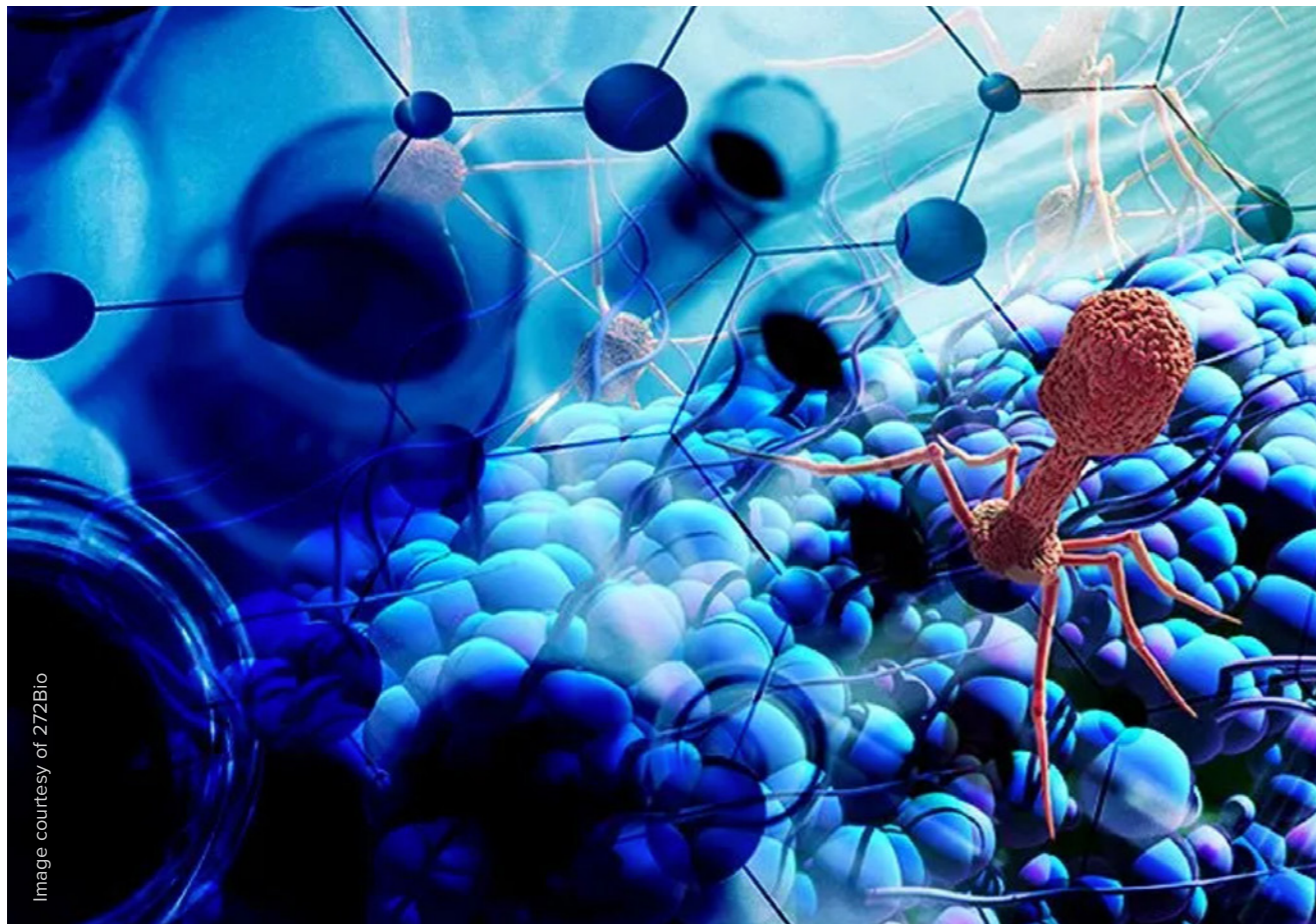
ANGLE Founder and Chief Executive, Andrew Newland, commented:

“

This ground-breaking first ever FDA product clearance in metastatic breast cancer provides the platform for ANGLE to work with our collaborators and customers to support further FDA submissions and the establishment of numerous specific clinical uses across different cancer types.”

