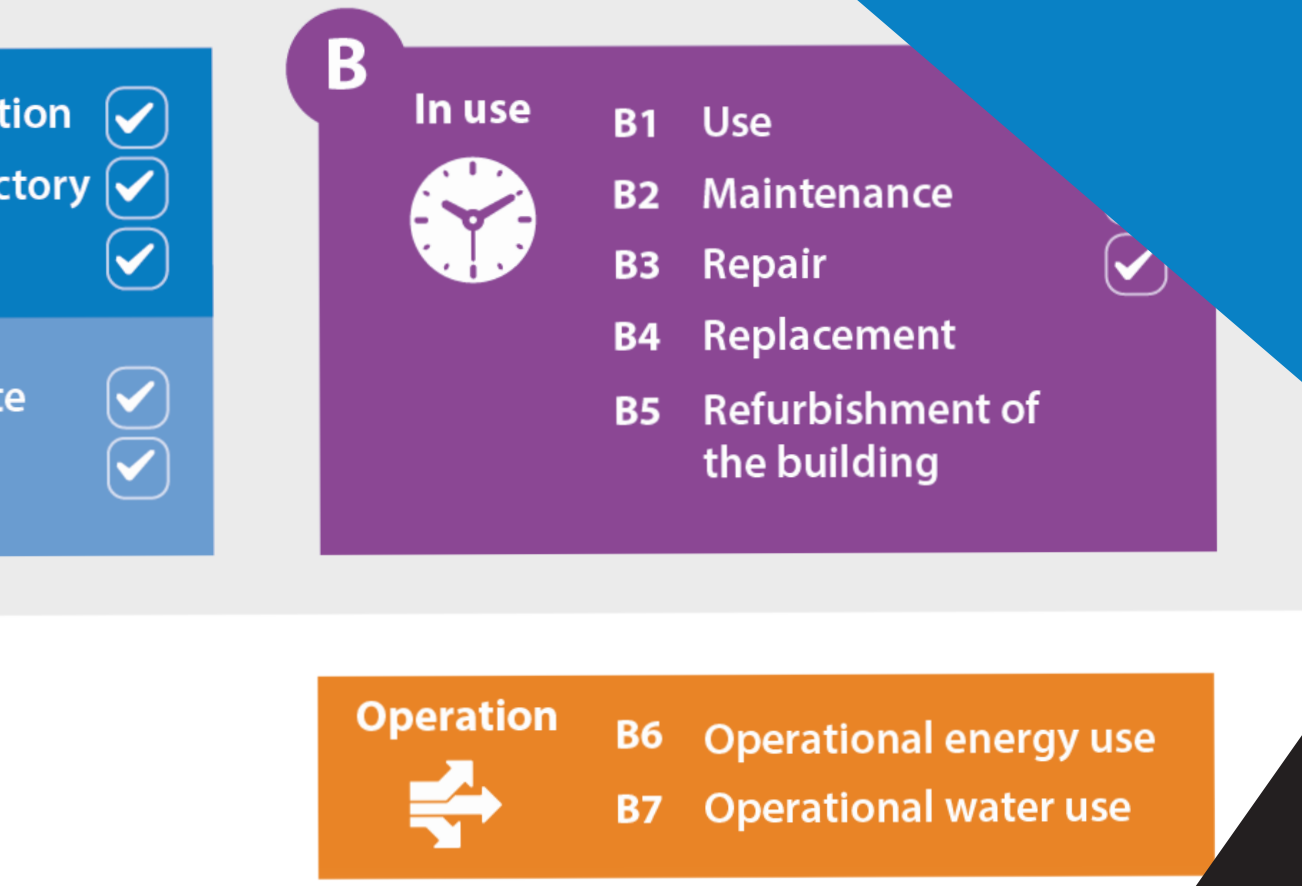
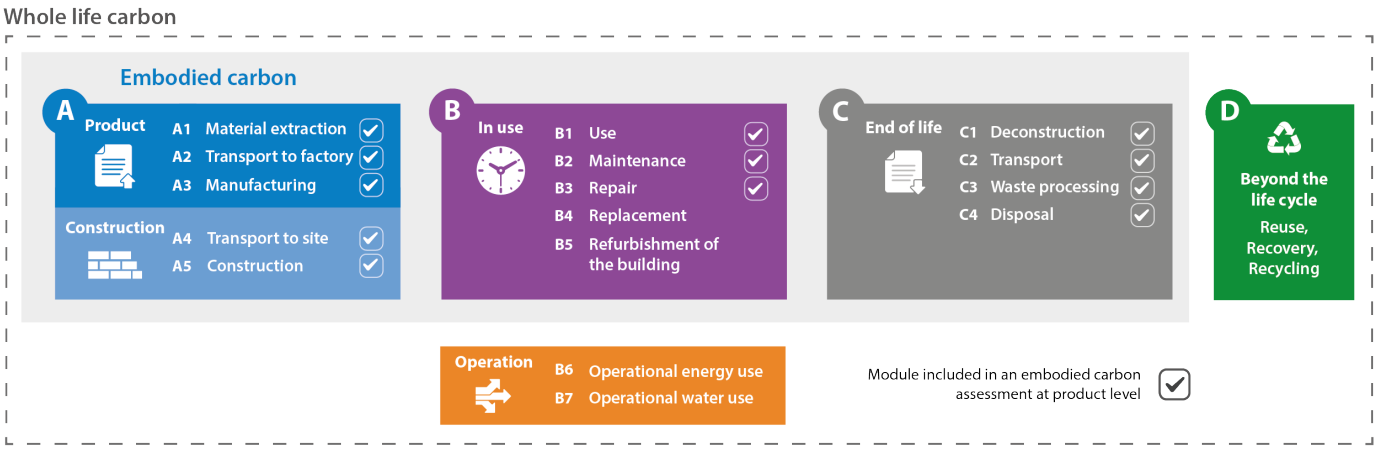


