



Layer shoes | Photo source Evan Stuart

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A NEW CONCEPT SHOE CAN CHANGE WITH FASHION

 SCIENCE & ENVIRONMENT

A new concept shoe can be easily changed to suit evolving fashion or replace wearing parts.

It is estimated that each year, around 300 million pairs of shoes are sent to landfills because they cannot be recycled. One reason for this waste is that most casual shoes are not stitched. Instead, they are bonded and glued together. This makes them cheaper, but also very difficult to repair. Springwise has previously highlighted some innovations for recycling clothing. These have included clothing made from [food waste](#) and vegan 'leather' [trainers](#). Now, a student at the [Dublin Institute of Technology](#), in Ireland, has come up with a possible solution to shoe waste.

[Evan Stuart](#) has designed a shoe that allows wearers to repair and customise footwear themselves. His project, called Layer, is made up of four parts: the uppers, soles, insoles and fastening lace. As different parts of the shoe become worn or as fashion changes, the wearer can order new shoe parts online. The shoes are held together by a lacing system instead of glue. The old parts can easily be unlaced, and the new parts laced on. All of the parts of the shoes are made from biodegradable plastics and recycled polyester fabrics. This means that even when users are ready to get rid of the shoes, they can be recycled.

In developing his shoes, Stuart created 43 working models before choosing the lacing mechanism as the most practical solution. Stuart has conducted user testing, but is still exploring areas such as ease of assembly, durability, usability and style options. He has also made plans to carry out further engineering tests on the materials before marketing the shoes. Layer has recently won a [James Dyson Award](#).

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Website: www.evanstuart.ie

Contact: www.evanstuart.ie/contact

Takeaway:

Seasonal, cheap and disposable clothing may please consumers, but it has also created additional waste. Layer represents an alternative to just throwing shoes away. It may also point the way forward for personalisation in fashion industries while also adhering to sustainable efforts. Is this the future of fashion?