“By making the Parsortix system widely available, we intend to support the entire industry in its adoption of liquid biopsy solutions for repeat non-invasive diagnostics for personalised cancer care. Large-scale medtech and pharma companies now have an FDA cleared platform on which to develop new medical solutions.

”



The image shows a bacteriophage, a bacterial virus, and the 3D protein structure



Image courtesy of Alliance Medical

Early detection of cancer

Alliance Medical's brand new purpose-built PET-CT Centre at the Park has welcomed over 800 patients in the first two months since opening in September 22. It features one of only two GE Discovery MI 5-Ring Gen 2 PET-CTs in the UK, which can detect smaller lesions at earlier stages than ever before. Patients benefit from lower radiation doses and quicker scans, with full-body imaging completed in just 10 minutes. Faster image reconstruction also enables scans to be reviewed during the appointment, allowing further imaging immediately if required.

The facility is also used for vital research into diseases such as cancer and dementia with the Royal Surrey NHS Foundation Trust, the University of Surrey and National Physical Laboratory (NPL).

Historic moment for Alzheimer's treatment

Re:Cognition Health, specialising in the diagnosis and treatment of people with Alzheimer's disease, is delivering the global clinical trial for Lecanemab.

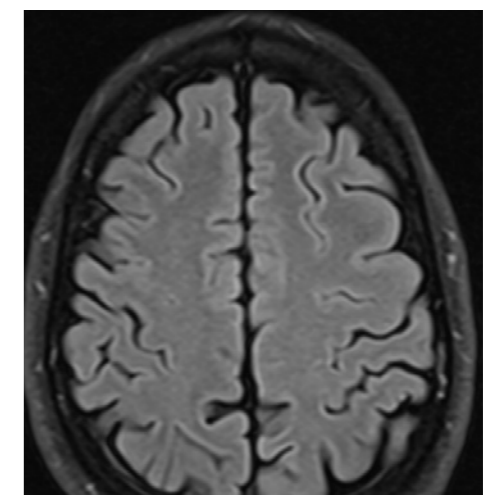
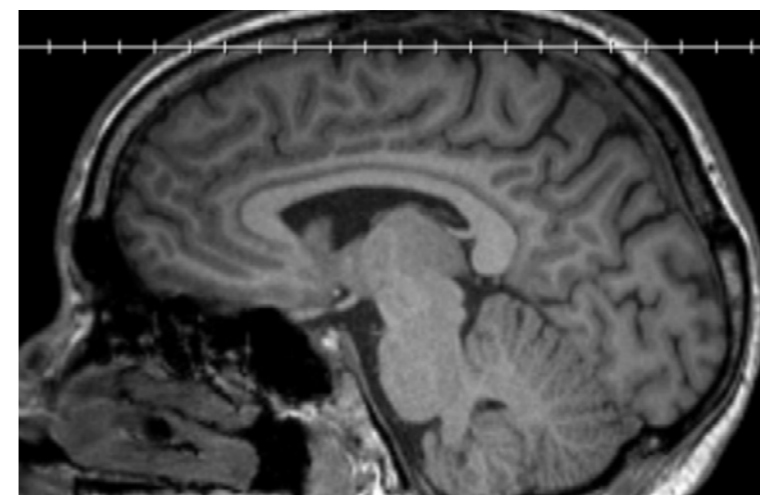
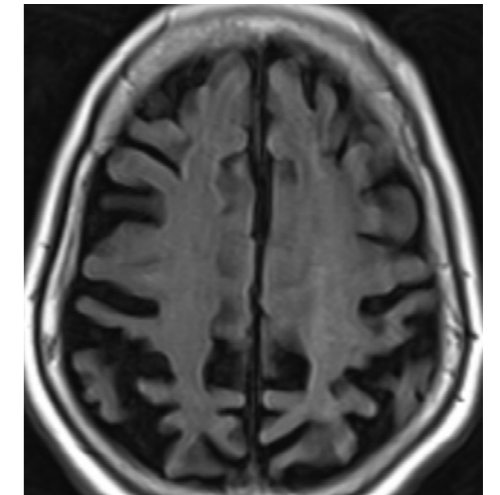
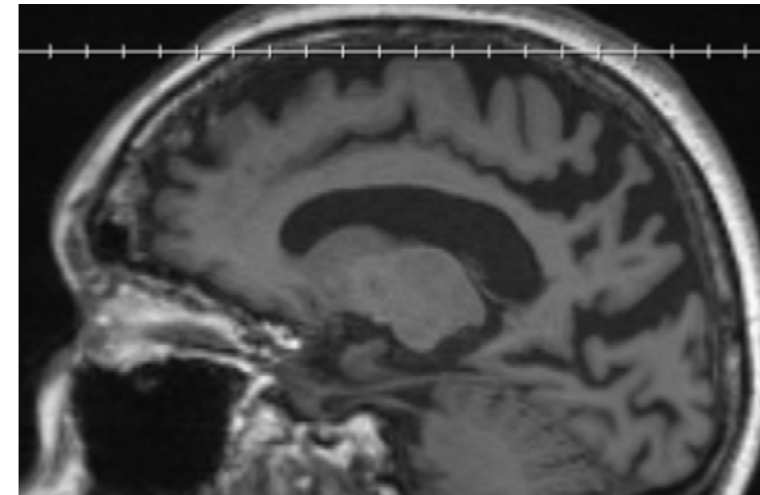
A total of 1,795 volunteers in the early stages of Alzheimer's participated in the trial, receiving fortnightly infusions of Lecanemab, a new medication developed by pharmaceutical companies Eisai and Biogen.

