

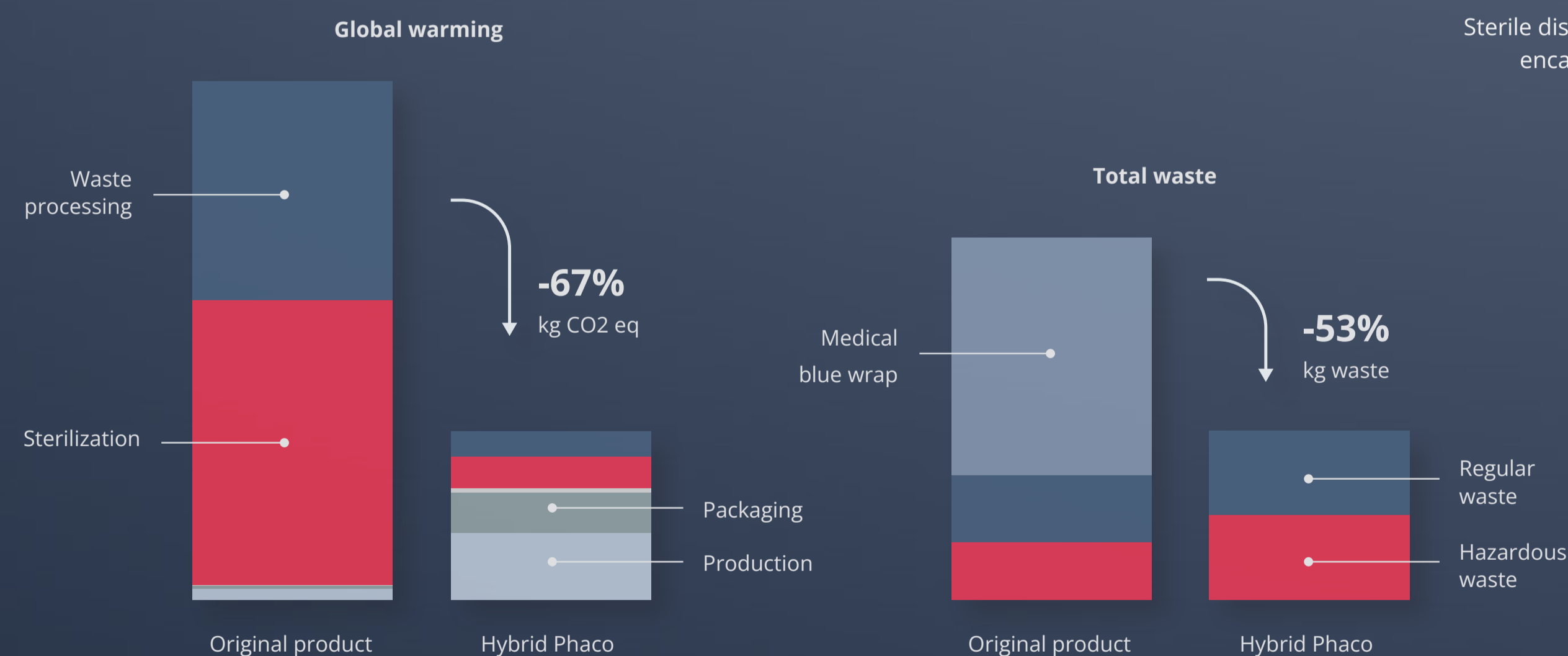
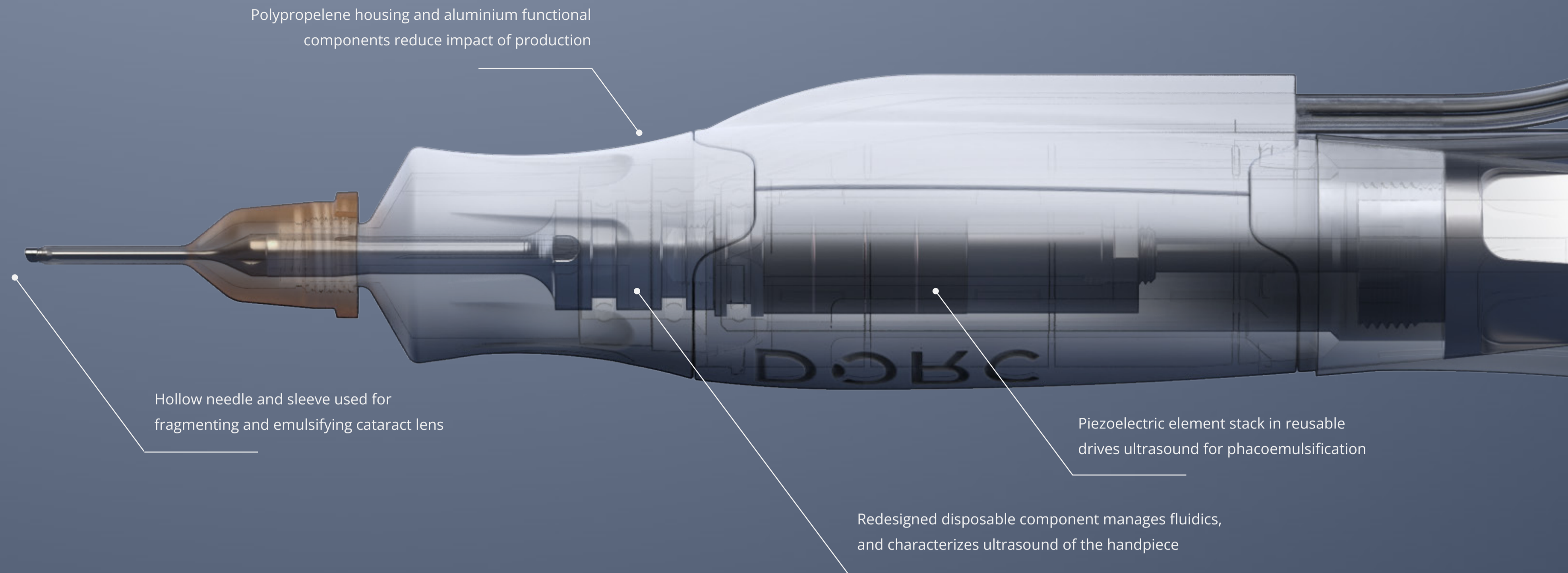
Hybrid Phaco

