



Right to Repair Inquiry

Submission to the Productivity
Commission in support of
Right to Repair reform in
consumer electronics

AUSTRALIAN
DEMOCRATS
Right to Repair Campaign

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INTRODUCTION



The Australian Democrats support strong consumer law and consider effective, and powerful Right to Repair reform to be **essential** especially with regard to electronics, agricultural machinery and other goods. The focus of this submission is on electronics.

It is imperative that the rights of the consumer – as the **owner** of a product – are protected and the best way to do so is with **specific legislation** which provides the **right of repair**.

This submission discusses four key areas that should be addressed; protection of the **consumer**; protection of the **environment**; a clear definition of **ownership**; and **prevention of the monopolisation** of an industry.

When consumers purchase a product, they are protected to some degree against faults but should also be able to repair items **accidentally damaged**, for a reasonable price. One barrier to this is the **physical construction** of products that do not permit repair such as soldering as opposed to socketing. The use of **specialised chips and components** gives manufacturers an effective monopoly and allows them to set exorbitant prices for even the most minor repairs.

Whilst corporations like Apple and Google promote themselves as “green tech” this is largely **greenwashing**. They are responsible for large amounts of e-waste and components that are extremely toxic to the environment.¹ Their business model relies on consumers **“buying more product”** leading to more production using **more resources** and **more greenhouse gas emissions**.

Right to Repair reform should also address **ownership rights**. When a consumer purchases a product – whether a device, agricultural machinery or another good – **they ought to fully own it**. However, with recent issues surrounding multinational corporations, “Big Tech” and “Big Agriculture” have been able to effectively **control these devices**. An example is the **Error 53²** case where Apple effectively bricked/made their users’ phones

unusable after they repaired their products with “unofficial components,” despite them being functional. Apple will not supply their own components.

THE DEFINITION OF RIGHT TO REPAIR IN AUSTRALIA

Information request 1

What would a ‘right to repair’ entail in an Australian context? How should it be defined?

Right to Repair should be defined as the right for a consumer, on their own or through a third party to repair or upgrade the product they own with ease, for a fair price and with access to components required to undertake a work – with an emphasis of **repair or upgrade over replacement**.

Right to Repair in an Australian context, would give the consumer more **freedom and choice** over the repair options. This means that manufacturers should not be able to **monopolise** nor **reject** repairs, and consumers or independent repairers should be able to **undertake these repairs** with relative ease and have access to **the components and tools they need**.

This will result in products that last **longer**, faults or accidents that can be **repaired**; a lesser burden on the consumer; the establishment of a **regulated market** which will ensure higher quality and cheaper repairs through de-monopolisation; a **better planet and** put the power of choice back in the hands of the consumer.

WHAT RIGHT TO REPAIR WILL COVER, THE FOCUS AND FUNDAMENTAL CHARACTERISTICS

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a) What types of products and repair markets should the Commission focus on?

We recommend a focus on **Consumer Electronics** - smartphones; smartwatches; laptops; desktops; monitors; components; printers; headphones/earphones and other consumer electronics because the manufacturers of these products appear to be non-compliant with the ACL or the ACL does not adequately protect consumer rights for these products.

It should examine the consumer repair market, sub-markets, repairers and consumers:

- **Manufacturer Repair Markets;** These are repair markets either dominated or monopolised by the manufacturer. Consumers either ship an item to the manufacturer or attend an outlet. Options are limited and expensive, due to the control manufacturers exert. Manufacturers tend to refuse instrumental minor repairs, such as board repairs, refusing to repair a broken \$10 component, or charging high price as an incentive to purchase a new product instead.
- **Authorised Service Providers;** These are third party repairers, which repair products with authorisation from the manufacturer. This means that they pay a fee or need to obtain a qualification to be permitted to repair a product. ASP programs enable manufacturers to control the market, dictate repairs and set prices - anti-competitive practices. ASP's are highly limited by the manufacturers in the scope of the permitted repairs.
- **Independent Repair;** Independent Repair Shops are important in ensuring that repairs are of high standard, are competitive and fair³. They are not forced to abide by a manufacturer limitations and can undertake essential repairs refused by a manufacturer which include board repairs.

Independent Repair shops are however limited in the repairs they can conduct, due to manufacturer limitations and control over components and they use software to reject functional components installed by what

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manufacturers deem to be “non authorised individuals.” An Independent Repair sector is essential for open trade, a free market and more options for consumers.

- **Consumer Repair;** This is the market where the consumer can purchase components and/or tools to repair their own products. The Consumer Repair market includes sellers like iFixit who sell DIY kits for simple repairs and/or upgrades to the consumer. Consumer Repair is significantly hindered by anti-repairable design, restrictions on components and anti-repair software.

b) Are there common characteristics that these products share (such as embedded technology and software or a high/low degree of product durability), and which characteristics would allow policy issues to be considered more broadly?

Consumer Electronics share a variety of common characteristics which are intended to prevent consumers from repairing their devices including **intentional hardware limitations, software, product durability** and **limited service/supply options**.

- **Intentional Hardware Limitations;** are often used by manufacturers to hinder repair. An example of this is hard-to-access components through the use of special patented/pentalobe screws, heavily glued down or inaccessible components meaning the whole machine needs to be deconstructed.

Common hardware limitations can include **soldered components** that must be melted as opposed to **socketing** where components can be readily attached or removed. This is often done by manufacturers to discourage repair. Soldering essentially prevents or makes difficult, replacing components such as a battery, Random Access Memory, or the Central Processing Unit. Whilst we understand some components need to be soldered onto the motherboard, others can be socketed at little expense to the manufacturer. A case where a component was soldered when it should have been socketed was the flex cable -

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“Flexgate”. It cost several hundred dollars to repair when socketing would have cost just \$15.

Manufacturers **incorporate chips** in their products, such as System Management Controllers(**SMC**) and/or **Security Chips** under the guise of “security”. Whilst they obviously can and should make products more secure, they are being misused by manufacturers to control what can or what cannot go into a machine, even if it is compatible. This would appear to be at odds with the ACL which says *products must come with undisturbed possession so no one has a right to take the goods away or prevent you from using them.*

The ACL must ensure that these chips are regulated in the way they interact with other components in the machine. Indeed, SMC/Security Chip’s like the T2 used by Apple in their new Mac Products, are used to “authenticate” components in these devices. Authentication gives the **manufacturer the capacity to tell the machine to not work with a new compatible component in the machine** – which surely violates consumer rights. Companies like Apple should not be able to reject components which are compatible with the machine or to dictate what can or cannot be installed into the consumer’s machine. Furthermore, Independent Repair Shops and Consumers **should have access** to purchasable supplies of these chips for repairs or upgrades to machines.

