

RECYCLING MEDICAL DEVICES IN PRACTICE: INSIGHTS FROM NHS PILOTS

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Ambu

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85+ YEARS OF PROVIDING INNOVATIVE MEDTECH SOLUTIONS FOR HEALTHCARE PROFESSIONALS



Founded in 1937 by the engineer, Dr. Holger Hesse



In 1956, Ambu enabled HCPs to provide ventilation in any setting with the self-inflating Ambu Bag, a breakthrough innovation still in use today



Launched the world's first single-use flexible endoscope in 2009

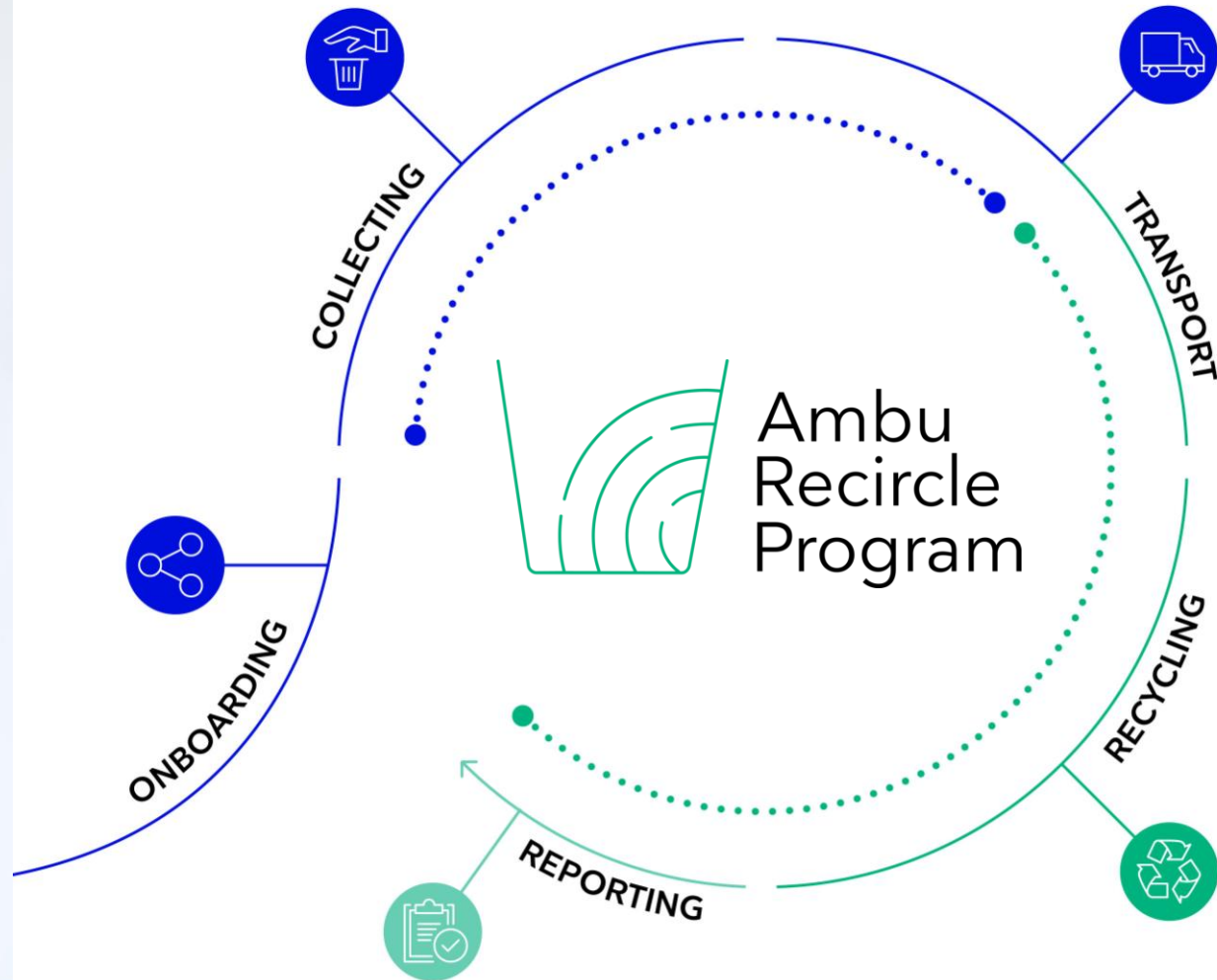


15 years driving and innovating the single-use endoscopy market

RECYCLING MEDICAL DEVICES IS A CHALLENGE, BUT IT'S NOT IMPOSSIBLE

- 1** 85% of hospital waste could in principle be recycled¹
- 2** 4,4% of global net emissions are caused by healthcare¹
- 3** 71% of these emissions are caused by medical devices¹





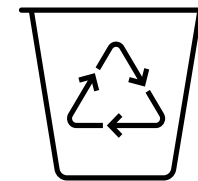
Onboarding & Collection: Hospitals receive bins, training, and reporting tools.

Transport & Processing: Partner recyclers ensure compliance and traceability.

Material Recovery: Plastics & metal separated and repurposed

Reporting: Each hospital receives CO₂ and waste-diversion data.