Results demonstrated a 27% reduction in the rate of progressive cognitive decline for those on Lecanemab compared to those on a placebo, in an 18-month trial.

The trial has been hailed by international experts in Alzheimers as a "historic moment." Re:Cognition Health's team are optimistic the results could lead to the progression of an effective potential treatment for Alzheimer's disease in the UK.

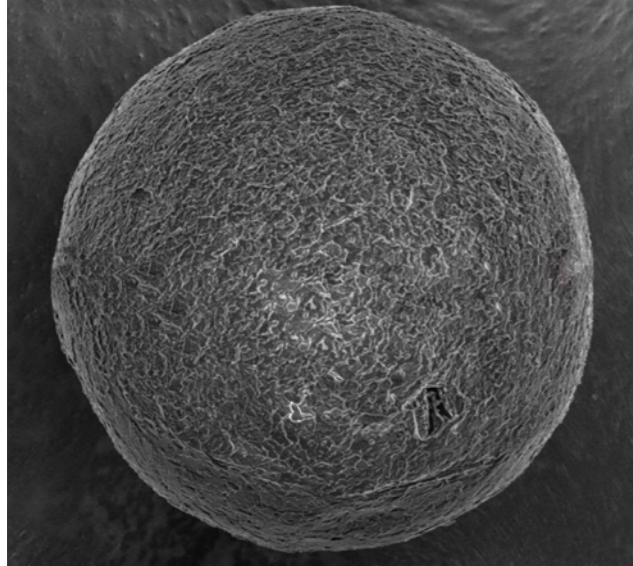
Dr Emer MacSweeney, the CEO and Medical Director at Re:Cognition Health and the Principal Investigator for the trial comments:

“The results of Lecanemab are very exciting, not only as a treatment for those with early stages of Alzheimer's, but also in forging a pathway for the development of multiple new treatments. There are many new drugs currently in clinical trials for various stages of Alzheimer's disease and it's certainly a very exciting time with cause for optimism.”