●**Intentional Software Limitations;** Manufacturers also utilise **software** to restrict what can or cannot be installed into a machine – and by whom, even if it is a legitimate component by the manufacturer. This was evident in two cases, **Error 53 and ‘BatteryGate’**. **Error 53**, caused by Apple Software, rejected compatible components in iPhones which were installed by third party/independent repair shops. After these components (the home buttons) were installed – the iPhones “bricked” and did not work. This was a software fault, for which Apple receiving a fine from the ACCC. **BatteryGate** was another case where Apple introduced software to slow down iPhones over time. Apple was eventually fined but claimed that it was done so to “extend battery

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life". The lack of transparency and the negative effects it had on consumers were concerning.

●**Product Durability and Lifespan;** Manufacturers have no incentive to design products that last post-warranty. Consumers often have a wide range of design choices but not durability or lifespan. Consumers do not have a right to know if there are anti-repair features or components that are built to fail. Nor are they told it that hardware design may, for instance, prevent adding more RAM.

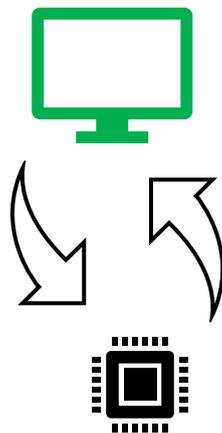
Upgrading as opposed to replacing should be a goal of Right to Repair reform. It is understandable that some Australians purchase a new product because they require something completely new, like a transition from a laptop to a workstation – or for a specific feature or set of features. Right to Repair reform should make it easier for users to upgrade their products, as opposed to purchasing a new one. This can be done through encouraging, or legislating that manufacturers reduce the use of soldering for example – when connecting aspects or components of the device like RAM to the motherboard. Simple, and inexpensive changes like the incorporation of more sockets will undeniably increase the lifespan and repairability of a product.

An example of this could be Fred, who wants to be able to run the new game, "CyborgMonkey2069" but his computer cannot run it because he doesn't have the right Graphics Card and Ram. However, all of his other components are compatible (a good SSD, great CPU and fantastic display). He can replace the entire computer, which would cost him \$4000! Or with strong right to repair reform, he could pay \$400 for the components he needs, avoiding the cost of a new device and reducing e-waste. He could also sell his old Graphics Card and Ram online, to further reduce e-waste. Now, Fred can play CyborgMonkey2069 and his computer will last much longer.

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With Right to Repair reform, Consumers like Fred will only have to purchase a new component, not a new device – extending the lifespan of their product.



Components like the CPU, GPU, RAM, STORAGE and CONNECTIONS should move to more modular computing where consumers, or a technician can repair or replace components. We have heard and disagree with the argument that “manufacturers may disagree with this and may thus leave the Australian market”, however – we will discuss why this is untrue later in this submission – and the avenues of a “Smart Transition to a Repair Friendly Future.”

Inevitable faults that occur post-warranty can be caused by wear and tear, the degradation of the battery and the eventual failure of internal components. For these faults, users should have an option to repair, access to spare parts for a reasonable period of time post-warranty and

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should be able to use third-parties willing to supply reliable components.

In the case of **accidental damage**, consumers should have access to repair options and components for a reasonable time beyond the warranty, and to components by third parties in absence of “legitimate components.” Repair options should not be monopolised by the manufacturer and there should be no barrier to Independent Repairers accessing components, tools and means to repair products.

Policy around right to repair for electronics could be extended to the growing number of products that now have IT components – everything from household appliances to driverless tractors and inventory control.

c) If there are particular products that the Commission should focus on, what are the unique issues in those product repair markets that support such a focus?

Consumer electronic product repair arguably has the most unique issues. The products have limited durability and upgradability, there is limited access to components and market monopolisation is high. These products are costly, have very high levels of penetration, and consumers are now dependent on mobile phones, tablets and/or computers for their daily lives.

Manufacturers are making their products harder to repair. There are no minimum standards or requirements such as removable components, and easier access. They control what components can be distributed and, whereas consumers are given the right to “spare parts” under ACL, manufacturers including Apple, tend to circumnavigate these and consumers cannot access these components.

Examples of these unique issues are presented as case studies below:

Faults

Issue: Flexgate; Apple Inc.

Status: Current and Ongoing in Australia

Background:

After an unspecified period of use, the displays of certain Macbook Pro Products fail due to a fault in the device. This defect is intrinsic to all Macbook Pro's 13" and 15" of the model year 2016 and 2017. This failure leads to the development of a "stage light effect" or horizontal lines across the bottom of the screen, with an eventual failure of the screen – as shown below.



Source: *The Verge*

The Models Affected Are:

- *MacBook Pro (13--inch, 2016, Four Thunderbolt 3 Ports)*
- *MacBook Pro (13--inch, 2016, Two Thunderbolt 3 Ports)*
- **MacBook Pro (15--inch, 2016, Four Thunderbolt 3 Ports)**
- **MacBook Pro (13--inch, 2017, Four Thunderbolt 3 Ports)**
- **MacBook Pro (13--inch, 2017, Two Thunderbolt 3 Ports)**
- **MacBook Pro (15--inch, 2017, Four Thunderbolt 3 Ports)**

Italics indicate the model is eligible to be repaired free of charge

Red indicates that the model is not subject to a service program

The issue was caused by a critical design flaw, which was the manufacturers responsibility. The Flex Cable connects the display of the device, to the logic board on the computer. It was **too short** which causes it to stretch and get damaged over time when the device is opened/closed with normal usage. This means messages from the logic board cannot reach the display, causing such issues as **stage light effect, horizontal lines** and resulting in a **dead screen**. The replacement of the cable would typically be inexpensive, however Apple decided to solder the cable to the display resulting in the entire display

needing to be replaced to fix the issue. The problem takes some time to develop, and most cases are in the post-warranty period. The charge to repair was \$750 to \$1,000⁴ despite the cause being a defect in manufacture. The shorter cable appears to have been a cost-saving measure (approximately 5 cents cheaper for the manufacturer).

[HERE](#) is a link to a video by iFIXIT describing the issue of Flexgate. It shows this is not an **isolated issue** as claimed by Apple. It **affects all products described above**.

Who Did it Affect?

It affected anyone who bought the laptops **sold in Australia**. Consumers who understand the **consumer guarantee** and tried to use it, were told by Apple staff that the guarantee lasts no more than three years. despite there being no specific time period specified in ACL, and the device/s can initially cost several thousand dollars. The options for consumers were to give up **and purchase a new product** or to **take Apple to the NSW Civil and Administrative Tribunal (NSW ONLY)** to get their product repaired.

