

## Photonics worth £13.5 billion to the UK economy

### The Photonics Leadership Group 2019 update shows the increasing value of light-based technology to UK economy

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Companies manufacturing and delivering services based on photonics technology in the UK produce £13.5 billion in output every year, contribute £5.3 billion of gross added value to the UK economy annually and employs 69,000 people in the UK at a productivity of £76,400 per employee. Photonics productivity is significantly above the UK manufacturing average of £67,000 per manufacturing employee. This 2019 update to the size of the UK industry, follows detailed analysis by the Photonics Leadership Group (PLG), which provides informed guidance to government, support agencies, users, and developers of photonics in order to maximise the industry's growth across the UK.

The UK photonics industry is now equivalent in size to the UK pharmaceutical, fintech or space industries in the UK. The continued growth of UK photonics reflects the critical role that light plays in current and next-generation products and manufacturing.

The latest PLG analysis has fully reviewed the 1200 companies operating in and around photonics ensuring that only the most relevant UK-based companies were included with locations based on real manufacturing and operating addresses. This year's analysis drew from 930 separate organisations made up of 1,030 legal entities with 1,100 operating locations. Focusing on identifying actual operating locations, rather than the registered office locations used previously, has also revealed a shift in the regional distribution of the industry reflecting the wide distribution of manufacturing sites around the country. The updated analysis also shows like-for-like growth of 8.4% since the last report based solely on comparing companies included in both the 2017 and 2019 analysis.

*"Photonics provides the back-bone of the internet, the key to many modern manufacturing processes and the sensors at the core of many defence systems, but the impact of photonics is only just starting" said PLG Chief Executive Dr John Lincoln. "We look forward to many further years of growth as photonics feeds essential data to autonomous vehicles, becomes ever more integrated into healthcare and digital manufacturing and plays an ever greater role in keeping us safe and secure."*

*"The Photonics Industry continues its strong growth trajectory, as photons replaces traditional tools" said PLG Chairman Dr Chris Dorman, OBE. "The age of photonics firmly upon us".*

The methodology—pioneered in photonics—accurately combines the output of the many SMEs operating in the industry with a fraction of the output of the large and highly diversified companies that produce photonics products as part of their product portfolios. Developed with SPIE, the international society for optics and photonics, for assessing the global industry in its annual Global

Industry Report, this methodology is now being applied by in many locations around the world and into other enabling industries, including acoustics.

The PLG will publish further analysis on the regional distribution of UK photonics revenue, distribution of output by company size and age, and further comparisons with other UK manufacturing sectors in 2019/2020.

*PLG acknowledge the support of all PLG members, the Future Photonics Hub, the Compound Semiconductor Applications Catapult and Photonics Scotland in the preparation of this data.*

## **Notes for Editors**

### **About the Photonics Leadership Group (PLG)**

The Photonics Leadership Group takes voluntary input from over 80 industrial and academic leaders in the UK photonics arena, providing a voice and interface for UK photonics to foster strategic dialogue between industry, academia, support agencies, and government in order to strengthen and grow the industry. Contributions and input from all are welcome. [www.photonicsuk.org](http://www.photonicsuk.org)

Financial data used in assessing UK Photonics industry output is based on data publicly reported to Companies House and amalgamated by Dun and Bradstreet. Reported data lags by up to 18 months represents the output of the industry on average between mid-2017 to mid-2018. The full list of organisations included in the analysis is available at [www.photonicuk.org](http://www.photonicuk.org) and recommendations for additions and corrections are always welcome.

### **About The Future Photonics Hub**

Launched in January 2016, the Future Photonics Hub is an EPSRC Future Manufacturing Research Hub led by the University of Southampton, partnered with the University of Sheffield. The Hub focuses on developing new industry-ready manufacturing processes by understanding, adapting and integrating photonics in four critical technology areas: light generation and delivery, high-performance silica fibres, silicon photonics and the manufacturing of 2D and metamaterials. The aim is to improve cross-platform capability, reliability, yield and to reduce costs, working with partners and end-users across a wide range of industry sectors, including oil and gas, imaging, aerospace, defence and security, energy, ICT, manufacturing and healthcare. [www.photonicshubuk.org](http://www.photonicshubuk.org)

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The Future Photonics Hub [contact@photonicshubuk.org](mailto:contact@photonicshubuk.org) | [www.photonicshubuk.org](http://www.photonicshubuk.org)

Images:

- 1- The UK photonics industry- key statistics
- 2- 2019 Geographic distribution of the UK photonics industry