Glass Futures

The Global Centre of Excellence in Glass for R&D, Innovation and Training

Glass Futures is a not-for-profit company, created as a core entity to develop two UK-based Catapult-like" Centres of Excellence in glass comprising R&D, innovation, technology incubation and implementation, training and up-skilling. It brings together the global glass industry and academia.

Led by some of the World's largest glass manufacturers, supply chain partners and leading UK University research groups, our aim is to create two centres of excellence:

- Unique multi-fuelled 'Hot' glass pilot facility in St Helen's, Merseyside
- High Tech 'Cold' glass research centre at the University of Leeds.

These will be supported by a series of smaller research hubs across UK academic and industry research groups. This initiative will also facilitate the creation of 'The Glass Corridor', stretching from Liverpool to Hull, along which almost 80% UK glass manufacturing is based serving to complement and underpin Glass Futures.

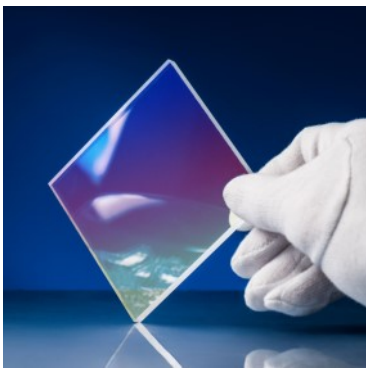
Glass Futures and 'The Glass Corridor' together will create a globally unique pool of expertise in glass technology, spanning the entire glass supply chain/manufacturing processes and becoming a magnet to attract global investment into R&D and the creation of new businesses in the region.

The aim is to strengthen and align existing industrial and academic expertise within the " Northern Powerhouse" region to create a globally recognised centre of excellence, or hub, in glass technology and manufacturing. It will have the capability to drive significant improvements in productivity and sustainability within the UK glass industry, with the ambition of driving the sector towards net-zero CO2 emissions by 2050.

This hub will align and develop existing expertise to catalyse the development of new technologies across the glass manufacturing supply chain (raw materials, melting, forming, inspection, down-stream value-added processing, recycling and zero-carbon manufacturing of "carbon reducing products" - PVs, wind-turbines and high-efficiency glazing systems).

The very essence of Glass Futures is to drive changes in technology and culture to facilitate growth and create a sustainable future for the glass industry.



St Helen's – hot glass facility

Our plan is to build a globally unique special purpose multi-fuel experimental pilot facility. This facility will host a series of glass furnaces capable of developing and demonstrating new technologies for reducing environmental impact and improving the productivity of glass manufacturing processes, from new raw materials and novel glass compositions to alternative fuel sources and furnace designs to waste heat recovery and carbon capture. The facility will also host state-of-the-art glass forming and processing capabilities.

Our ultimate ambition is to have a highly flexible furnace configuration to accommodate the needs of float and container glass making from batch to product. Initially we will work towards a pilot plant of around 30 tonnes/day with the capability of further expansion in scale should it be required. This will be a significant, scalable platform which will eventually develop new products and processes on an industrial scale, cutting development time and risks for the next generation of glassmakers across the world.

The St Helens site has been identified and funding is being secured for development. It is anticipated that this site will be up and running within a year from its commissioning, with pilot furnace trials taking place from the end of 2020.

Backed by industry funding, Glass Futures is currently pursuing UK government funding from BEIS and UKRI.

Leeds – 'cold' glass facility

The second facility, proposed for the University of Leeds, will research into the 'cold' end of glass production. It will focus on sustainability of the built environment looking to significantly improve glazing system performance through enhanced 'smart' coatings, climate management and environmental controls. This will dramatically reduce carbon emissions by moderating internal environments, substantially reducing building heating and cooling requirements. Further research areas include enhancements in structural glass and the use of glass in medical applications as well as delivering substantial improvements to both

Contributing organisations

Industry

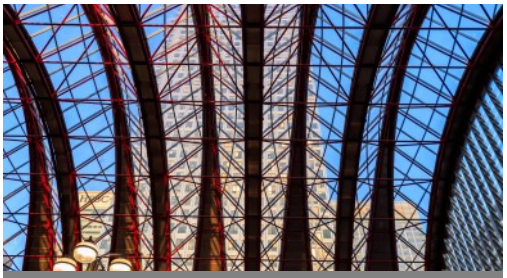
Guardian Glass, Owens-Illinois, Encirc, NSG Pilkington, Siemens, Swarowski Group, British Glass Manufacturers' Confederation, Glass Technology Services, TECOGLAS, Ametek Land, FIC (UK)

Academia

University of Leeds, Sheffield Hallam University, University of Cambridge, University of Liverpool

Not-for-profit

The Worshipful Company of Glass Sellers of London, Society of Glass Technology



Some glass facts

- Glass is the only truly sustainable packaging material and it is proven to be the consumer's packaging material of choice.
- In the UK alone circa 7,500 million containers are produced for use in the food, cosmetics, wines, beers and spirits industries.
- Approximately 1 million tons of flat glass are produced for the construction industry.
- The glass sector achieves world-wide sales of circa £70Bn, £20Bn of which is within the EU.
- UK glass manufacturing is worth £1.45Bn, with a UK market of £1.6Bn.
- More than 6,000 people are directly employed in the glass manufacturing industry at around 20 major sites across the UK.
- A further 100,000 or so jobs rely on glass, in industries as diverse as food and beverage filling lines, window installation, auto wind-screens, construction of wind turbines and electronic circuit boards.

For more information

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