It is surely reasonable for a product costing \$1,500 to \$7,000 to have a life expectancy of more than 3 years under the Consumer Guarantee. The product in this case is clearly not of acceptable quality, not fit for its purpose, and spare parts and repair facilities are not available for a reasonable time after purchase. The Consumer Guarantee says consumers are entitled to a replacement or refund for major failure and for compensation for any other reasonably foreseeable loss or damage, when the goods (i) has a problem that would have stopped you from buying the item if you had known about it, and (iv) doesn't do what we said it would, or what you asked for and can't be easily fixed. The question here is why the ACL did not protect consumers.

What was done about it?

The issue is ongoing, with four out of the six models still not covered in a service program. Apple discreetly added 2 millimetres to the flex cable to

resolve the issue in their 2018 product⁵, but still took no responsibility for the flaw. Following lawsuits, they then unveiled a service program but it only covers the two 13" models (the cheaper version of the devices), leaving 4 models out of the program and consumers must pay the repair costs. Apple claimed the problem affected a limited number of devices however, this claim has not been substantiated and it would appear the flaw is systemic to all 2016 and 2017 Macbook Pro's.

Faults Conclusion:

Whether it's a screen, cable or battery issue the ACL should enable users to repair the part of the device which is faulty – as opposed to replacing an entire portion of the device, which is an economical and environmental option. It should also ensure that manufacturers pay for the costs of repair even in the post-warranty period if the issue is due to a **systemic fault in the device**, which will encourage manufacturers to make their products more **repairable** and **reliable**.

Practices

These are case studies and examples where Manufacturers have participated in practices which discourage repair, or deliberately prevent it from occurring in the first place. These practices include, but are not limited to:

Soldering Components; As discussed earlier, this is where the manufacturer solders components making it incredibly hard to remove, replace, disconnect and reconnect broken/old components.

Packing; Manufacturers may require that components which don't need to be removed, have to be removed to access a certain component in the machine. In many cases this is not to preserve space, but rather an intentional method of making repairs incredibly difficult – requiring the full or partial disassembly of a device.

Specially Designed Screws; Manufacturers are moving towards specialised, and often patented screws in their products. This makes it harder for consumers to get into these products.

Control Over Supply; Manufacturers control the supply of components to make it difficult for consumers to repair their devices. They also withhold Board Views to make board repairs more difficult for independent repair shops – at times forcing consumers to replace the entire board.

Intentional Disruption of Repair

Design or software is intended to either prevent repair, or effectively “punish” users who decide to repair their devices. Three Case Studies of a manufacturer incorporating software to repel repair on their devices are listed below in addition to a general overview of design decisions:

Issue: Error 53; Apple Inc.⁶

Status: Solved, ACCC Lawsuit – Good Example.

What was the issue?

In 2016, Apple users reported their devices “bricked,” which means that these devices were put in a non-functional and vegetative state after a third-party, or independent repair shop conducted a repair to the home button. These repairs may have been conducted due to accidental damage or the home button being worn out. Once these compatible components were installed, the iPhone’s worked until a software update was released. This system software on the iPhone “rejected” the components and resulted in iPhones not working.

This not only raises an issue regarding the repairability of the device but regards the extent of which manufacturers can assert authority over a device once it has already been sold. With regard to the rights of the consumer - it must be emphasised that the consumer owns the device - following the sale of the device, and that the extent of which a company can assert control over that device should be limited.

What caused the issue?

The issue was caused by software introduced in the iOS 9 update - which Apple claimed was to protect customers security. When the home button was repaired by a "non-company" or "unauthorised" actor, the software rejected the component and prevented the phone from working as intended – leaving it in a vegetative/unusable state. It is evident that this was introduced as new software as users who previously installed new home buttons had phones that worked as intended, until they updated their devices. This issue is caused by two things in particular:

1. Apple's tight control over their product repair ecosystem, by not distributing their "authorised parts" to third party suppliers.
2. Deliberate or "unintentional" (claimed by Apple) software that "rejects" certain components following a repair – effectively rendering a device useless.

Who did it affect?

The issue affected Australian and International Consumers who repaired their iPhone home button following the release of the iOS 9 update.

What was done about it?

Apple released a software update following outcry and legal action, iOS Version 9.3. Apple was fined \$9 Million dollars by the ACCC.

What could Right to Repair reform do About it?

Right to Repair reform could help prevent manufacturers abusing their control over hardware through software on their devices by having severe penalties for those that decide to do so. A code of practice should govern how manufacturers can "control" the products they have already sold, to ensure that their influence is minimal and to ensure that the end user is protected. If a component works, it should not be rejected.

Furthermore, Right to Repair reform could force the company to sell genuine components to third parties. This will ensure that repairs will be undertaken properly, will 100% work with the device whilst also ensuring

that repairs are undertaken in a free market - without monopolisation by the manufacturer, which will ensure cheaper and higher quality repairs.

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Issue: Battery Replacement Issues; Apple Inc.

Status: Current.

What was the issue?

Currently, following the replacement of the battery of Apple products regardless of the new battery is genuine or not genuine - Apple issues a software warning to the user to service their battery immediately. Whilst this is a minor issue, it does mislead consumers.

What caused the issue?

Apple software deliberately asks the user to “service” the device, following a repair by an independent service provider regardless if the battery was an Apple Genuine battery or not.⁷ In addition, whilst the issue does even highlight genuine apple batteries as not genuine - another issue is, the unique chips in batteries. Manufacturers are incorporating more and more chips in certain components and whilst they serve a purpose (in this case to manage battery life and performance), they are often misused by the manufacturer to control who can repair the device and what components are compatible.

Who does it affect?

Consumers, who use their products which have been repaired by any non-authorized Apple repair shop, any independent repairers that replace the battery of an iPhone.

What was done about it?

Nothing has been done about it so far. This issue should be dealt with immediately, as it may be abused by manufacturers in the future to assert their control over the repair ecosystem of their products.

What could Right to Repair reform do about it?

Right to Repair reform should ensure that manufacturers cannot establish a monopolisation over the components or repair of their devices. Apple and other manufacturers should NOT be allowed to display misleading messages on the basis that the repair was not carried out by an “authorised apple service provider.” Manufacturers like Apple should be required to, sell and distribute components like legitimate batteries to consumers and independent repair shops. Whilst we understand and disagree with the “Poor Quality Batteries” defence manufacturers use, “bad quality” batteries will **continue to used regardless**, and the only way to ensure the quality of battery repairs is by companies like Apple **providing** independent repair shops with **genuine components**.

The “but bad batteries” argument is weak as most batteries, even if not genuine, do not “spontaneously combust” as they often pass vigorous tests and meet expectations, as reflected through the high quality components of iFIXIT and other online retailers. Ironically, iFIXIT tools are used by Apple (as spotted in a promotional Apple video in the background), reinforcing their reliability.

Standards governing batteries should be strengthened, and restrictions on third parties developing compatible batteries for major devices be lifted if they meet these standards. Whilst “battery controller chips” are good and effective at managing batteries, these components should not be controlled by the manufacturer - and third parties and consumers should have access to them. Including special chips to deliberately restrict the compatibility of components violates the rights of the consumer and should be regulated.