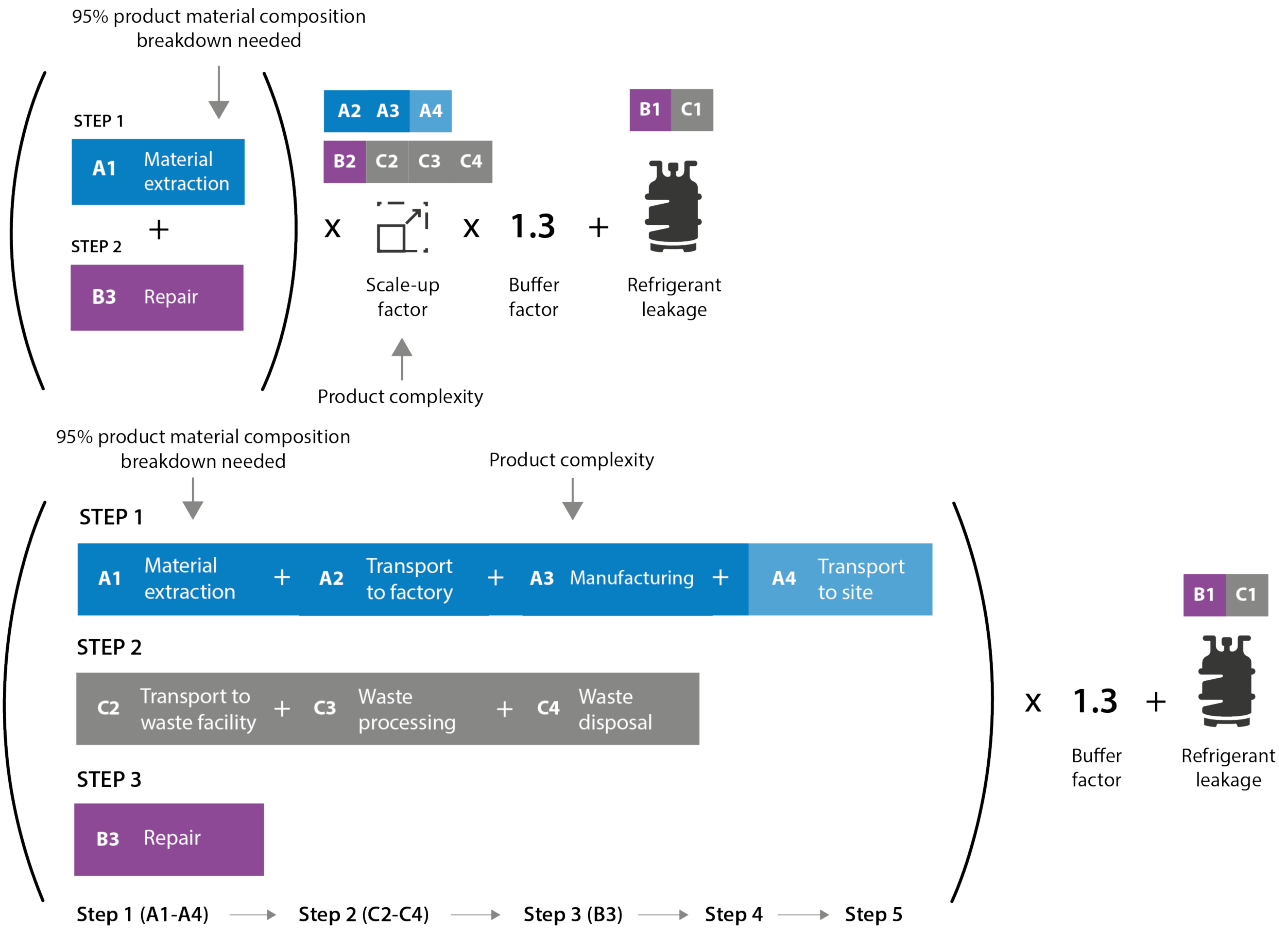
TM65 EMBODIED CARBON

Dextra GROUP PLC

TM65 EMBODIED CARBON

At Dextra we are committed to understanding and publishing the carbon content of our products throughout their life cycle, from manufacturing and lifetime repair through to end of life disposal. With accurate embodied carbon data we will be able to focus our future design and development to minimise carbon intensive materials and manufacturing processes, whilst making this data publicly available will ensure that we are transparent and accountable in our commitment to carbon reduction. Our data will be produced in accordance with CIBSE TM65 Guidelines to ensure it is accurate and comparable with other manufacturers in our industry.

