

FUTURE LAB 2024 - full listing of guest exhibitors - curator's summary

Introduction

The mission statement for Future Lab is 'Technology for a Better World'.

Under this mission, Future Lab 2024 presents four themes: *Protecting the Planet*; *Robotics to the Rescue*; *Future of Flight*; and *Our World in Pixels*.

A curated line-up of pioneering companies, laboratories, studios and organisations are invited to represent these themes and tell their pioneering stories.

All exhibitor activations include an element of STEM engagement; from fun facts and inspirational stories to full hands-on activities. British astronaut Tim Peake is ambassador for Future Lab, and has worked with the curator to bring a special 'Tim's Take' to the STEM stories across the show.

Theme 1: PROTECTING THE PLANET

Tackling some of the biggest challenges of our time, the application of breakthroughs in material science, advanced engineering, automation and Earth observation is enabling the transformation of global industries; empowering our ability to build a future in which we can thrive and sustainably provide for the demands of an evolving global population, while also better understanding and protecting the little blue dot we call home.

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Privateer

{PR note - first time exhibiting in Europe}

Privateer, co-founded by Apple inventor Steve Wozniak, is pioneering a satellite sharing economy to ensure a sustainable future in space. Their real-time Wayfinder platform helps satellite operators safely navigate crowded orbital highways, while the company's recently-acquired TerraScope application utilises AI modelling to expand access to Earth observations from space. Together, these technologies aim to eliminate redundant hardware in orbit, enhance satellite safety, and promote efficient use of space resources.

privateer.com

Astroscale

A throwaway culture in space has led to Earth's orbits becoming cluttered; the 5,000 redundant satellites and rocket bodies that have been discarded are a threat to our economy and daily lives. A collision could cause serious impact on the satellite services we rely on every day. Astroscale is developing technologies to reduce orbital debris and enable a circular economy in space, for a sustainable future space environment.

astroscale.com

Durham University Solar Car (DUSC)

{PR note - exclusive unveil of the 2024 car ahead of the iLumen European Solar Challenge in September. The Bridgestone World Solar Challenge car from 2023 will drive the Hillclimb}

Powered by solar energy, DUSC's vehicles showcase Durham University's commitment to innovation and complex engineering projects. Every aspect of their ultra-efficient cars benefits from thousands of hours of in-depth research, design and testing. DUSC2023 set a British record at the 2023 World Solar Challenge, completing the 3,000km journey in six days. Next, the team targets the iLumen European Solar Challenge 24-hour race in September 2024.

dusolarcar.org

Helixx

{PR note - global dynamic debut of the Helixx Cargo demonstration vehicle, as a safety vehicle on the Hillclimb}

Helixx pioneers Vertically-Integrated Mobility as a Service (V-MaaS) by enabling sustainable electric vehicle (EV) ecosystems through licensable 'Factory in a Box' solutions, making eco-friendly transportation accessible and affordable for all. Helixx offers EV fleets in different formats tailored to the specific needs of the world's megacities; promoting local manufacturing, fostering economic development and integrating advanced technology to reduce costs, enhance operational efficiency, and support cleaner and greener future urban mobility.

helixx.tech

Levidian

Levidian is a climate tech business on a mission to decarbonise the world's most carbon-intensive industries. Its patented technology, LOOP, captures carbon from methane gas before it's burned and creates two valuable products: hydrogen, a clean alternative fuel source; and solid carbon in the form of graphene. This super-material can be used to enhance the performance of products such as batteries, tyres and plastics, unlocking further opportunities for decarbonisation.

www.levidian.com

The Tyre Collective

Tyre wear is the second-largest microplastic pollutant in our oceans and a major source of air pollution; a problem exacerbated by electric vehicles due to increased battery weight and torque. The Tyre Collective is developing solutions to capture this stealth pollutant at-source, working with commercial fleet operators and vehicle manufacturers. Their patent-pending technology uses electrostatics and airflow to capture particles to be upcycled, ensuring a cleaner, healthier environment.