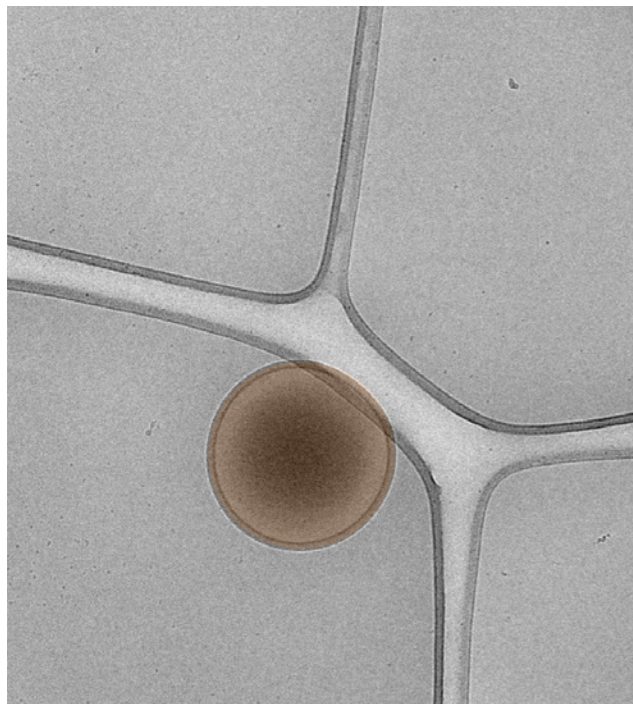


Top two scans are a patient with Alzheimers. Bottom two scans are a normal patient.

At the heart of the RNA Therapeutic Revolution



TEM of SiSaf's Bio-Courier nanoparticle epitomises next generation RNA stability and targeted delivery



TEM of a Bio-Courier nanoparticle showing the hybridisation of cell targeting lipids and SiSaf's proprietary bioabsorbable silicon matrix

The world is back on its feet again after Covid due to mRNA vaccines, with over 12 billion mRNA shots given worldwide since December 2020.

To deliver on the promise of RNA in both preventive and therapeutic vaccines, as well as therapeutic drugs, we need to ensure the potent but highly unstable RNA molecules can be delivered safely and in sufficient numbers to their specific cellular targets. Current lipid-based delivery systems are quite fragile and prone to release their cargo prematurely, needing ultra-cold transportation and limiting the accessible tissue targets within the body.

This is where Surrey Research Park based **SiSaf Ltd**, and its patented Bio-Courier® RNA delivery technology, comes in. SiSaf's revolutionary approach combines lipid nanoparticles with the structural integrity of proprietary bioabsorbable porous silicon to substantially improve the stability and protection of RNA. With enhanced RNA durability enabling ambient storage and improved systemic survival, SiSaf's technology is driving a pipeline of first-in-class RNA therapeutics for rare, and as yet, incurable genetic diseases of the bone and eye. In parallel SiSaf is partnering with RNA industry leaders to improve global access to life saving vaccines and therapeutics.

SiSaf announced in October the initiation of the U.S. FDA Regulatory process for its lead siRNA therapeutic to restore bone mass and quality to normal levels for patients with Autosomal Dominant Osteopetrosis Type 2 (ADO2), a rare genetic skeletal disorder.

“
Our revolutionary Bio-Courier RNA delivery system should clear the way for therapeutics for many other rare and common diseases once thought impossible to treat.
”

SiSaf's founder and CEO, Dr Suzanne Saffie-Sieber



Blood test for early-stage cancer detection

Datar Cancer Genetics is an oncology research and applications company specialising in non-invasive cancer detection, diagnosis and management.

In February, it was granted 'Breakthrough Device Designation' for its blood test to detect early-stage prostate cancer. This is the company's second test to receive FDA approval, following on from approval last year for early-stage breast cancer detection.

