

Right to Repair, Encouraged to Replace.

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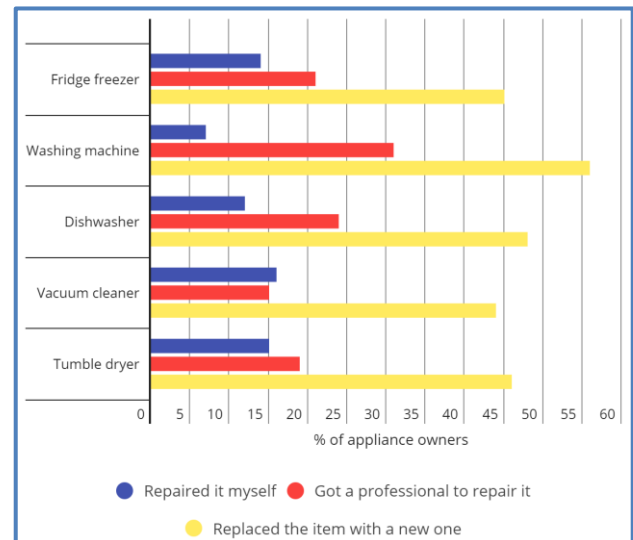
E-waste ("Discarded electrical or electronic devices such as mobile phones, televisions and computers." - *Techopedia*.) continues to grow 4 - 5 percent every year, with an estimated 49.8 million tons in 2018 (LEBLANC, 2018). This rise is linked closely with the shortening life spans of electronic goods (Prakash et al., 2016). Once these goods are broken, most people will discard their broken electronics and will purchase another to take its place. However, many reasons why a person may throw away a broken or faulty product, such as a cracked screen on a phone, can be mended by a repair specialist or by self-repair.

This investigation will look at a legislation which would aid the end-user's ability to repair their damaged goods. This legislation would enforce electrical manufacturers to design their products to be easier to repair and to be longer lasting. This paper will investigate the effects of this legislation and investigate arguments for and against it. This paper will also briefly cover the social, economic and environmental landscape of this issue and how this legislation will change them.

The Right to Repair movement began gaining traction in Europe around 2016 but the first protest in Brussels took place on the 10th December 2018 as the movement tried to sway ruling on the ecodesign legislation (The Restart Project, 2018).

One of the primary arguments that groups for the right to repair legislation make is the possible reduction in e-waste. The general idea of this being that if products are being repaired rather than replaced then the broken appliance do not go to landfill sites. However, a survey by *Which?* (Participants 1,500) displays that a large majority of people prefer to replace their household electrics with newer models when they breakdown (Fox, 2018). The survey also asked why they decided to

replace their appliance, the most common reply being that it was too expensive to repair. For example, the average lifetime of a washing machine without repair is roughly between 5 to 10 years (Porter, 2014). With repair this time frame could be extended to up to 15 years. Whether the legislation would encourage more people to repair rather than replace would be dependant on how well EU countries can change public attitude from a throwaway society.



Graph displaying responses of the 1,500 people asked. In all five categories of common household appliances, all of them show people prefer to replace followed by professional repair then self repair. Graph source: *Which?*

Community repair groups like *iFixit* state that many electrical products are designed to not be repairable, or at least not by anyone other than company official repair specialists. An ongoing study where they look at the repairability of laptops uncovered that devices like *Microsoft's* Surface Laptop cannot be taken apart without "inflicting a lot of damage." (*iFixit*, 2017). They state that this is especially problematic when trying to replace parts that have high failure rates, such as the battery, as once this part fails the entire device must be discarded. Another problem facing repair jobs is specialist screws and other locking mechanism, putting more hurdles in the way of a would be repaired device. *Apple* devices use star shaped security screws called pentaplo screws (Foresman, 2011). These are used as anti-tampering measures to keep the end-user out of their product and to encourage them to bring their product to *Apple's* official repair service. *iFixit* goes on to state that anti-consumer tactics like these are why the

European Union must update their ecodesign directive.