thetyrecollective.com

KALMAR Automotive

Promoting the circular economy, KALMAR Automotive pioneers an 'Evergreen Philosophy' through which each upcycled KALMAR 7-97 E-Volt is handcrafted from an existing Porsche 964 and integrates cutting-edge materials to reduce environmental strain. Introducing an EV powertrain and sustainable light weighting, each vehicle features a revolutionary plant fibre composite bodyshell demonstrating immense strength and weight-reduction, while significantly reducing carbon emissions through the production cycle. This is automotive haute-couture for the future.

kalmarautomotive.com

Theme 2: ROBOTICS TO THE RESCUE

The world is on the cusp of a revolution in robotics. The life-changing innovations we dreamt about are now possible. New abilities brought about by fast-paced advances in AI, machine learning and automation offer radical benefits for every industry – with positive use cases across productivity, precision, environmental targets, safe and enhanced workforce, and unprecedented data analysis – demonstrating how human-machine collaboration is a force for good.

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Dexory

Dexory provides the logistics industry with the only real-time data intelligence platform for warehouse operations. Data is collected by fully-autonomous robots navigating the aisles to track inventory, visualise assets and monitor environment data - scanning 10,000 locations p/h, 24/7 - building a live digital twin. A highly intuitive analytics platform enables companies to operate with 100% accuracy - identifying bottlenecks, increasing productivity and accurately forecasting demand, stock and capacity.

dexory.com

Earth Rover

Earth Rover is a pioneering agri-tech company on a mission to revolutionise agriculture and horticulture through the sustainable autonomous robotic solution, CLAWS. This light-weight, solar-powered technology harnesses the power of AI, applying concentrated light technology to target the meristems of weeds, eliminating them at their growing points and effectively avoiding the need for chemical herbicides and soil disturbance, preserving soil health and structure, all while acquiring real time, per-plant data.

earthrover.farm

HausBots

HausBots design and manufacture robotic platforms for a variety of inspection and maintenance tasks in industrial processes - for example chemical storage tanks or silo cleaning within food manufacturing. Removing humans from dangerous environments, these robots can climb inside confined spaces or crawl up the outside of tall structures, at the same time successfully increasing site efficiency and providing the infrastructure owner with a much higher quality of complete inspection data.

hausbots.com

Shadow Robot

{n.b. PR note - this is the European public unveil of the Google DeepMind robot hand}

Developing the industry's most advanced robot hands, Shadow Robot has been working on the challenge of robot dexterity for over 20 years. Customers can apply the robust hardware and software solutions to revolutionise workflows and bring precision and efficiency to wide-ranging research tasks. The company has recently launched a new robot hand in collaboration with Google DeepMind to meet the needs of real-world machine-learning applications.

shadowrobot.com

Sheffield Robotics

Sheffield Robotics is dedicated to supporting a better understanding of the positive future potential of robotics, AI, and automation. They research robotics across a range of uses, including manufacturing, healthcare, and education, and develop new interfaces for beneficial collaboration between robots and people. With their work through SERAI (Skills and Education in Robotics and AI), they focus on building resources and helping to shape policy to enable more people to embrace robotics and AI futures.

sheffield.ac.uk/sheffieldrobotics

Theme 3: FUTURE OF FLIGHT

Cutting-edge developments in unmanned flight technologies are opening-up commercial and logistical opportunities for revolutionary aerial services, benefiting both industry and daily life. Companies at the forefront of this dawning era are pioneering new operating systems and platforms to safely navigate and manage airspace, while others are designing exceptional new aircraft and aerial vehicle solutions to support delivery logistics, industrial inspection, environmental research, transit and connectivity.

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Dronamics

{n.b. press note - this is the UK public unveil of the Black Swan}

Dronamics is the world's first cargo drone airline, designing, building and operating high payload, long-range cargo drones capable of carrying up to 350kg a distance of 2,500km; up to 80% faster, 50% cheaper and with 60% lower CO2 emissions than alternative freight. Their Black Swan aircraft requires as little as 400m runway, on most terrain, enabling same-day shipping over long distances for industries including pharma, food and industrial parts.

dronamics.com

Hybrid Air Vehicles (HAV)

