Establishing a Recycling Innovation Centre for the MedTech Industry

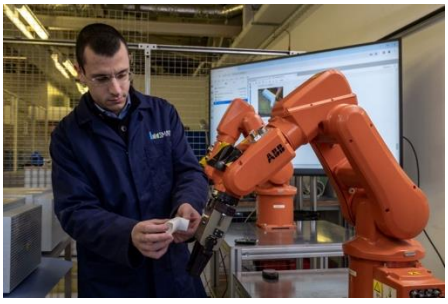
ReMed

The rationale for organised innovation in MedTech circularity

MedTech innovation is booming, with new treatments embodied in a growing stream of new devices on the market. However, this trend could be undermined if devices continue to be designed for single-use and also multi-use devices are not recycled at end of their useful life. This is not sustainable environmentally, economically or increasingly socially, as reflected in the evolution of government policy and NHS procurement criteria.

The route for a transition to a circular economy of medical devices starts with acceptable decontamination. Legislation and guidance are being adapted to accommodate effective methods. Design and engineering innovation are needed so that existing proven and emerging decontamination technologies can cover more devices with the necessary validated and assured levels of safety.

This then opens the gate to multi-use devices as the default approach, but progress needs circular design and engineering solutions to ensure devices can be repaired, remanufactured or refurbished for multiple cycles of use, and then eventually recycled. Economically viable recycling requires maintaining maximum functional value of the materials in closed or open loops, which frequently is not straightforward even when devices have been designed for recycling.



Innovation needs investment, hence a Priority Action in the DHSC's *Design for Life Roadmap* – "to establish a medtech innovation centre". Piecemeal projects through just public funding and limited industrial initiatives will not cut it; a systematic approach is needed. Fortunately, much of the necessary R&D can be pre-competitive. Several industrial sectors already run effective pre-competitive collaborative research programmes, including pharmaceutical and biotechnology, resulting in significant progress towards a common goal.

The ReMed project team (www.remed.uk) is keen to facilitate firstly consensus on the need for MedTech innovation in circularity and then to stimulate ideas on how universities, the industry, government and the NHS can effectively collaborate in a timely way to accelerate the transition towards circular healthcare in the UK.

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