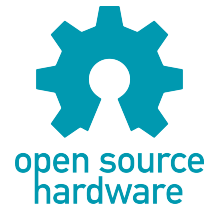
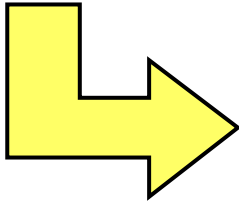


Reclaimable Circuit Assembly Process

An Open Source Proposal By Shane Oberloier



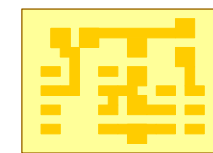
THE PROBLEM: The world will generate 92 billion pounds of e-waste in 2017 alone¹. Humanity is not going to slow down, So how can engineers make this waste more manageable?



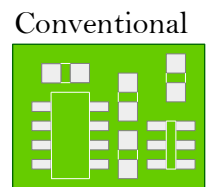
THE SOLUTION: Eliminate Solder! Parts will become easier to reclaim. The solder-mask can be forgone enabling an easier copper recycling process. Follow these 5 steps:

1

Create your board design. Manufacture it yourself or send out for conventional processes.



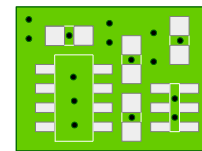
Milled / Etched



Conventional

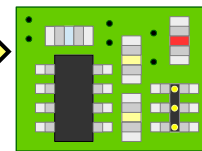
2

Adjust the design to have vacuum holes. Also place them at part locations.



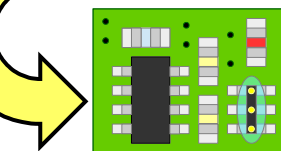
3

Enable Device Vacuum and place parts. Vacuum pressure will hold the parts in place



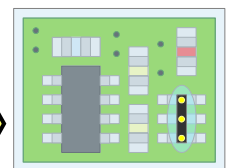
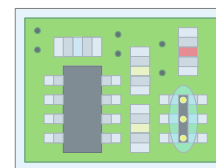
4

Place glue around exiting devices such as connectors and heat sinks.



5

Thermoform and seal a plastic bag around the board. Once cooled, cut open connectors



Once the circuit has reached its end of life, cut the bag to reclaim both parts and copper.