HAV is pioneering zero-emission aircraft for a better-connected tomorrow. They have developed Airlander to be the world's most efficient, large aircraft. Airlander 10, HAV's first aircraft, delivers ultra-low emissions across cost-effective cargo, passenger transportation, communications and surveillance use cases, with a clear pathway to zero emissions by 2030. Airlander 10 will carry 100 passengers or 10 tonnes of freight and paves the way for the introduction of larger Airlander variants.

hybridairvehicles.com

The Drone Rules (TDR)

TDR pioneers drone operations, leading the industry with innovative solutions and advancing education through its STEM divisions: Drone City which provides books, programmes and camps to educate and inspire children aged 5–11; and Droneworxx which offers specialised programmes designed to prepare individuals aged 11–21 for careers in technology and aviation, together raising aspirations in STEM careers by showcasing how drone technology is changing the world for the better.

thedronerules.com

sees.ai

Unmanned aerial vehicles (UAVs) will soon be part of daily life – flying routinely through our world, inspecting, monitoring, and carrying cargo and people. sees.ai is developing the Operating System that makes it possible to deliver aerial intelligence at scale, giving operators of critical infrastructure – electricity grid, oil and gas, nuclear, road and rail – the ability to safely fly connected fleets of inspection drones, beyond visual line of sight (BVLOS).

sees.ai

Royal Mail

Royal Mail is trialling various drone technologies to assess how these can help to better serve remote and island communities; the benefits being increased reliability and speed of delivery, additional connectivity, improved environmental credentials versus conventional air freight, and longer term reduced costs. RM is collaborating with Skyports Drone Services, and has previously collaborated with Windracers (below) to conduct trials to-and-from the Shetland Islands, Orkney Islands and Isles of Scilly.

<https://www.royalmail.com/sustainability/environment/drones-connecting-remote-communities-across-the-uk>

Windracers

The low-cost logistics champion, dedicated to bringing prosperity to those who need it, Windracers is a pioneer in self-flying aircraft. Their universal ULTRA fixed-wing drone is powered by a ground-breaking uncrewed autopilot system Masterless, and is available to everyone, everywhere, for multiple applications. Holding more BVLOS permissions than any other operator, they have deployed their drone for organisations including the MOD, British Antarctic Survey, and Royal Mail.

windracers.com

Lilium × Volare

Introducing a revolution in sustainable, high-speed regional air mobility, Lilium is developing the world's first electric Vertical Take-Off and Landing (eVTOL) premium jet. Offering a zero-emissions, low-noise, private transport solution that will be faster than existing high-speed alternatives, the jet has been developed by Lilium in Germany and is being introduced to the UK in 2026 by private aviation consultants Volare as the sole UK distributor.

lilium.com / volareaviation.gg

Theme 4: OUR WORLD IN PIXELS

Combining exciting advances in spatial computing, AI, real-time processing, and sophisticated gaming engines is resulting in the digital world becoming an increasingly dynamic environment for research, product development, education and training. The realm of extended reality (XR) facilitates visualisation and experiences which are not physically possible, while digital twin solutions are being applied with wide-ranging positive impact across industries to improve efficiency, safety and sustainability.

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Atlantic Productions

Founded by Anthony Geffen, the world's leading factual documentary company and pioneer in immersive storytelling Atlantic Productions has won multiple BAFTA and Emmy awards including the first-ever BAFTA for virtual reality storytelling. Recent immersive projects have included Galápagos VR with David Attenborough and other collaborations with Google, Apple, Meta and NASA. Atlantic is a content partner for the cutting-edge Apple Vision Pro headset, Apple's first spatial computing offering.

atlanticproductions.co.uk

GeoAcoustics

We know more about the surface of the moon than we do about the ocean floor. But mapping it is critical for understanding environmental changes and planning conservation, resource management, subsea engineering and more. GeoAcoustics develops innovative sensor technologies for the collection of underwater data, partnering on the Gebco Seabed 2030 mission to build a complete map of the seabed and working on seagrass monitoring around the UK coast.

geoacoustics.com

Metaverse VR

Metaverse VR is revolutionising skills and experiential training for complex and challenging environments, predominantly for the military, by creating and delivering award-winning immersive content solutions in VR. They support organisations to transform the ways they train and deploy their teams, and are changing the way people think and behave in the virtual realm, through utilising advanced gaming engines to design and model high-definition, interactive digital environments and AI-enabled avatars.