Driving circularity in eye surgery with a semi-disposable phacoemulsification redesign

The hybrid phaco handpiece rethinks phacoemulsification in cataract surgeries, addressing key factors—sterility, functionality, and environmental impact.

By introducing a disposable element for sterile use and a reusable component for driving ultrasound, the design **eliminates the need for energy-intensive sterilization**. With sterilization eliminated, environmental impact is significantly reduced, with a **67% decrease in climate impact** over the entire life cycle, marking a step towards a circular economy in healthcare.

Functionally, the design features a validated design on ultrasound and fluidics. A blister pack ensures sterility, which provides a contact-free assembly, and handover method verified by healthcare professionals. **This design enables non-sterilized components to be used in the operating room.**

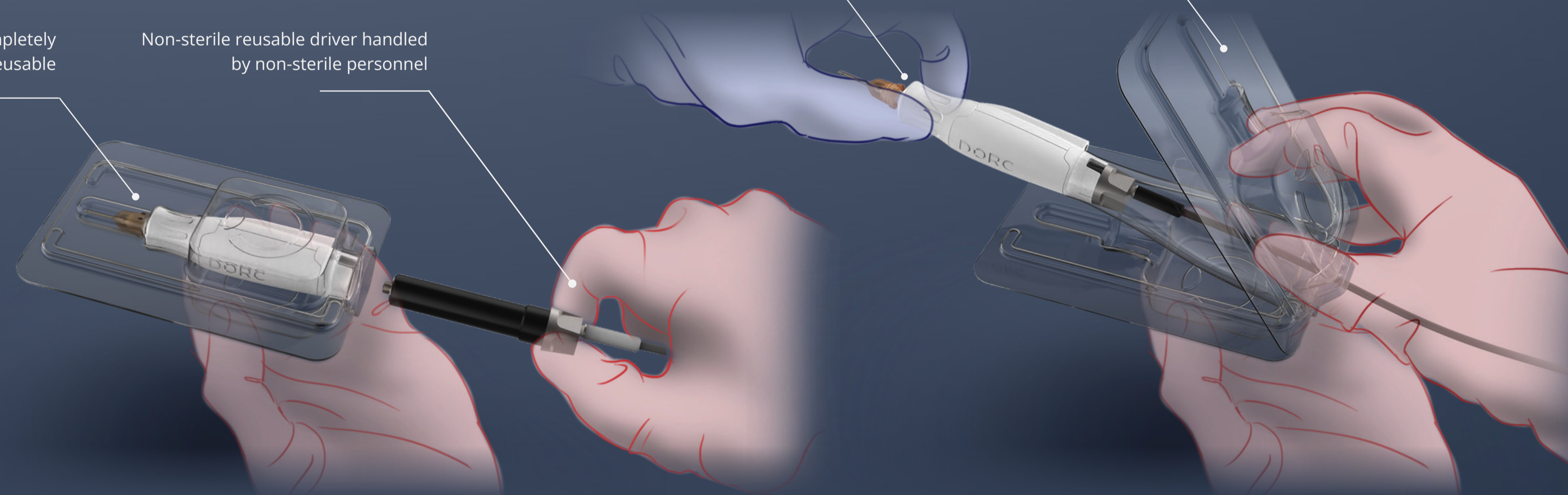


Sterile disposable that completely encases non-sterile reusable

Non-sterile reusable driver handled by non-sterile personnel

Untouched handpiece is taken out by surgeon

Blister packs unroll sterile sleeve, and forms the sterile barrier



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Hybrid Phaco: Driving Circularity In Ophthalmic Surgery
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Integrated Product Design

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