Innovate UK

Quantum Technology

11th – 16th May 2025

Global Business Innovation Programme
The Netherlands

Contents

Welcome

As part of our Global Business Innovation Programme (GBIP), Innovate UK, the UK's national innovation agency is delighted to bring a delegation of innovative UK quantum tech businesses to the Netherlands to explore collaborative opportunities with local partners.

Our delegation of 8 ambitious UK companies will use this visit to the Netherlands as an opportunity to engage with key stakeholders, gain insights into cutting-edge ideas, discover new opportunities and network with other professionals who share a passion for forward-focused collaboration. The combination of commercial expertise, creative excellence and technological innovation across the two countries can create significant value for businesses operating in these markets.

We hope you enjoy exchanging insights, thought-provoking ideas and meaningful connections that will help drive the growth of these exciting companies while opening new opportunities for cooperation and collaboration.

On behalf of the programme organisers, we extend our sincere gratitude to our gracious hosts, attendees, delegates and partner organisations for their invaluable contributions to this programme.

Thank you for your support.

Abhinav Sharma
Programme Lead | Quantum Industry Fund
Innovate UK

Sophie Mifsud
Europe Partnership Manager
Innovate UK

Sandra Steinhauer
GBIP Lead | Innovation & Growth Team Manager
Innovate UK Business Growth

Quantum Technology

The publication of the £2.5bn 10-year National Quantum Strategy in March 2023 has maintained the UK's position as a leading ecosystem in the creation and exploitation of quantum technologies. As we invest more public money, we expect private investment to compliment the ambition.

The 10-year strategy includes an aim to raise an additional £1 billion of private investment into the programme. Since the quantum tech industry fund was launched in 2018, we have already committed circa £240m in over 200 industry projects involving more than 182 companies within and outside the UK. These companies have so far raised over £500m of directly correlated private investment, so our ambition for the next phase of the quantum tech business innovation programme is well founded.

Innovate UK's programme remains committed to grow international partnerships, supply chain resilience and joint ventures for taking the quantum tech industry into the mainstream of our shared future.

In 2023, the Netherlands and the UK signed a memorandum of understanding, pledging to further intensify co-operation in quantum technologies. Its complementary supply chain and research strengths in photonics, semiconductor and quantum technology are required for the growing quantum tech industry in the UK.

The Netherlands has world-leading strengths in advanced facilities in quantum technologies, is third in the world for scientific citations in quantum research, and is second for investments in quantum technology per capita.

Through its flagship programme, Quantum Delta, the Netherlands is investing over €615m in the development of its quantum technologies ecosystem, ranging from strong research hubs to international active start and scale-ups.

This programme will help the development of collaborations between UK businesses and Dutch partners to take advantage of future collaborative activities. Quantum technology is a new and ground-breaking technology that can offer disruptive solutions to a variety of unsolved problems.

Innovate UK

Innovate UK

Innovate UK, part of UK Research and Innovation, is the UK's innovation agency.

It works to create a better future by inspiring, involving and investing in businesses developing life-changing innovations.

Its mission is to help companies grow through the development and commercialisation of new products, processes and services, supported by an outstanding innovation ecosystem that is agile, inclusive and easy to navigate.

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Innovate UK Business Growth

Innovate UK Business Growth is Innovate UK's national business growth and scaling service. It is an integral part of the innovation agency's product and service portfolio.

The service is available to all established small to medium-sized innovation-focused growth companies, including Innovate UK grant winners.

Innovate UK Business Growth accelerates its ambitious clients on their growth journeys with one-to-one support from over 450 innovation and growth specialists and scale-up directors embedded in every UK region. Their tailored, expert advice helps thousands of businesses sharpen their commercial strategies, maximise the value of their intellectual property (IP), secure game-changing investment and take their businesses onto the global stage every year.

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Global Business Innovation Programme

Innovate UK's Global Business Innovation Programme brings together cohorts of innovative UK businesses looking to grow and scale globally. Each programme focuses on a specific market and technology or sector area, enabling businesses to explore future opportunities and build global collaborations and partnerships.