Prostate cancer is the most commonly occurring cancer for men in the UK and the 4th most common cancer overall. The test can help reduce the number of biopsies among individuals with benign conditions of the prostate and it can also improve detection rates among those who do have prostate cancer.

Datar's blood-based cancer management tests are based on unique technologies and hold the promise of major breakthroughs. Besides their portfolio of next-generation sequencing based tests, the study of Circulating Tumor Cells and their role in cancer management is their key area of research. The Company is validating several early detection assays which will be offered as Laboratory Developed Tests (LDTs) in early 2023. Datar offers its test portfolio in the UK, European Union, GCC, USA, Australia and India.

The Company has advanced testing facilities at Surrey Research Park, in addition to Raleigh, North Carolina, and Nasik, India. It has formed partnerships with several clinics and hospitals in the UK to provide precision oncology-based solutions to improve the detection and treatment of cancers.



Image shows automated pipetting of samples

Developing Topical and Transdermal Treatments for Global Customers

Following two years of double-digit growth, **MedPharm's** focus in 2022 was to continue providing exceptional topical and transdermal development and manufacturing services to organisations around the world.

Topical drug products are becoming increasingly appealing to organisations and patients due to their ease of administration and effectiveness. MedPharm has supported pharmaceutical organisations in the development of semi-solid drug products since 1999 and opened its first standalone facility in Surrey Research Park in 2006.

In 2022, MedPharm's team of experts focused on developing, refining, translating, and validating processes that allow clients to move seamlessly from early-stage development into late-stage production.

One of many exciting announcements coming out of MedPharm in 2022 was the selection of MedPharm by Swiss-based Mosanna Therapeutics for the development of a first-of-its-kind nasal spray aimed at treating Metabolic Obstructive Sleep Apnea. Sleep apnea currently affects more than 350 million people in the US and Europe.



Images courtesy of Medpharm



Surrey Research Park Annual Review 2022

Image courtesy of British Land

Life Sciences sector at SRP set to grow further

British Land is carrying out a comprehensive refurbishment of the 100,000ft² Priestley Building with potential for use by life science companies.

The works feature a new double height reception and basement cycle area with shower and changing facilities. Internal areas have been stripped back to a shell and will

be transformed with new internal finishes, glazing, toilets, lifts and mechanical and electrical services.

The building will be highly sustainable, with roof mounted solar PV panels, upgraded insulation and targets of EPC A and BREEAM Excellent.

It is envisaged the newly refurbished facility will complete in summer 2023.

A world class veterinary hospital

The first of its kind in Europe, **AURA Veterinary** specialises in animal oncology, soft tissue surgery and interventional radiology (IR). The highly regarded animal hospital, previously known as Fitzpatrick Referrals Oncology and Soft Tissue, is now under new ownership following a management buyout by the clinical team in September.

The innovative business is on a mission to change the way cancer is treated in companion animals, offering a comprehensive clinical pathway on-site for diagnosis and treatment of all solid tumours and blood cancers in dogs and cats, including surgical intervention, critical care and chemotherapy.

There are several practice-led initiatives that underpin Aura's long-term research ambitions:

- The hospital's patient database, which stores over 7,700 comprehensive patient records, and
- Aura's tissue BioBank, which since 2019, has collected samples from over 100 spontaneous tumours to support clinically relevant research into tumour biology, biomarkers and treatment solutions.

The team has benefited from a strong relationship with the University of Surrey, partnering on a wide range of projects such as research into a new blood sampling method that should allow easier detection of key biomarkers for genetic diseases such as cancer.

Aura is expanding and the SRP team are now working with the company to accommodate this growth.





From start-up to multi-national

Virtual Recall is now one of the world's leading veterinary software companies, creating pet owner communications and eCommerce solutions for vet practices.

The company has been based at SRP since inception and has grown from start-up to multinational.

Since acquisition in 2020 by Zoetis, the world's largest animal health company, Virtual Recall has pursued a strategy of global expansion. In 2022 it doubled its global reach to eight countries and is due to launch in a further four by March 2023.

