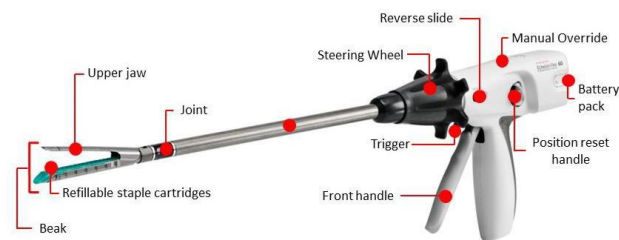


Assignment 10

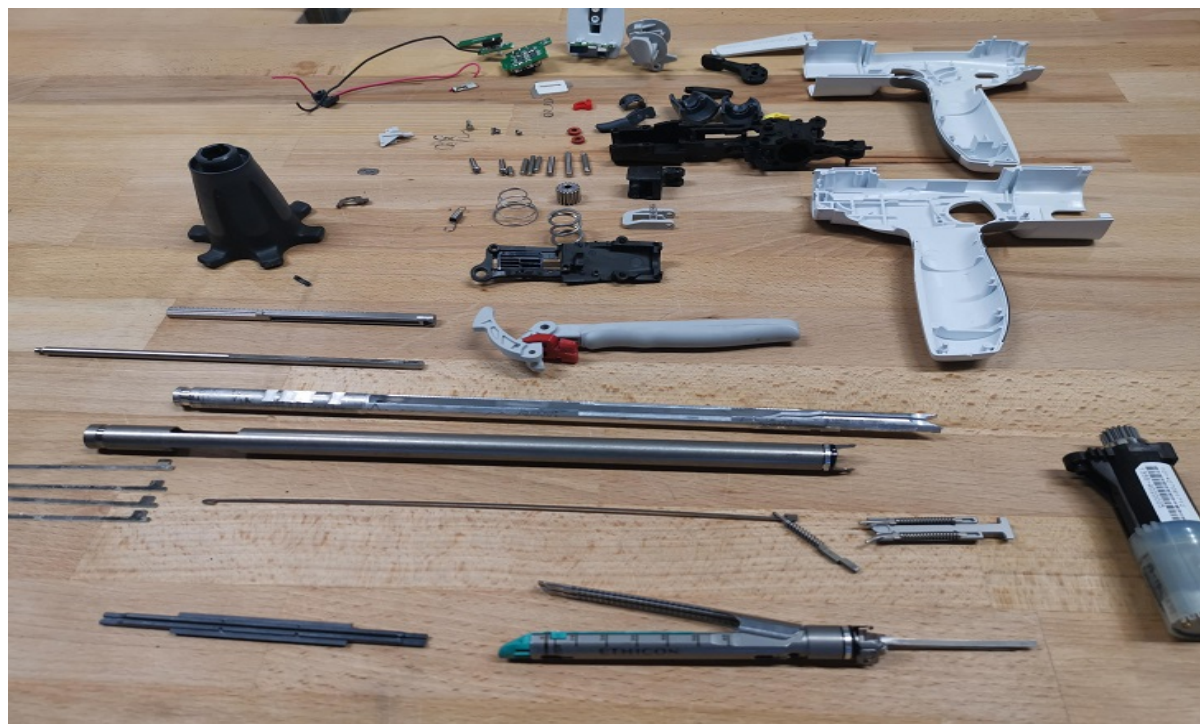
Reusing components of disposable equipment: what are the design, regulatory and supply chain implications?

Case study: Safe reuse of mechanical and electrical components of the disposable laparoscopic multistapler



Problem statement

To reduce the CO2 emission related to processing of hospital waste and the manufacturing of new medical devices, an open collaboration between industry, hospitals and universities was created within the entity GreenCycl (www.greencycl.org). In line with the goals of the Green deal, new processes are being developed that allow or foster reuse, reprocess or recycle of components from complex disposed instruments. Some of these processes are proven to be sustainable from a technical point of view. However, uncertainties in infrastructure, MDR and national or local rules and regulations prevent fast upscaling in Europe or allow the larger health industry to reuse valuable instrument parts after being harvested at our HQ living lab in the Meern.



Although the processes of GreenCycl are technically feasible, there are no general guidelines for all reprocessing steps that allow manufacturers to use refurbished components in their new devices.

Medical Delta interdisciplinary thesis lab: Sustainable Hospitals 2021 - 2022