

CASE STUDY: CARBON REDUCTION TECHNOLOGY

BACKGROUND

Carbon Reduction Technology (CRT) was formed in 2008 and works with local authorities and industrial facilities across the UK. CRT specialises in high efficiency lighting including street lighting, heritage lighting, retrofit lighting and high bay lighting.

The organisation's main ethos is to reduce customer carbon emissions, along with both operational and maintenance costs, by selling lighting technologies which are specifically intended to replace or upgrade older style inefficient luminaires.

Carbon Reduction Technology's initial engagement with the school was in June 2018, becoming a member of the School as a requirement of joining the approved supplier list of a client and Partner of the School. Although only regular membership was required, CRT realised that a more sustainable approach was also great for business. Joining the Supply Chain School encouraged CRT to examine where further carbon and waste could be reduced at the manufacturing end rather than their previous focus on reducing waste at the client's end.



SELF – ASSESSMENT & ACTION PLAN

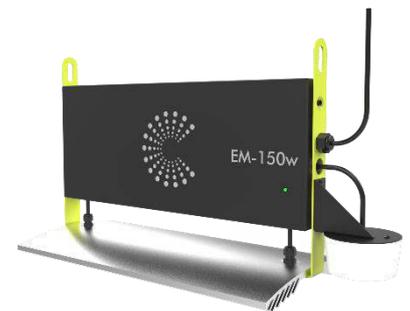
Carbon Reduction Technology have completed assessments and have accessed the resources within their action plans. Liz Hudson who is the main point of contact with the SCSS explained how the assessment tool helped CRT to gain a better understanding of their industry and has provided broader knowledge on technologies which complement their own. This has helped to influence the organisation's long-term business plan.

The process of assessing and re-assessing the organisation's knowledge level against different sustainability issues prompted CRT to generate ideas around the sustainability of their products and supply chain.

IMPACT

Since becoming a member of the School, CRT have made a variety of changes to their organisation's processes:

- **Product redesign** – CRT have viewed various resources within the school. Viewing the School's Water e-learning modules enabled CRT to introduce new product options which significantly reduce the amount of mass and material involved in their manufacture. By reducing mass, material and ultimately weight, this has enabled a large reduction in the carbon footprint of product transportation.
- **Shipping** – Previously CRT packaging of the HBX2 Luminaire was very inefficient. Due to the shape of a luminaire the organisation was using a large amount of packaging around void space. They have now added a hinge to the product so that it can be affectively flat packed. As a result, less packaging is being used and more products can be transported per shipment. Since this change has been implemented the number of loadable products per shipping pallet has been doubled and the weight of integral construction materials such as Aluminium has been reduced by up to 20%!
- **End of Life** – The end of life process of CRT's street light has also received an overhaul. A redesign allows for a very simple changeover of core components at the end of a luminaire's first operational lifetime, breathing up to 20 years more life into the product at a fraction of the financial and carbon cost of purchasing and installing a full replacement. Due to this innovation, some of their products' life spans have doubled!



BENEFITS

- **Cost Saving** – As a result of joining the School CRT have been able to modify products and processes so that costs are being saved for their organisation and their customers.

- **Meeting Clients Requirements** - The school provides a variety of resources on Sustainability and Supply Chain Management which are important to CRT's customers and clients. Using the School, CRT are making it their mission to incorporate these aspects into their business.
- **A more sustainable supply chain** – CRT are motivated to re-evaluate the sustainability and emissions of their supply chain, through promotion of the school and redesign of products and packaging.
- **Brand awareness and value** – Involvement with the School has enabled CRT to gain customer confidence and credibility when bidding for projects and approaching new prospects.
- **Framework** - The School has enabled structure regarding sustainability within CRT, providing a greater understanding of industry priorities.

THE FUTURE

Carbon Reduction Technology are planning to investigate other areas of their business and begin to apply the knowledge and skills that they have learnt from the Supply Chain Sustainability School; this includes:

- Encouraging other members of staff to enrol in the school, undertake training and access learning resources
- Attending Supply Chain School supplier days and workshops
- Social Value – looking at ways staff members can get more involved within the community by volunteering at events
- CRT are looking to move forward with ISO14001