It's safe to say that following ten years of solid growth, animal health is now a thriving cluster here at Surrey Research Park.



8

Countries



32m

Communications sent



2,300+

Sites worldwide



5m

Clients reached worldwide



7.2m

Pets helped



4.1m

Surveys sent



Animal health collaboration

The SRP team has been working closely with University of Surrey colleagues to develop a significant academic-industrial partnership on animal health, centred in Surrey. The group aims to accelerate new veterinary products based on advanced diagnostics and therapeutics.



Leaders in innovation

A third of this year's Surrey Business Award winners are located at Surrey Research Park.



Business Innovation of the Year

AURA Veterinary's BioBank collects tissue samples from spontaneous tumours to support clinical research into tumour biology, biomarkers and cancer treatment.



International Business of the Year

NatureMetrics has sold its DNA-based biodiversity monitoring products in more than 80 countries, and to date 47% of revenue comes from overseas. The company also acquired Canada-based environmental DNA business, Precision Biomonitoring.



Start-Up of the Year

Signapse is creating a low-cost, accessible platform which uses neural networks and deep learning to generate sign language to and from text or voice.



Best customer service

Igenomix is a genetic laboratory providing information to private and NHS IVF clinics to maximise the patient's chance of having a healthy baby.



Employer of the Year

Gold-I, a global market leader in trading systems integration, prides itself on employing young, relatively inexperienced people in the sector and promoting from within.

We are also supporting the next generation of entrepreneurs with 25% of the winners at Surrey County Council's Invest in Surrey 40 under 40 Business Awards being part of the SRP community.