Protestors outside Brussels, Albert Borshette Conference Centre. Displaying their broken fridges, microwaves and other household objects. Image source: *Schraube locker*.

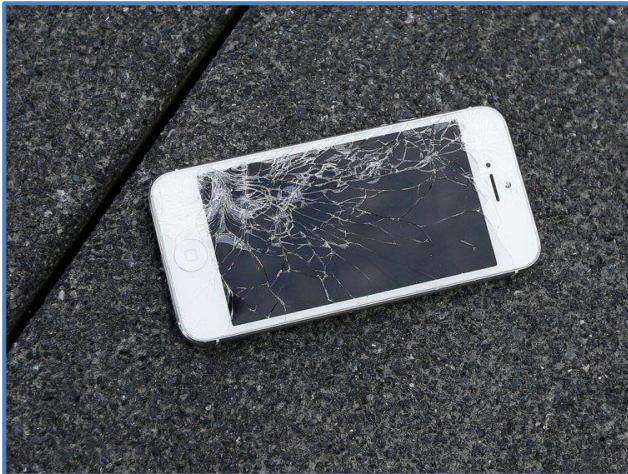
Some critics state that the ability for companies to keep their product's technical details concealed from the public is for user safety. *TECHNET* state that the Right to Repair legislation would be a "gift to cybercriminals" (Mincieli, n.d.) referring to products such as laptops and phones, suggesting that the hidden specifications are electrical manufacturers way of protecting their end-users. However, there is a lack of evidence correlating between devices with open access to spare parts and manuals and devices with hidden technical details.

TECHNET continue to state that manufacturers being able to keep their intellectual property to themselves allows them to stay innovative and unique in their products. The article tells how "The proposed legislation would compromise companies' R&D initiatives" (Mincieli, n.d.) generating the idea that the ability for companies to keep their technology from competitors increases innovation. This is seen throughout many different industries in the world, where companies have departments based solely on the goal of developing new technology and ideas that the competition does not have. For many businesses that rely on being innovators and producing exclusive products the Right to Repair act could hinder them after their product has been released. On the contrary to this possibility however is that many companies already have reverse engineering departments (Rouse, n.d.). Current society attitudes towards electronic devices enforce a preference for replacing rather than

repairing due to the ease of getting a brand-new product in a short amount of time and the active marketing campaigns by companies such as *Samsung* who offer yearly upgrade programs to their newer products. These products are usually still in working condition and are still equipped with most of the same tech that is in their newer devices. Once the customer gets their new device, they send their old one to the company, what is done to this device depends on the company in question. Some will break down these into their raw materials, others will re-use some of the components into other products and some will send the devices to landfill sites. This nature of consumerism is seeking to be reduced by attitudes presented by the Right to Repair movement. A journal on the effects of community repair organisations states "Prolonging a product's life through repair is the sustainable choice: it decreases waste generation as well as the need for raw materials." (Arabi et al., 2018) implying that encouraging a willingness to repair and increase the time short life cycle products are owned would reduce on e-waste production. The companies that rely on yearly product releases would likely lobby against the Right to Repair legislation. It could also be suggested that because these companies can release new products so often, it has increased the rate of technological advancement.

Electrical companies do offer some repair services, (Such as *Apple* genius) however they also offer recycling opportunities for their customers. For example, *Apple* have been very vocal about how they recycle phones that their customers give back to them. They have shown off Liam a disassembling robot and more recently its successor Daisy. According to *Apple*, Daisy can take apart 200 iPhones an hour (Heater, 2018). This would be an impressive feat if *Apple* did not produce 27,000 iPhones an hour. The problem the repair community has with this robot however is its method of recycling. Once this robot has disassembled each component, they are shredded down to get at their raw materials. This is because *Apple* has a policy on making sure all second-hand parts are destroyed so they do not get used in other devices (Koebler, 2017). Whereas these disassembled parts could be used to repair other iPhones to give them a longer lease of life. Instead *Apple* are either sending these materials to their manufacturers to create other devices and giving the unwanted material to recycling companies. Doing so, however, produces a few problems. When reducing the components back to