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Issue: Intentional Slowdown of Devices; Apple Inc.

Status: Recent, already solved. Resulted in lawsuits.⁸

What was the issue?

Apple was deliberately slowing down older iPhone devices, through discrete software updates, often making them extremely slow, and

owners did not know what was wrong - causing many to purchase new devices instead of repairing their devices.

What caused the issue?

The lack of transparency on the Manufacturer's part meant users did not know what was going on and it was impossible for them to change this limitation on performance.

Who did it affect?

It affected users with old iPhones, who used them enough for the battery to degrade to a percentage of original capacity, decided by Apple. Phones with these batteries were not faulty and the batteries still worked despite not having a short battery life.

What was done about it?

Apple was forced to pay over \$500 Million USD to iPhone owners in the US. Apple funded a battery replacement program and software monitoring to alert the user to the need to change the battery, and the option of software enhancement of battery life - a welcome change.

Manufacturers tend to control the distribution of many components in their devices including unique chips, such as the Apple T2 chip to either prevent or disincentivise repair⁹. Apple also control the supply of chips so once they break, **consumers cannot repair them as the chips are not supplied**. This can force consumers to either pay a large sum for the replacement of a huge portion of the device (for example the whole motherboard) for over \$1000AUD¹⁰, as opposed to a \$3 component with labour.

Misleading Service Programs. Some manufacturers offer "extended warranty programs" which often confuse or mislead users over their rights in order to persuade them to purchase services (or part of a service) which should be provided under the ACL. Sometimes manufacturers mislead users about their repair options, **for example replacing a whole logic board instead of a chip**. In many cases these "repairs" cost more than product is worth. An investigation by CBS in America,

uncovered Apple requesting an expensive motherboard replacement¹¹ for a fault which was caused by a minor pin misplacement which could be easily moved and repaired by a tool like tweezers, for free.

Right to Repair laws should require manufacturers to be open about repair choices, and give access to components without restrictions posed by “authorised service programs” or contracts. This will ensure that third-parties can effectively carry out repairs which include board level repairs. Board level repairs, for instance will dramatically reduce the cost of repair for consumers, and the availability of more components to the consumer/repair shops will permit for more repairs to be conducted to the board, reducing the need to replace a significant portion of the machine - this has both positive economic impacts for the consumer, and positive impacts from the environment. Furthermore, this may also entice the manufacturer to carry out those repairs as well. Furthermore, further education of consumer law and rights with consumers themselves, through visually attractive graphs/charts/signs at the Point of Sale is recommended. *This will be discussed in further detail, further into the submission.*



When we consulted our members, we asked about the lifespan of consumer devices. A majority of them when asked, suggested “aren’t they made to break down right after warranty,” and if asked if they would repair a device past warranty, the most common response was “no, it’s more expensive to repair the thing than replace it.” This shows a general distrust in the community with current consumer law, and strong Right to Repair legislation will revive consumer confidence.

[Text/Call Survey Conducted January 2021]

THE NEED FOR CONSUMER GUARANTEE REFORM

Information request 3

- a) **Do the consumer guarantees under the ACL provide adequate access to repair remedies for defective goods? If not, what changes could be made to improve access to repair remedies? Are there barriers to repairing products purchased using new forms of payment technologies, such as ‘buy now pay later’?**

The consumer guarantees under the ACL do not provide access to repair remedies for defective goods, to the extent which is required for consumer protection. This is because the “consumer guarantee” is very vague, and manufacturers effectively have control over the period that it covers and can limit the repairs that can be undertaken. The consumer guarantee limits a consumer’s ability to seek third-party options of repair, as these may not be subsidised or may affect existing warranty conditions. **A key issue with the consumer guarantee is the time period it covers.**

“Buy Now Pay Later” schemes, do seem to accommodate repairs/ replacement of devices and don’t seem to continuously charge users once they have returned a product. However, changes to the ACL should be made so that where they fail to accommodate replacements, a refund is required. Payments made by consumers should be refunded in the case of replacement, including interest paid on a plan. Once the product is refunded any obligations on the consumer in the contract should be cancelled.

The Following Changes are suggested:

1. Set minimum standards for product repair.

This should ensure that products which are “destined to fail” in the post-warranty period, or unrepairable products cannot be sold in Australia.

We cite the example of Flexgate – see page 10.

2. Restrict or Ban the sale of Consumer Electronics which cannot be repaired in Australia

3. Define the Consumer Guarantee Period

The Consumer Guarantee Period should be defined for systematic faults that will lead to eventual failure and these **must** be subject to a recall or a repair program.

4. Introduce Recalls for electronics with faults that occur after before and warranty

Where the supplier is responsible for a critical fault, that even after the warranty period - that Fair Trading be able to recall these items, forcing companies to offer consumers a full refund in the case where the fault is unreparable, or for free if only the manufacturer can repair it.

b) Is the guarantee of available repair facilities and spare parts effective in providing access to repair services and parts? Or is the opt-out clause being widely used, making the guarantee ineffective?

The guarantee of available repair facilities and spare parts is especially ineffective for consumer electronics. The Opt-out clause is widely used by manufacturers of laptops, computers and smartphones for components like specialised chips.

Many chips are withheld by the manufacturer, restricting the repair options of a user and often forcing them to purchase a new machine, or pay for an unreasonably expensive repair requiring a total replacement of a large portion of the device.

The guarantee of spare parts is ineffective as manufacturers, are not obliged to supply these parts to independent repair shops, nor consumers.

For the guarantee of available repair facilities and spare parts to be effective the repair industry must be regulated to reduce monopolisation. Independent repair shops and consumers should have access to components, manuals and board views. This will lead to a

competitive market, and enable more targeted repairs, at a lower cost to the consumer and the environment.

c) Should consumer guarantees seek to balance the broader societal costs of remedy choices (such as the environmental impacts of replacements) with consumer rights, and if so how? For example, should repairs be favoured as a remedy?

Yes. Repairs should be favoured as a remedy as they reduce the amount of e-waste as well as the financial burden on the consumer. The world has finite resources, and the endless cycle of replacing new products with old products has a major, **detrimental impact on the environment**. When products are replaced, they are often sent to landfill and deteriorate into toxic and carcinogenic chemicals which spread into the environment and ecosystem. Indeed, e-waste is a serious in Australia and abroad (*discussed later in this submission*). Whilst many OEM's have a "recycle" program for older devices, this does not go far enough as many components within the device, cannot be recycled and the process of recycling produces a vast amount of pollution and energy. Recycling isn't exactly a clean process either – by-products and some toxic resources which cannot be recycled have to be dumped in landfill.

