# West Lothian emerges as Scotland’s photonics technology hub



West Lothian has emerged as a significant hub for photonics technology in Scotland, hosting the largest cluster of photonics businesses in the country. This sector has seen continuous development over the past four decades and is now playing a crucial role in space exploration and advanced satellite communications.

Photonics, the science and technology involving light, lasers, and fibre optics, is at the heart of innovations linked to semiconductors, electronics, and advanced manufacturing in the local economy. Alter UK, based in Livingston, stands out as a key player within this industry. The company notably contributed essential electronic components to NASA's Mars Perseverance Rover mission, which successfully landed on Mars in 2020.

During a recent meeting of West Lothian Council’s Economy, Community Empowerment and Wealth Building PDSP, an update presented by Jim Henderson, the council’s Business Development Manager, highlighted the long-standing investment in photonics in the region. He explained, “The West Lothian economy benefits from long-term investment in the photonics sector. University spinouts and high-growth start-ups have made West Lothian their investment location of choice for more than 40 years.”

Henderson emphasised the connection between photonics firms and higher education institutions, citing the founding of Edinburgh Instruments and Helia Photonics by senior academics from Heriot-Watt University. He also noted the continued growth of Alter UK (formerly Optocap), which has expanded its operations at its Livingston headquarters.

Alter UK specialises in precision manufacturing across a wide array of semiconductor-based photonic and electronic technologies. The company has been operating at Bain Square, Livingston since 2003 and employs around 45 full-time staff at this location. As part of its strategic growth plans, Alter UK intends to invest £5 million to establish a new Photonics Design Centre. This facility will focus on developing proprietary state-of-the-art photonic products, building on the firm’s existing service-based offerings.

A key product in development is a Space Grade optical transceiver, designed to enable high-speed data transfer and communications within Very High Throughput Telecom Satellites, reflecting the company's critical role in advancing satellite technology.

To support its expansion, Alter UK was awarded a £100,000 Jobs Task Force grant, helping to recruit nine new employees, as part of the broader multi-million-pound investment in its Livingston base. The firm has also partnered with Business Gateway, Scottish Enterprise, and received training assistance from the Flexible Workforce Development Fund, alongside collaboration with Heriot-Watt University.

Expanding on the wider sector support, Henderson pointed out a significant recent funding award of £4.7 million aimed at scaling up photonics technology in Scotland. This investment came from the Engineering and Physical Sciences Research Council (EPSRC), a body within UK Research & Innovation. Dubbed the Photonics & Quantum Accelerator (PQA), the initiative connects research teams from the Universities of Glasgow, Strathclyde, Heriot-Watt, and St Andrews with local authorities and industry groups. The programme seeks to drive growth and innovation across Scotland’s Central Belt, with West Lothian positioned as a central component of this effort.

These developments reflect West Lothian’s continuing prominence in the photonics sector, underscoring its role in cutting-edge technological advancements linked to space exploration and telecommunications.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://www.edinburghnews.scotsman.com/news/west-lothian-tech-companies-are-helping-to-explore-the-surface-of-mars-5103708> - This article supports the claim that West Lothian hosts the largest cluster of photonics businesses in Scotland and highlights its role in space exploration. The region’s tech companies are involved in Mars surface exploration.
2. <https://technologyscotland.scot/photonics-west-2025-highlights-for-photonics-scotland/> - This article mentions the Photonics West event and highlights Photonics Scotland’s presence, which aligns with West Lothian’s involvement in photonics technology and innovation.
3. <https://optics.org/press/5205> - The creation of a new Photonics Design Centre by Alter Technology in Scotland supports the expansion plans of companies like Alter UK in West Lothian, focusing on photonic product commercialization.
4. <https://www.strath.ac.uk/whystrathclyde/news/2023/47mconsortiumaimstoaccelerategrowthofscotlandsphotonicssector/> - This article details the £4.7 million consortium funded by the EPSRC to accelerate Scotland's photonics sector growth, involving universities and local authorities across the central belt, including West Lothian.
5. <https://glasgowcityofscienceandinnovation.com/4-7m-consortium-aims-to-accelerate-growth-of-scotlands-photonics-sector/> - This article further explains the £4.7 million funding initiative aimed at tripling the photonics sector across Scotland's central belt, supporting economic growth and innovation.
6. <https://news.google.com/rss/articles/CBMirgFBVV95cUxOM093TVo1UnpwcG56YWI2MGRJSWRoQXJkdzZzcnUzdkQxeW5KRTdvNDBDZE5vOHNIdlRDeG5KVmNlcFZRQ2dpM2pEZHFSamdOTm5GWGxhaUl6anpPMlFCYTBueWtva0dnb1BTYl9sc183Vm9odXRjUXBLdk9CTTh5cnlibURMVDNXVUR6QnR0YXRaU2xiTmxsUUpEdXRILUNycHFoOXRfSUlnZ1BUYmc?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data