Innovate UK-supported businesses will gain access to detailed market knowledge, cultural insights, introductions and connections – opening doors that SMEs might otherwise find difficult to access on their own.

It will support businesses with a structured three-stage programme: Get Ready for the Market, Visit the Market and Exploit the Opportunity, together with harnessing the expertise of an Innovate UK innovation and growth specialist to maximise opportunities and impact for the business.

This brochure details the businesses taking part in the Innovate UK Global Business Innovation Programme – Quantum Technology, the Netherlands, providing an overview of their operations and objectives for this visit.

Leading the Visit

Abhinav Sharma

Programme Lead | Quantum Industry Fund
Innovate UK

Abhinav leads Innovate UK's quantum technologies industry fund and chairs the UK government's national quantum programmes delivery board.

The Innovate UK quantum tech industry fund sponsors commercial R&D initiatives, procurement contracts and international supply chain development partnerships. Since 2018, the fund has committed well over £220m for projects involving more than 189 organisations, 30 university research groups, and Research & Tech Organisations (RTOs) to develop new technologies and products based on advances in quantum science.

Abhinav's background is in product development, systems and industrial engineering, and business transformation. He worked at major aerospace sector original equipment manufacturer (OEMs) for a decade in technical and operational leadership roles.

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LINKEDIN PROFILE

Sophie Mifsud

Europe Partnership Manager
Innovate UK

Sophie Mifsud is a European Partnership Manager in the Global Team at Innovate UK.

Sophie is responsible for the Innovate UK relationship with several European countries; developing bi-lateral relationships with counterpart innovation agencies and other in-country networks to support UK businesses to exploit opportunities to grow and scale across Europe.

Sophie has a background in stakeholder management, communications and partnership building in government and the third sector.

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Leading the Visit

Sandra Steinhauer

GBIP Lead | Innovation & Growth Team Manager
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Sandra is an Innovation & Growth Team Leader on behalf of Innovate UK Business Growth.

Together with her team, she supports innovative small and medium-sized businesses to develop and maximise their growth and international potential.

She has been involved in delivering Innovate UK funded internationalisation support since 2017, leading delegations to the USA, Canada, Israel and Spain.

Prior to this role, Sandra spent twelve years in Brussels in various business support roles, representing and advocating the interests of businesses and other stakeholders in the EU legislative process. She monitored and informed about relevant EU policy developments and provided advice on European funding possibilities and other EU-related matters.

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Overview of Companies

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Zaiku Group

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Cavero Quantum

Cavero Quantum is the home of Symmetrikey, the world's most secure encryption and authentication protocol.

Symmetrikey uses new techniques to generate symmetric keys that are resistant to classical and quantum attacks, and uses these keys as the basis of quantum-safe, two-way endpoint authentication.

Deployed via a lightweight software implementation, Symmetrikey can secure a wide range of systems, devices and networks – even those using legacy infrastructure or Internet of Things (IoT) devices with low compute power.

Cavero Quantum is looking to partner with organisations, solution providers and system integrators to establish Symmetrikey as the new standard of quantum-secure, business-ready encryption and authentication.

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Industry: **Cybersecurity**

Visit objective

Cavero Quantum is looking to partner with standards bodies, organisations, solution providers and system integrators.

LINKEDIN PROFILE

Crypta Labs

Crypta Labs is an award-winning quantum security company based in London, UK. It specialises in Quantum Random Number Generator (QRNG) technology to enhance encryption protocols and innovative solutions for quantum-enhanced cybersecurity.

Founded in 2014, Crypta Labs develops innovative hardware and software solutions, including portable quantum hardware security modules and embedded QRNG technology for Original Equipment Manufacturer (OEM) integration. Its products leverage the unpredictable properties of light to generate truly random numbers, ensuring unbreakable encryption for critical sectors such as IoT, defence, healthcare and fintech.