For **repairability** OEM's should be obliged to allow defined repairs. Where a consumer returns a damaged device which can be repaired such as board level repairs, this should be encouraged.

d) Are consumers sufficiently aware of the remedies that are available to them, including the option to repair faulty products, under the ACL's consumer guarantees?

Consumers are not aware of the remedies available to them, and often believe that their rights are limited by the warranty period and sign up to "extended warranty programs", referred to earlier. **More information and education would assist consumers and enforce guarantees.** This could be:

- 1. An Infographic at the Point of Sale**, which explains the rights of consumers and the difference between warranty and the Consumer Guarantee. The infographics should be **engaging** and **clear**, not legal jargon, and should be displayed in large font which is easy to read and understand. Language should be at primary school level.
- 2. A proper and clear notice** of what the extended warranty covers and how, if at all, it adds to the rights granted by the ACL. It should avoid legal jargon and be easy to understand.
- 3. Education Programs in Schools** to inform students of their rights under the ACL, delivered in an engaging/memorable way.

THE NATURE OF REPAIR MARKETS IN AUSTRALIA

b) Is there any evidence of a difference in quality, safety or data security between authorised repair networks and independent repairers? Are there ways to address concerns around quality, safety or data security while promoting a vibrant independent repair market?

There is limited evidence of a difference in quality, safety or data security between authorised repair networks and independent repair networks. All repair options are vulnerable to mistakes. However, Right to Repair reform should improve quality, safety and data security across the board. Whilst there is no evident difference in quality between Independent Repair Shops and manufacturers our experience suggests that Independent Repair delivers higher quality repairs at lower prices compared with OEM's, provided they have access to the right tools. In any case, comparisons are not possible in some cases because OEM's do not offer these repairs and Authorised Service Providers are not allowed by OEMs to do so.

Quality, safety and data security are likely to be improved by competition and better consumer choices that can challenge the current monopoly in electronic repairs.

Key areas of concern for OEMs discussed:

1. Counterfeit Screens in iPhone's

We understand that the Commission has raised the issue of Counterfeit screens in iPhone products, and we acknowledge this as an issue and a problem but it is largely **due to the absence of legitimate components being distributed to independent repair**, and the astounding costs of these repairs to consumers.

In the absence of legitimate components, Independent Repair Shops still do repairs - and for the most part, consumers are satisfied.

Manufacturers should not have total control over the sale of every component in the machine, particularly if its common like a battery.

When official manufacturer parts are available to independent repair shops and consumers, safety concerns are likely to be eliminated. It is possible for "official parts" to be verified by a sticker or QR code. If unofficial parts are not faulty and are from reliable sources, they should also be allowed to be sold. The availability of unofficial parts, of even or better quality, are likely to improve competition.

Manufacturers should distribute components to all independent repairers, not just Authorised Service Providers. Even if a product uses unofficial parts where official parts are available, the device should not limit the user's capability to use the device through software.

We do not agree with OEM arguments that Right to Repair will lead to dangerous repairs, rather it would alleviate concerns of counterfeit products and improve quality provided manufacturers supply independent repair shops and consumers with legitimate quality parts, instructions and more repair friendly devices. Right to Repair reform could require unofficial components to be subject to safety tests or standards. This would better balance the needs of consumers, Independent Repairers and the Manufacturer.

2. Battery Issues

OEM's often argue that unauthorised batteries are "faulty batteries" which are destined to "spontaneously combust," leading to a claimed risk imminent risk of death and destruction. This is not supported by evidence of recalls and, in the case of Galaxy Note 7, the fault lay with OEM batteries.

Many unofficial batteries are sourced from reputable retailers, like iFixit and are fully compatible and safe for use in products.

There is no "unofficial batteries bad" and "official batteries good" system. Batteries produced by the OEM have similar levels of success and failure. Manufacturers should supply independent repair shops and consumers with official battery components. *But wait... if third party batteries are as good as official batteries, why do you say we should supply official batteries?* We say official batteries should be supplied as they completely eliminate any potential dangerous batteries in the market (even though they are a microscopic proportion of those sold, and are often banned/strictly scrutinised). This can be done through Right to Repair policy which forces manufacturers to supply these components on the market. Thus, "Unofficial Batteries" are often by safe and reputable outlets like iFixit. These batteries will be sold regardless if we adopt Right to Repair reform. There are indeed faulty batteries, however they are used by independent repair shops and consumers in extremely rare circumstances. This is due to regulation concerning the quality of these products, and the scrutiny of these products/suppliers online and in the press.

c) Are there available examples of the contracts between OEMs and authorised repairers? Do these contracts limit effective competition in repair markets (such as by limiting the number and reach of authorised repairers or requiring authorised repairers to not be authorised by a competing brand)?

We do not have any examples of contracts. However, we understand they are restrictive and determine what an Authorised Service Provider can or cannot do. Authorised Service Providers are often limited by what kind of devices they can repair and are restricted in what other devices they are allowed to repair, but the degree varies. To become authorised, repair shops must apply within a specific timeframe, agree to a contract and get qualifications from the OEM which are often more of a rubber stamp than a course. Authorised Repairers must report to OEMs regarding efficiency, the repairs they've completed and their customer databases, highlighting issues of control, and privacy.

Often, these programs are at a cost to the participating repair shop and a sign of OEMs taking Repair Shops "hostage" in exchange for a binding agreement which restricts their ability to repair products, and forces third-parties to enrol in these programs for limited components required for repair. An example of this is the *Apple Authorised Service Providers* program which costs money for third-parties to register, offers limited components and restricts the ability of those independent repair shops to conduct repairs to areas like motherboards through binding contracts.

These "schemes" should be **regulated**, and all components in the device needed for a repair **should** be available to all **third-party or independent repair shops** as well as **consumers**.

d) Are there specific examples or other evidence of practices by OEMs or their authorised repairers that create barriers to competition in repair markets?

Yes. The two primary ways OEMs in association with authorised repairers create barriers to competition in repair markets are through

Restrictions on Components and **Software Limitations**. See pages 4 & 5.

e) What is the relationship between the intensity of competition in the primary product market and the risk of consumer harm from a lack of competition in repair markets? Can competitive primary markets compensate for non-competitive repair markets?

The intensity of competition in the primary product market has reduced the scope for repairing, for example smart phones which compete on thinness but this prevented the use of removable batteries.

To improve the repairability of products, **a repairability rating scheme** as adopted by the European Union,¹² would create competition and give consumers more choice in sustainability.

f) Are the restrictive trade practices provisions of the CCA (such as the provisions on misuse of market power, exclusive dealing or anti-competitive contracts) sufficient to deal with any anti-competitive behaviours in repair markets?

The restrictive trade practices provisions of the CCA **are not sufficient to deal with anti-competitive behaviours in repair markets**.

As technology evolves, OEM's find new ways to assert control and dominance over market power, through exclusive dealing which is not covered by provisions of the CCA.

