

Case Study

Company Name

Changing Streams

Industry

Construction

Delivery Partner(s)

Virtual Engineering Centre

Background

Changing Streams is a not-for-profit organisation dedicated to eliminating the use of plastic in the construction industry through innovation in industrial processes and sustainable procurement practices. The company focusses on the analysis of each facet of the supply chain and operational processes to determine their impact on the plastic waste stream.

The construction industry is the second largest producer of plastic waste globally.

Challenge

The company approached the Virtual Engineering Centre (VEC) via LCR4 START for support with the development of a digital strategy to further their plans for the development of a "Changing Streams" accreditation mark. Similarly to their FAIRTRADE® or Red Tractor® accreditation, demonstrating a high standard of assurance of sustainable plastics practice.

To facilitate this the company is building a digital 'Integrated Knowledge Resource' (IKR) to enable all in the supply chain to assess structure, functionality and environmental impact of building components, including traditional and sustainable alternatives, to underpin their 'plastic footprint' accreditation methods.

Solution

The VEC supported Changing Streams in their exploration on how digital tools can be used to facilitate a low-cost system of accreditation with a low barrier to adoption and a high degree of integrity. The VEC employed their expertise in industrial digital solutions with their experience in the highly regulated aerospace

supply chain testing and accreditation process to help the company refine its strategy for adoption.

The VEC served as a bridge between industry and academia and allowed Changing Streams to plan a roadmap for how digital technology, algorithms and artificially intelligent (AI) tools could be applied to extract data from a global source to generate a potential employer in the IKR (Integrated Knowledge Resource) platform. The key objective is to provide information interfaces between all supply chain parties, ensuring a cradle-to-grave approach for materials from producers to consumers (industry, government, R&D, design and planning authorities).

Impact

Changing Streams have been able to bridge the gap between industry and research and validate the feasibility of their value proposition ready for roll out across Liverpool and Manchester city regions construction sectors.

The company has now pulled together a multidisciplinary project team comprising of computer scientists, AI experts, engineers, environmental and material scientists and construction professionals from the University of Liverpool and the University of Manchester.

With the support of SMEs in the region, the company has a view to making the North West a centre of excellence in sustainable practices in the constructions industry.

Changing Streams