their original material, some material is always lost in the process. As well as this, remaking the components produces CO₂ which can be avoided if the original components are re-used in other products (Urry, 2016). One of the factors of the Right to Repair legislation is to force companies to be resource mindful when manufacturing products. This means to not be wasteful during recycling and manufacture. This means processes such as the shredding of useful components would likely be targeted to stop if these laws are put in place.



A cracked iPhone, attempting to self repair or go to a third-party repair organisation would void warranty. Accidental damage is not covered by *Apple*. Image source: *Business Insider*

While tech companies would prefer to recycle old appliances, most manufacturers such as Google and Samsung do provide official repair services (Deahl, 2018). Though these companies do provide repair services, exactly what devices and issues they will fix is limited. A tech youtuber *LinusTechTips* had their year-old iMac Pro refused for repair after they accidentally dropped it during transport (*LinuxTechTips*, 2018). They understood that, due to the damage being accidental they could not get a free repair, but even when being willing to pay they still could not get *Apple* to repair their computer. This was further problematic for them because parts for this computer were not available from *Apple* or any third-party sources. This meant that they were given no choice but to discard a £5000 computer because of a cracked screen. From a consumer's perspective the Right to Repair legislation would better enable them to avoid situations like this.

Along with accidental damage voiding manufacturer warranty, some products are coming with 'warranty stickers' attached. These stickers, if torn, will void the warranty of the product and will lock the owner of the product out of repairs and replacements. According to *Ifixit* however these stickers are illegal and are scaremongering to keep consumers away from repairing their products. The organisation state that these stickers are "just crafty trickery from manufacturers" and will hold no weight in the way of stopping the owner of the product from fixing it (Clapp, 2018). Companies that use tactics such as these stickers do so to encourage replacement rather than repair.

Electronic manufacturers not supplying spare parts for their products is a main arguing point for the movement. Repair stores that are not certified by the manufacturer of the product cannot get access to official parts. To combat this, they are buying components from illegitimate sources, thus allowing the possibility of faulty parts being installed into products. The Right to Repair legislation would stop the illegal supply chain for third party repair organisations. Repair specialist and repair store owner Louis Rossmann states that if repair shops could obtain official parts then this would help them lose their negative and unreliable public image (Rossmann, 2019). Rossmann then goes on to say that most repair stores have trouble getting access to unofficial and illegal parts as imported parts may be claimed by border control as they are deemed illegal goods.

Critics of the act say that encouraging more people to repair would slow down the speed to which newer and better products can be made. They suggest that if people continued using the same product and repaired it whenever a problem arised then newer versions of the same product would likely not be purchased. This is likely one of the reasons that tech corporations are lobbying against Right to Repair, so they can continue customer recurring spending.

As well as unofficial repair organisations having trouble getting parts, farmers are also one group of people that are being affected by this problem. Tractor manufacturer *John Dee* is forcing farmers to send their tractors to company certified repair specialists and will not sell any parts (LAURSEN, 2019). This is problematic for many farmers as they

cannot spare weeks waiting for their farming equipment to be repaired. These standstills on their productivity could cost them a lot of money as they require their vehicles to operate a lot of different machinery.

A large portion of electronic manufacturers are being wasteful when it comes to recycling their products. They are avoiding the eco-friendlier option of longer lasting and repairable products to capitalise on the throwaway nature of current day consumers. This also shows how manufacturers have designed their products around outdated policies to force their customers to either seek official repair or replacement. They do this likely to ensure their customers stay in their revenue stream even after they have purchased their product. On the contrary however, a lot of tech companies rely on recurring purchases from their consumer-base, so ending such practices will put a stop to the current rapid growth of the tech industry.

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