OEM's are manipulating hardware and software to prevent third parties, or Independent Repair from doing some repairs. For example, **Macs with the Apple T2 System on Chip** require the 'Apple Service Toolkit 2 (AST 2) System Configuration Suite' to complete many repairs.¹³ Unfortunately, this repair software is restricted to Apple Authorised Service Providers (**Authorised Repair**). Due to this, Apple and other OEM's are effectively using a combination of hardware and software to restrict competition in the repair industry. This is done by **requiring specific locked software** which is only available to certain authorised companies to undertake repairs – which would otherwise not

require such software. OEMs often charge exorbitant prices to Authorised Repair for this software which essentially, forces many Repair Shops to enlist in these “Authorised Repair Programs” where they serve the OEM’s.

The presence of **Authorised Repair Programs** in Consumer Electronics, and **Dealerships** (in the example of Automotive and Agriculture) can restrict the options of users for repair, through **refusing certain repairs**, the control of component supply and restrictions on what Authorised Repair may or may not do. Furthermore, at times there may be the establishment of a set price – controlled by the Manufacturer across **Authorised Repair Programs** for some repairs – which prevents a competitive market from emerging.

g) What policy changes could be introduced if there is a need to increase competition in repair markets and improve consumer access to, and affordability of, repairs?

Recommendation 1; Require OEM’s to distribute and sell legitimate components for their products, which can be distributed to third parties and consumers.

This will bring competition in the marketplace, restrict the control manufacturers assert over the products and providing third parties with legitimate parts for repairs. This **will not** infringe on copyright as these components are often only compatible with the manufacturer’s produced product - and will not be able to be used in other products. If rival OEM want to “deconstruct” chips – they can readily do this under current arrangements.

Recommendation 2; Prevent Monopolisation of the right to repair industry.

Recommendation 3; Make it illegal for manufacturers to install malicious software which prohibits third-party or independent repair from occurring. If special software is required to conduct a repair, like the “Apple Service Toolkit 2 (AST 2) System Configuration Suite” – independent repair shops and consumers should have access to this software.

Recommendation 4; Regulate Authorised Repair/Service programs offered by OEMs

Many OEMs offer “Authorised Service Programs” but these programs force third party repair shops to comply what are unreasonable rules and procedures. These programs should only serve as a “tick of approval”. Independent repair shops should not be required to enlist in a program by the manufacturer so that they can repair devices at the explicit direction of the manufacturer.

Recommendation 5; Require OEMs to release board views.

OEMs should release the schematics of the boards on their devices, to enable third party repairers to repair them. These do not infringe on intellectual property, as they just display the interactions between various components – which are unique to a specific device and rival OEM’s cannot simply copy/paste these schematics either. Without the release of Board Views, repairs of the logic board are often delayed, made impossible or harder. Furthermore, manufacturers should not be able to sue those who provide board views of their products to consumers or Independent Repair.

Recommendation 6; Protect those who sell repair products to consumers and enable consumers to access these remedies of DIY repair.

Information request 5

a) To what extent do current IP laws already facilitate repairs by consumers or independent third parties (e.g. the spare parts defence under the Design Act)?

Current IP laws already facilitate repairs by consumers or independent third parties, **to a limited extent**. This is due to the fact that many components are still unavailable to consumers. The spare parts defence under the Design Act should be changed to include all components, such as chips within consumer devices. Currently, independent third parties and consumers are limited by repair options and OEMs can refuse to provide spare parts for areas they consider should not be repaired – for example, components on the Logic Board which may include transistors, or larger components that include batteries¹⁴ which are not supplied to consumers.

OEMs also abuse their IPs through **Supply Chains**. An example of this is where components in the motherboard of a Macbook are manufactured by Texas Instruments – and the OEM(Apple) ensures that the supplier is in an exclusive agreement to only supply the OEM with the components/transistors and nobody else. These components often have minor design changes which require Independent Repair or third parties to use them. Without these components, repair cannot occur. **Right to Repair reform needs to close IP loopholes, especially around the supply chain of components.**

Current IP laws are also misused by manufacturers through conditions they apply. For example, “spare parts” that are supplied by OEMs, are often to Authorised Repairers/Authorised Service Providers whom are in a binding contractual agreement with the OEM. Access **to these spare parts and components should be unconditional.**

b) Are there any aspects of IP laws where consumers’ rights with respect to repairs are uncertain?

Software. OEM’s insist that for IP reasons, users cannot access, tamper with, nor edit the software on their own devices and neither can others who are not in Authorised Repair Programs or not acting on

behalf of the OEM. This prevents them from being able to do repairs altogether. As evident with the *'Apple Service Toolkit 2 (AST 2) System Configuration Suite'*¹⁵ manufacturers install software which is protected by IP laws which would otherwise not be required to perform the repair. Indeed, **manufacturers abuse IP laws to incorporate software which is unnecessary for repair and/or restrict access to this software required for repair.**

Hardware and Manuals. OEMs use IP laws to prevent access to certain chips or components. Without these, repairs cannot take place. OEMs are also refusing to distribute repair manuals on the basis of IP or they restrict access to third-party manuals on the same basis. Manuals for should be available to consumers and Independent Repairers. They do not interfere with IP. Third-parties who make manuals that explain how to repair a device should be protected from action by an OEM who refuses to supply an official manual. Independent Repair shops need access to Board Views which are diagrams essential for board repairs.

c) Do current IP protections (e.g. intellectual property rights, technological protection measures, end-user licencing agreements) pose a significant barrier to repair in Australia? If yes, please comment on any or all of the following:

Current IP protections **do pose a significant barrier to repair** by protecting chips, transistors and other components; manuals, board views and schematics; and an inadequate Spare Parts defence which has been circumnavigated by OEM's through Authorised Repairers or largely ignored.

The impacts of these barriers on third party repairers and consumers are significant. They result in limited repair options for Independent Repairers and consumers, where a repair would otherwise be relatively easy. For instance, the replacement of a small chip would be inexpensive – however, if the OEM refuses to supply that chip – the consumer may need to pay a large sum of money for a new machine. In cases where IP law restricts access to components – Independent Repair Shops may need to other components which whilst compatible and functional, may not meet the manufacturer's standards, reflecting

on the point that IP laws restrict repair options, and also lead to issues with the quality of repairs. Consumers may also have limited choices and may be forced to repair at the OEM.

Options for reducing these barriers and their associated costs and risks include; Elaborating and expanding upon the Spare Parts Defence; Removing IP Provisions, or creating exemptions to IP Provisions which enable manufacturers to withhold components needed for repair; Mandating that manufacturers distribute Repair Manuals and Board Views; protecting third-party Independent Repair Distributers(manufacturers of guides, toolkits etc) from OEM IP lawsuits and perhaps making IP law more specific to prevent loopholes.

d) In what ways might government facilitate legal access to embedded software in consumer and other goods for the purpose of repairs? What are the pros and cons of these approaches?