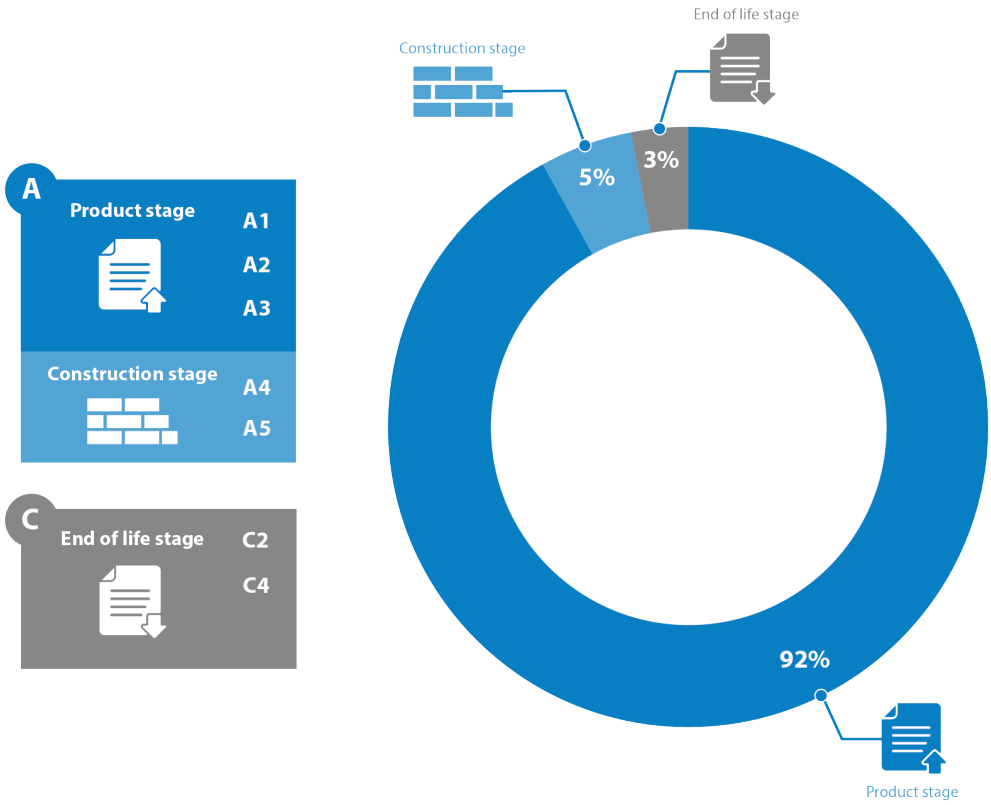


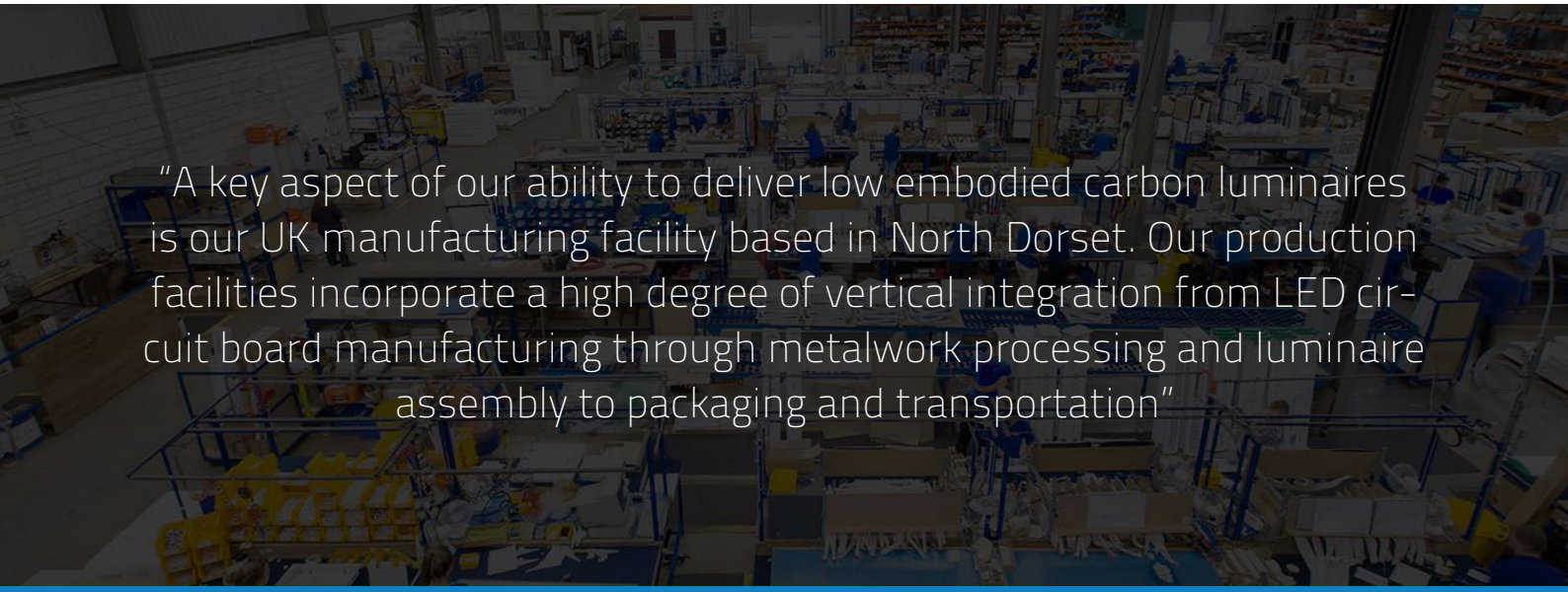


TM65 EMBODIED CARBON

Longevity and ease of repair are key aspects of reducing embodied carbon, longer product life cycles and the ability to repair luminaires reduces the frequency of replacement and therefore the embodied carbon that each replacement cycle generates. At Dextra we have always used branded European components ensuring excellent component lifetimes and simple component sourcing in the event that repair is required. Our drivers typically have a lifetime of 100,000 operating hours to 10% failure rate whilst our LEDs offer 10% lumen depreciation over 60,000 operating hours ensuring that our product life expectancies are typical for current state of the art LED technology.

All of our luminaires are labelled with a unique identification code allowing us to trace the components used at the point of manufacture further simplifying the repair process. Our luminaire designs have always had maintenance and repair as a key design ethos with easy access to key components that can be removed and replaced with commonly available tools, our five year warranty with on-site repair including labour for three years has always held us accountable in this respect with simplicity of repair being in both our customers and our own interests.





TM65 EMBODIED CARBON

A key aspect of our ability to deliver low embodied carbon luminaires is our UK manufacturing facility based in North Dorset. Our production facilities incorporate a high degree of vertical integration from LED circuit board manufacturing through metalwork processing and luminaire assembly to packaging and transportation. This investment and self-sufficiency ensures not only that we offer market leading delivery combined with local project support from concept to aftersales, but also minimises transport miles and the associated carbon through multiple parts of the supply chain. We have also taken a range of measures to reduce the carbon and environmental impact of our production facility from replacement of our solar installation with the latest generation high efficiency panels, investment in new energy efficient plant and machinery as well as minimising packaging and eliminating single use plastics.

Although energy consumption over lifetime falls outside the remit of embodied carbon, as the majority of a luminaires Co2 production is typically derived from the energy consumed in its lifetime we will continue to maintain our focus on improving luminaire efficiency in conjunction with a commitment to minimise embodied carbon. Since the advent of LED technology we have strived to produce the most energy efficient luminaires by designing and manufacturing our own LED circuits to ensure the light source provides state of the art lumens per watt, and also through optical design which provides the highest possible light output ratios ensuring a minimum of light is wasted within the luminaire housing.

Accurately calculating the embodied carbon of our ranges is a complex challenge, despite the scope of this project we will endeavour to make this information publicly available by 2024 and welcome any questions regarding our environmental and carbon reduction commitments as we go through this next stage of our transition to a sustainable manufacturing process with minimal environmental impact.