UNIVERSITY HOSPITALS OF LEICESTER NHS TRUST



987 devices collected

97% of material recycled

488 kg CO₂e saved

Annual impact if implemented across the 25
largest NHS hospitals in the UK

22.5 tonnes of clinical waste diverted from incineration

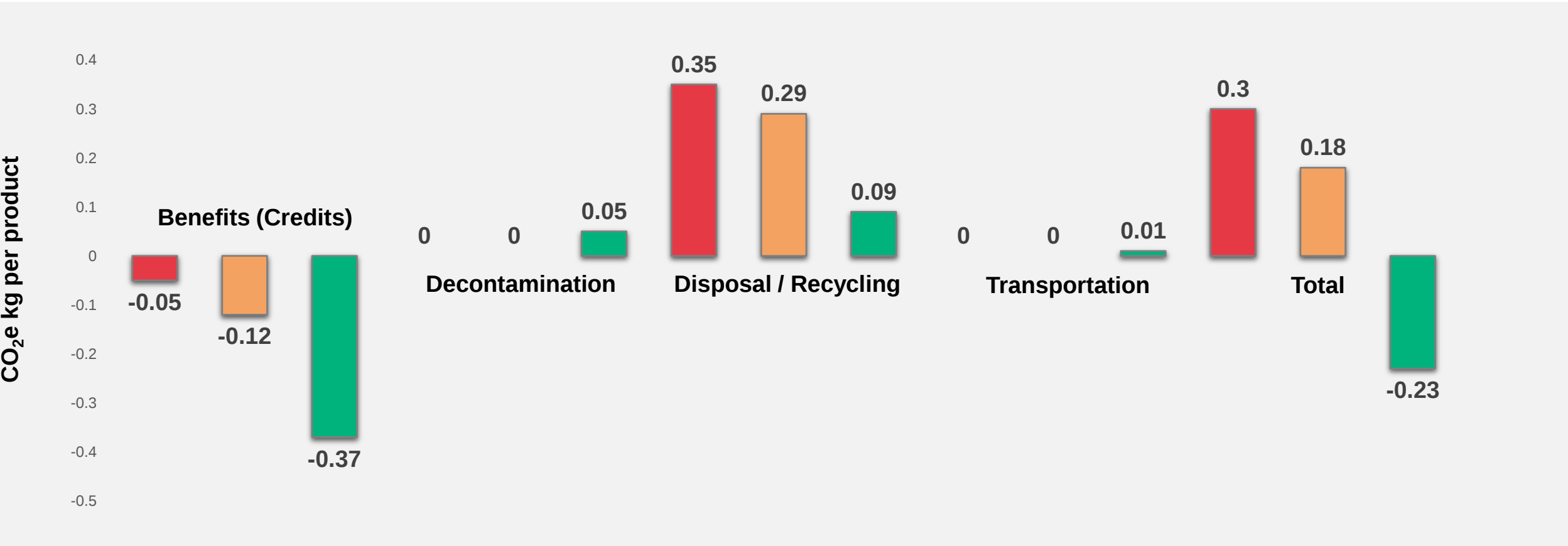
67.5 tonnes CO₂e saved

327,000 miles in an average UK hybrid car



ECOLOGICAL BALANCE SHEET

Both hazardous waste and municipal waste incineration have a significantly higher environmental burden (178-230 %) compared to recycling



Emission Sources HWI MWI Recircle

Note: The calculations are based on aScope 4 Cysto that is recycled in the UK. Results may vary across product mix and hospital locations.

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We transitioned to single-use endoscopes due to issues with decontamination and breakages, which caused cancellations. It was a natural progression to join the Recircle pilot, as we were concerned about the plastic waste being generated by our clinic. We look forward to seeing the impact of this initiative and exploring how these devices can be given a new purpose through recycling.

Kevin Harris, Urology Nurse Specialist

I am pleased to support the Ambu Recycling pilot at University Hospitals of Leicester as a chance for us to test a new way of recycling medical devices.

Data gathered from the pilot will help us to understand more about how this project and similar waste reduction systems can support our decarbonisation targets.

Claudia Holroyd, Head of Sustainability and Waste

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A man with glasses, wearing a blue short-sleeved hospital uniform with white piping, is sitting in a metal chair. He has a red lanyard with a yellow ID badge and a blue hospital ID badge around his neck. The background is a clinical setting with a light green wall, medical equipment, and a black lamp on the right. The Ambu logo is in the top right corner.**Ambu**

EU & UK Regulation

MDR rules forbid reuse of single-use devices in clinical settings; recycling is allowed only after decontamination. Waste directives in both regions push manufacturers toward take-back and recycling.

Using Recycled Materials in Devices

Use is currently restricted by ISO 10993 biocompatibility and traceability standards. Early pilots show recycled plastics are feasible for non-contact components, with formal guidelines expected in 2026.

NHS Policy Direction

The NHS Net Zero Supplier Roadmap rewards take-back and recyclability, and HTM 07-01 now permits separate collection streams for recyclable medical plastics.



LEARNINGS & TAKE AWAYS

1. Recycler capabilities vary & logistics are complex
2. Stakeholder alignment across hospital departments are crucial
3. No harmonised guidance/standard for medical device recycling
4. Collaboration between policymakers, hospitals, and industry is essential to reduce waste & divert recyclable materials like plastics and metals away from incineration.



THANK YOU