The Government might facilitate legal access to embedded software in consumer and other goods for the purpose of repairs through opening up avenues for third-party and consumer access. Often, these repairs require software which when used, does not violate IP law nor reveal company secrets – as the dedicated purpose of this software is to repair the device. Government could facilitate legal access to embedded software by providing the repair/analytical tools used by the manufacturer, require that companies distribute this software upon request to Independent Repair Shops and Consumers at no or reasonable cost.

We understand that some analytical tools may cause harm if in the wrong hands, which is why these specific elements of software tools are exemptions to what we proposed, and these specific tools should be either controlled by the OEM or require a highly regulated licence to protect privacy and safety. **This exemption must be specific and should not be allowed to be abused by manufacturers to not provide access to these tools at all.** These exemptions include tools which enable a manufacturer to use software to bypass a device's security/password or access private information regarding an account.

In cases where these restricted tools are packaged with other tools that are required for repair, the government should require that the tools required for repair are provided separately to prevent OEM's from using this as a loophole.

Information request 6

a) What evidence is there of planned obsolescence in Australian product markets? Do concerns about planned obsolescence principally relate to premature failure of devices or in them being discarded still working when more attractive products enter the market? Add. Info Pages 7-8

There is evidence of planned obsolescence in product markets.

There are four major components; **Hardware, Upgradability, Software and Repair Options.**

In the 20th century, products like consumer TV's were built to last for decades and required occasional repairs or upgrades which could be installed by a technician which would extend the lifespan of the device. Whilst we acknowledge times have changed, we disagree that a period of 3 years or so is an acceptable lifespan for a consumer device – especially where repair or upgrade options could be available.

Right to repair reform could mitigate or eliminate practices of intentional obsolescence. The **European Union** is in the process of redefining product ownership, from "repair and replace" to "upgrade" and Australia could learn from this.

Restricting the **upgradability** of devices can lead to premature failure of devices, and preventing **upgrades can stop people matching** more attractive products on the market. Examples include soldering RAM, CPU's and GPU's to prevent users from upgrading these components. This is because often with consumer electronics, users get a new machine due to one or two major upgrades. If users can add these upgrades to their existing machine (like additional RAM or an upgraded Graphics Processing Unit) they will not need a new device and will save money.

Manufacturers design their hardware in ways that prevent both upgrades and repair for minor faults. These intentional anti-repair decisions can shorten the lifespan of a product drastically, particularly if the product fails after the warranty period. This is due to the fact that if a repair costs 30-70% of the original product cost, many people are incentivised to buy a new product instead - when the repair could with R2R reform could only involve a \$5 component and labour.

Planned obsolescence also concerns products that are built to fail **after the warranty period has expired** due to hardware limitations. An example of potential hardware planned obsolescence are devices which are built with components that cannot sustain ordinary use for an extended period of time – like the flex cable which caused Flexgate(pages 11-14).

Products should not be built to fail and should remain in a useable condition for long after the warranty period. Product repairability is a key component of planned obsolescence because devices with a repairable minor fault causing a major issue can potentially last years, or even decades longer than a product which is unrepairable, forcing consumers to purchase a new product.

OEMs limit repair options - a key component of planned obsolescence. This is seen with many electronics which fail post-warranty, where the inability to repair those devices due to difficult repairs which exceed the worth of the device – or no components available. Products like the **Microsoft Surface Laptop 2** are unrepairable and destined to fail due to non-removable components like the battery.¹⁶

Software on a device can dictate how long the device can be used for by the consumer. In particular, smartphones which are fully functional may be limited by what software version the manufacturer decides for them to run. Remaining on old software on a new device results in security risks and features that become unsupported. Furthermore, software also can deliberately “slow down” phones as they age – which was the case in the intentional slowdown of apple iPhones(page 17).

b) How can the Commission distinguish between planned product obsolescence and the natural evolution of products due to technological change and consumer demand?

There are many **reasons why people purchase new devices**, however – often, these are minor like a need for more storage or for graphics or speed. Most “technological change” is minor on a year-to-year basis and the inability of consumers to upgrade essential parts of their devices, like ram, is what often means they purchase a new product.

Old products are still useful, and even when major technological shifts occur – can be used for other purposes – or resold. Just because a new device has more features, does not change the operability of the phone – however deliberate software or hardware limitations do. Evidence of software planned obsolescence was the Error 53 Scandal involving Apple Inc, and evidence of planned hardware obsolescence include the Microsoft Surface Laptop 2 which was built to fail as it was not able to be repaired, with a soldered battery. This means that when the battery dies, so does the device. Some products are built to fail, and this is different to technological change. Products should be built to last for their intended purpose and not just for a “3-year cycle”.

Other products work perfectly fine, however are deliberately limited by either software which reduces the performance of the device – or leave it vulnerable to security issues from a lack of support. For example, old phones still work – still make calls, and emails. However, without software updates – users are forced to purchase new products as old apps become incompatible, security issues and in some cases are unable to purchase new devices.

Consumer products should be supported by software updates for an extended period of time so old products are still usable. Whilst new updates may bring features that may slow down older devices, manufacturers should regardless continue to support the security or

general function of the device/s through minor updates – which is not difficult to do. In the case where the manufacturer cannot provide updates nor service, consumers should be able to seek alternative open source avenues for software on their devices – like Linux for example which works very well on old devices, however, currently OEMs limit what consumers may use as the operating system on their phones and refer to the installation of other operating systems as a case of “jailbreaking.” Jailbreaking which does not result in the distribution of pirated content, nor malware but rather results in the legal installation of new, more compatible operating systems on devices to lengthen the lifespan/increase the functionality/compatibility of the device **should be allowed.**

This should occur especially in cases where OEMs end official support for the device. However, we do accept that, in the case of installation of unofficial operating systems during the warranty period which may cause phones to perform tasks which they were not built to do, warrant termination of warranty. However, OEMs should not be able to restrict/deny the consumer their right to use their own devices and, in the cases where third-party operating systems are used, should provide consumers with the option to repair..

Misleading marketing in the promotion of new products is a factor in obsolescence. This works through visual appeal, software and the promise of faster speeds. However, after 3 years or so of usage the device becomes slower than it was originally thanks to software updates that deliberately slow down these devices over time. Manufacturers use this, in combination with advertising, to reduce the lifespan of a product and get consumers to purchase a new one.

The inability to repair a device is a key part of planned obsolescence.

c) How does planned obsolescence affect repairers, consumers and the broader community in Australia?