metaverse-vr.co.uk

Performit Live

Performit Live is pioneering real-time motion capture streaming, to facilitate next-generation engagement with live content using revolutionary patented technology that connects animators with skilled performers anywhere in the world. Democratising the art of motion capture, the technology solution is easy to use, allowing anyone to capture and stream character movement, including facial and hand gestures, without the need for complex PC setups, specialised camera equipment, or technical expertise.

performitlive.com

Miirage

Miirage is at the forefront of redefining holographic technology delivering photo-realistic, life-size digital experiences. They have developed a unique, flexible, high-definition modular system with razor-sharp visual quality, concentrating on enhancing the realism and interactivity of next-generation holograms and prioritising accessibility and affordability. Through continuous research and development, they are committed to pushing the boundaries of what is possible in display technology, transforming ordinary spaces into extraordinary digital worlds.

miirage.digital

Lucy Johnston, Curator, Future Lab

Lucy has been communicating stories of innovation for over 20 years; as an event and exhibition curator, author, presenter and advisor to companies and organisations worldwide. Focussing on a mission to spotlight *innovation for a better future*, her wide-ranging work also includes heading-up the independent task force UKII, which champions innovation and talent across UK industry. She is a retained author with international publishing house Thames & Hudson, writing about the evolution of design and technology.

About the Festival of Speed presented by Mastercard and FOS TECH

First staged in 1993, the Goodwood Festival of Speed presented by Mastercard is the world's largest automotive garden party; set against the spectacular backdrop of Goodwood House in West Sussex, UK. Over 600 cars and motorcycles spanning the phenomenal history of motoring and motorsport take part along with legendary figures from the automotive world. Highlights include Future Lab presented by Randox, Electric Avenue, Forest Rally Stage, Supercar Paddock, Supercar Run, F1 Pit Lane presented by Sky, Drivers' Club, GAS Arena, Cartier Style et Luxe Concours d'Elegance and Bonhams|Cars Auction.

FOS TECH is the overarching umbrella brand for tech and future mobility content at the Goodwood Festival of Speed. It encompasses all forward-looking aspects of the event, from the latest in automotive technology and alternative fuels, through to the world's most intriguing and groundbreaking innovators in Future Lab and extensive STEM programme for 11–16-year-olds. FOS TECH aims to serve visitors, press, exhibitors and digital viewers with immersive and accessible content, reinforcing FOS as the platform to explore, showcase and celebrate a vision for tomorrow's world.

About Future Lab presented by Randox

Future Lab was launched in 2017 as a platform through which to introduce wider stories of technology and science innovation to the world's biggest annual motorsport and automotive celebration, Goodwood Festival of Speed. With a mission to spotlight 'Technology for a Better World', over seven years the curated Future Lab campus has presented over 120 exhibits from pioneering companies, laboratories, scientists, designers, engineers and explorers, and welcomed participating teams from across the world. This dynamic, immersive environment uniquely brings together visionary stories from broad fields of innovation ranging across future mobility, energy, agriculture, climate, health, art, architecture, space exploration, ocean research, robotics and AI, and groundbreaking digital interactions.

About Randox Laboratories Ltd.

Established in 1982, Randox is the largest healthcare diagnostics company from the UK & Ireland. The company employs some 2,200 staff globally and maintains a strong commitment to R&D and innovation.

Radox reinvest up to 25% of turnover in research and development and has more tests in development than any other diagnostics company. Radox manufactures over 4 billion tests annually and are active in 145 countries, supplying a wide range of healthcare providers. It is assessed that Radox products are involved in 5% of diagnoses globally, directly impacting around 400m people.

Radox's diagnostic focus is to undertake comprehensive testing and data analysis to identify risk to health, promote preventative healthcare and improve clinical diagnosis. Aiming to achieve better healthcare outcomes whilst reducing the burden on healthcare services.

Committed to the prevention and early diagnosis of disease, Radox has opened a range of Radox Health clinics to bring innovative diagnostics directly to the consumer – there are currently more than 20 such clinics across the UK, including in selected John Lewis stores.

www.radox.com

<https://radoxhealth.com/>

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