The company's unique selling point is its delivery of compact, affordable and scalable quantum security solutions that meet National Institute of Standards and Technology (NIST) and are independently verified for randomness. Crypta Labs also prioritises sustainability by designing energy-efficient devices with tamper protection and health monitoring features.

With a strong focus on global collaboration and innovation, Crypta Labs has positioned itself as a key player in the rapidly growing quantum cybersecurity market.

Crypta Labs

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Industry: **Quantum enhanced cybersecurity**

Visit objective

Crypta Labs aims to establish strategic partnerships, gain market insights and explore collaboration opportunities within the Netherlands' quantum ecosystem to accelerate international growth and advance quantum safe encryption technologies.

LINKEDIN PROFILE

Helios Energia

Helios Energia Ltd, together with its Quantum Light group, is pioneering advancements in quantum communications and photonic integrated systems.

Focused on developing scalable, noise-resistant technologies, Helios is at the forefront of enabling next-generation secure communications infrastructure.

At the core of Helios's innovation is LightKey™, a patent-pending quantum communications platform that delivers a low-cost, highly scalable and resilient solution for integration into existing fibre-optic networks. Designed to support applications across telecommunications, data centres, defence, aerospace, cybersecurity, and electronics, LightKey™ addresses the growing need for quantum-safe communications in critical sectors.

Helios Energia is advancing Photonic Integrated Circuit (PIC) technology through research, development, and commercialisation, offering a disruptive pathway for practical and accessible quantum communications. The modular architecture enables streamlined deployment and is engineered for real-world performance in complex environments.

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Industry: **Communications**

Visit objective

Helios Energia are actively seeking collaboration partners in academia, research and development, product development, and industry to accelerate the development, testing, fabrication and commercial launch of its LightKey™ product portfolio.

LINKEDIN PROFILE

Microbritt

Microbritt is a UK-based advanced manufacturing company specialising in high-precision microfabrication for the quantum, semiconductor and sensing industries.

Founded as a spin-out from Newcastle University, Microbritt delivers cutting-edge micromachining solutions for quantum hardware developers, research institutions and OEMs. The company's patented micromilling technology enables complex features to be fabricated in brittle materials such as silicon, glass and lithium niobate without the damage typically associated with conventional laser or mechanical processing.

Microbritt supports the rapid development of custom components for quantum devices, sensors and photonic systems. Its unique, non-destructive microfabrication approach offers precision, scalability and material versatility, making it suited to the demands of quantum applications. The company works closely with international partners across the UK, Germany, Switzerland, the Netherlands and the USA.

Aligned with the goals of net zero manufacturing, Microbritt's approach significantly reduces waste and energy consumption per part by replacing multi-step processes with a single, digitally controlled CNC system. Through this programme, the company seeks to build sustainable, high-value partnerships that accelerate the deployment of quantum technologies across Europe and beyond.

microbritt

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Industry: **Manufacturing quantum devices**

Visit objective

Microbritt aims to build strategic partnerships with leading quantum companies and institutes, explore bilateral funding opportunities, expand exports and showcase Microbritt's sustainable microfabrication capabilities for collaborative quantum hardware development.

LINKEDIN PROFILE

Paragraf

Paragraf mass produced graphene-based electronic devices using standard semiconductor processes.

The company's Graphene Hall Sensors (GHS) and Graphene Field-Effect Transistors (GFETs) that are currently in production, and other semiconductor devices in development, make use of its proprietary graphene growth process to fully harness the wonder of the material's myriad features.

The company's products deliver superior sensitivity, robustness and energy efficiency to solve important problems in a range of applications, including automotive, industrial automation, cryogenics, healthcare and agri-tech.

Paragraf is committed to materially impacting critical global challenges by driving a 2D-material revolution in the semiconductor industry. It believes this will facilitate massive improvements in the performance of technologies across all aspects of life.

A spin-off from the University of Cambridge in 2018, Paragraf has raised $85 million over three rounds of fundraising and is widely recognised as an emerging tech leader.