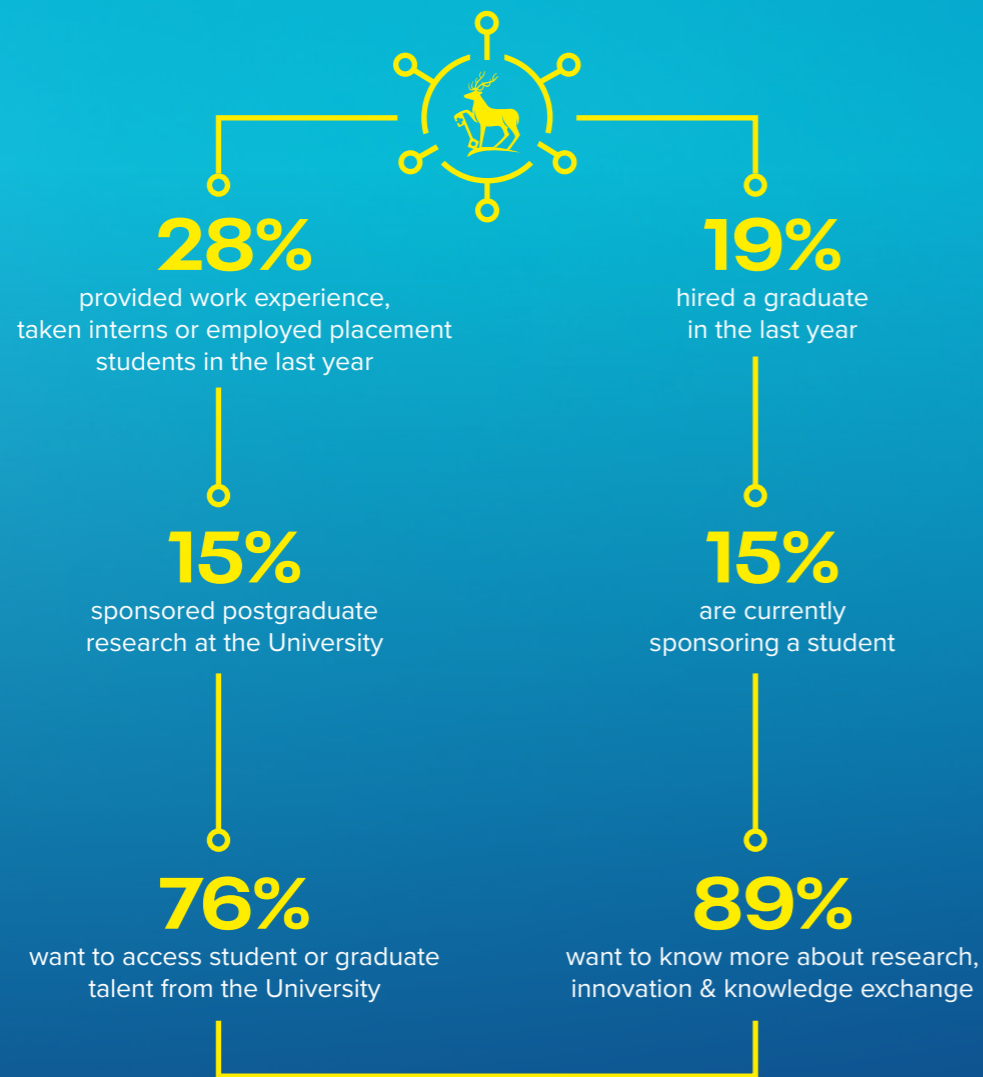
Congratulations

Tom Boulton	Lead Engineer at Surrey Satellite Technology Ltd
Milo Bygrave	Lead Designer at 22Cans
Colin Francis	CEO, LabCycle
Chris James	CTO, Gold-i
Neil Johnston	CEO and Founder at Vector Suite and Rocketdesk
Amir Taba	CTO at DIREK LTD
Dr Anna Vartapetiance	CEO, Co-Founder and Director at Securium
Charlotte Watson	Operations & Relationship Manager at SETSquared Surrey
Ben Ward	Business Owner at Rocketdesk and Supergonk

Fostering links with our businesses and the University

A significant benefit for companies located at the Surrey Research Park is proximity to student and academic talent, as well as access to state-of-the-art research and innovation facilities.

SRP company interaction with the University



Meeting talent needs and providing opportunity

“
Surrey provides an excellent student experience, from enrolment to graduation. The Talent Working Group is an excellent initiative to enable students to start their career, whilst supporting the superb business community on our doorstep at SRP.

”
Kerry Matthews,
Chief Student Officer, University of Surrey

Access to talent is a critical enabler for our growing businesses. We therefore created a Talent Working Group to provide greater access to talent for all our customers while enabling opportunities for those starting or growing their career, focusing initially on talent supply from the University.

The Group comprises representatives from across our business community, from start-up through to multi-national, together with colleagues from across the University. A series of new initiatives have occurred, and are planned, with success measured by the number of placement students.

The initiative will grow and next year we will expand to integrate talent flow from a wider range of sources.

Fostering interaction

A significant emphasis throughout the year was fostering interaction between SRP businesses and the University. Various initiatives were undertaken including:

- Several **networking events**, for example “Building Surrey as a national hotspot for AI,” which was held in March. This sold-out event involved various innovation partners including from the nearby Royal Surrey County Hospital.
- An inaugural **postgraduate research showcase** was held at SRP in November to provide Tenants with the opportunity to discuss research themes and meet researchers working on areas of

business interest. Thirty researchers presented their work to an audience of over 120 in areas including health, space, sustainability, AI, materials and digital technology. The event was a sell-out, with bigger plans under discussion for 2023.

- SRP companies actively participating in **Surrey Business School’s Leadership Academy**, which launched in 2022 and brings together prominent business figures from across the region. The Academy is in equal parts thought leadership and targeted peer to peer discussion, focused on impact and application. Nine SRP businesses are part of the Academy.

Adrian Shanks, Business Development Officer at Surrey Business School, comments:

“
We greatly value the diversity of insights and experience
that SRP businesses bring.
”



**Our innovation
community doesn't stop.
More to come in 2023...**





SURREY
RESEARCH PARK
A University of Surrey Enterprise

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