PARAGRAF

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Industry: **Semiconductor**

Visit objective

Paragraf's unique graphene-based magnetic sensor in a 3-axis module may provide potential for improved Quality Control (QC) monitoring in the Netherlands.

LINKEDIN PROFILE

Skylark Lasers

Skylark Lasers develops ultra-stable, single frequency continuous wave lasers at Ultraviolet (UV) and Near-Infrared (NIR) wavelengths, built on a robust diode-pumped solid-state platform.

Engineered for long-term stability and precision, the lasers are designed for demanding applications across quantum technologies, spectroscopy, lithography and emerging deep tech.

In the UV range, Skylark offers compact, low SWaP-C lasers at 320 nm and 349 nm. These deliver efficient, long lifetime performance for 2D materials research, semiconductor inspection, grating fabrication and interference lithography.

In the NIR, lasers at 780 nm and 785 nm deliver low noise, narrow linewidth performance for precision spectroscopy and quantum applications– including sensing, positioning, navigation and timing (PNT), Brillouin techniques, Raman analysis, and cold atom experiments.

Skylark Lasers is working to accelerate the commercialisation of field-ready quantum systems and recently delivered a turnkey laser system for quantum gravity sensing as part of a UK government SBRI initiative, demonstrating its capabilities in producing reliable solutions for the quantum market. Skylark is committed to supporting next-generation quantum platforms on a global scale.

Skylark Lasers

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Industry: **Photonics**

Visit objective

Skylark aims to find partners and customers to work to demonstrate its technology in end user's application and overcoming the market's perception and reliance on incumbent technology.

LINKEDIN PROFILE

Wave Photonics

Wave Photonics develops Photonic Integrated Circuit (PIC) technology – a key enabler for scaling up quantum computing and communication.

The company's key products and services include:

- The most expansive, highly optimised Process Design Kit (PDK) IPs, covering a wide range of wavelengths from visible to telecom bands
- Pre-qualified PIC packaging templates
- Full PIC design service, from specification to full device design and fabrication

Wave Photonics offers the most expansive PDKs to serve the applications requiring non-telecom wavelengths, such as quantum ion-trap technology. It enables rapid PIC development with optimised size, efficiency, performance predictability and to be readily adapted for new wavelengths and foundry processes.

The pre-qualified PIC packaging templates not only save $100s'k NRE cost, but also shorten the time-to-market by many months (even years).

The design service provides one-stop-shop to PIC development, thanks to the strong partnership ecosystem, including both prototyping and volume foundries.

Wave Photonics also develops disruptive, commercially viable Quantum Key Distribution (QKD) digital security solutions with the potential of mass adoption in data centre and communication network.

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Industry: **Technology: photonics and quantum**

Visit objective

Wave Photonics aims to gain firsthand knowledge of the ecosystem, identify and forge stronger links with potential customers and strengthen opportunities for collaboration with potential partners.

LINKEDIN PROFILE

Zaiku Group

Zaiku Group focuses on uncovering connections between pure mathematics and emerging technologies such as Artificial Intelligence (AI), blockchain applications, federated learning, fully homomorphic encryption and quantum computing.

The company's research and development activities are deeply rooted in creating innovative solutions and partnering with researchers and innovators to co-create transformative products and services.

Zaiku Group is currently developing two commercial platforms:

- Sakurai.cloud: A cloud-native marketplace for quantum-safe AI models, designed with cryptographic resilience against quantum attack
- Quantum Formalism.academy: An edtech platform offering advanced, on-demand courses in mathematics tailored for algorithm developers in AI, quantum computing and post-quantum cryptography

Since launching last year, Zaiku Group had the privilege of supporting top professionals and researchers from renowned organisations including Meta, DeepMind, Quantinuum (formerly Cambridge Quantum) and OpenAI.

Zaiku Group

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Industry: **Technology**

Visit objective

Zaiku Group aims to build strategic research and development and commercial partnerships within the Netherlands' quantum ecosystem.

LINKEDIN PROFILE

Innovate UK

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