Cost, lack of components and limited options for repair are frustrating for both consumers and repairers

UNSW University Industrial Designer Dr. Miles Park, says the three leading causes of product obsolescence are 'matter, mind and money.'¹⁷ He stresses that some repairs are uneconomical and thus, incentivise consumers to purchase a new device instead of repairing their existing one. He argues that a key component of planned obsolescence is the need for spare components, which he commends the EU for mandating. Dr Park points out that in this area, Australia is lacking. He suggests:

"There's proven design and engineering strategies that enable you to produce longer life products. For example, you might offer obvious non-tool entry points for opening a product and replacing components, or you might design a product to be modular"

It is not just the issue of what consumers can repair themselves. Independent Repair shops can find it difficult to repair products that are intentionally designed to keep people out or have components which cannot be removed– as seen with the Surface Laptop 2.

d) What measures do governments currently use to prevent planned obsolescence or mitigate its effects (in Australia and overseas)? How effective are these measures?

We know of no current measures in consumer electronics to prevent planned obsolescence. Whilst Australian IP law does possess a "spare parts" clause, as discussed earlier, this is widely ignored.

The European Union has introduced a repairability and lifetime ratings scheme for all products¹⁸ and is extending an eco-design law to cover consumer electronics.¹⁹ This law is effective in

preventing planned obsolescence as it sets technical standards which mandate that these products are repairable. This law includes provisions that incentivise/force OEMs to include changeable and parts and OEMs must design or work towards products which are more repairable. These design standards also ensure that better quality components are used, reducing the effect of “wear and tear” on the device.

The EU is moving towards adopting a circular economy for Consumer Electronics. It opposes the ‘take-make-use-discard’ status quo.²⁰ The new reform will mandate increased software support and will make products more repairable and upgradable. This will ensure that products do not “become redundant” when new features are released, as these features can be incorporated into those products which will lengthen life expectancy. The software elements of this green law will ensure devices have a longer lifespan. This legislation will be effective in reducing e-waste, and empowering consumers to make more informed and cost-effective decisions regarding their electronics.

The French Government has strong legislation which opposes planned obsolescence. Where it is found that a company has engaged in practices of planned obsolescence, a penalty of up to 5% of annual turnover or jail time applies. This is effective, however, manufacturers still use loopholes which are not covered by this legislation. It is however a pivotal start, and was useful in the investigation of Apple’s conduct in using software that slowed down older iPhones.²¹

Australia’s Consumer Guarantee is severely limited in practice. This is due to enforceability concerns where OEMs can decide what is, and what is not covered under the guarantee. There is no proper definition of a period under the Australia Consumer Guarantee, which causes further issues with enforcement and consumer protection.

e) What are the benefits, costs and risks of Australia adopting measures similar to those currently used overseas, such as product design standards and reparability ratings?

There are substantial benefits to Australia adopting measures similar to those currently used overseas. Introducing product design standards and repairability ratings will not be a significant cost to government or the public. Other benefits are **products lasting longer, greater consumer awareness and satisfaction, a better economical result for consumers and a cleaner environment.**

Adopting **repairability ratings** will mean consumers are better informed of their choices. Consumers to be more independent and motivated to shop around for more repair friendly products in the open market.

Similar legislation will result in a reduction in e-waste and a cleaner environment, less devices will go into landfill each year, fewer resources will be required and options like recycling and will reduce pollution caused by manufacturing.

f) Do consumers have access to good information about durability and reparability when making purchases? If not, how could access to information be improved?

No. This is due to the fact that any information supplied is by the OEM's and through marketing is not an accurate representation of durability nor repairability. Indeed, there's no standard of repairability in Australia on which consumers could make a decision. OEMs often mislead consumers with "Free" Extended Warranty Schemes which are already covered by normal warranty.

Recommendation 1; That the Australian Government introduce a mandatory Repairability Rating Scheme akin to the one introduced by the European Union that's visible on packaging. ²²

This will rate a product's repairability out of a given number of stars/points (i.e., 1/5 for poor, 5/5 for excellent and 0/5 for fail). It will support consumers in purchasing more repairable and sustainable products and incentivise OEMs to make their products more repairable.

The star rating could be similar to that used for Energy Efficiency on consumer electronics.

Recommendation 2; Introduce a “Name and Shame” website for products that fail to meet minimum standards, are suspected of intentional obsolescence and companies that continue to promote anti-repair or anti-competitive practices.

This could be similar to that on the website of the [NSW Food Authority](#)²³ for products that fail to comply with minimum standards or for companies which have been found to have engaged in anti-competitive practices with regards to repair in the past. Devices by an OEM that has engaged in anti-competitive practices could be required to contain a label on their packaging which states “Warning: this product has not complied with Australian Government minimum standards in the past” for a period of 24 months. These “Name and Shame” and Label suggestions would be highly effective in informing the consumer and would empower them to make good decisions.

Recommendation 3; The Australian government should ban or heavily restrict the sale of Consumer Electronics which are deemed unrepairable in Australia. A Minimum Standard for Repairability (MSR) should be developed and enforced.²⁴

Introduce a transition period for regulation of the repairable nature of Consumer Electronics. Provide manufacturers with a period of time to adjust and make their machines repairable, perhaps 5 years.

Recommendation 4; Introduce an education program in schools regarding Right to Repair and consumer rights, as well as an awareness campaign in the media.

Delivered in an engaging way, this program would empower a new generation of aware consumers and inform students of their rights under the ACL as well as making the right choices – for “their pocket” and the environment.

THE ENVIRONMENTAL COSTS OF E-WASTE

Information request 7

The Australian Democrats have always been a party that cares about our environment. One of the most pressing environmental issues is e-waste.

The Global E-Waste Monitor 2020 reported that, e-waste (discarded products with a battery or plug such as computers and mobile phones) increased by 21 per cent in the five years to 2019 and predicted that by 2030, it will be almost double the 2014 figure, fuelled by higher consumption rates, shorter lifecycles and limited repair options.

E-Waste is toxic,²⁵ and when disposed of – results in toxic heavy metals which include lead, mercury, cadmium, arsenic, beryllium, palladium, cobalt, tin, gallium entering our environment. It also results in hazardous, carcinogenic chemicals such as brominated flame retardants which not only cause harm to the environment (flora and fauna) and but the health of the community and humans, where these substances are known to cause cancer.^{26 27}

Our Resources are finite and the endless cycle of “purchase and dispose” leads to the need for more resources. Endless mining causes harm and damage to the planet, results in damage to the environment through the destruction of terrain and chemical leaks. Furthermore, the need to find more resources empowers horrible practices such as Child Labour in the Dominican Republic²⁸ for a pivotal component in devices – cobalt.

Endless Consumption leads to endless production which leads to endless air pollution. Right to Repair reform will reduce the need to replace products, reducing the production of products leading to cleaner skies and better air. Right to Repair will fight and help solve the pressing issue of climate change, preserving our world for future generations.²⁹

Right to Repair reform is pro-environment, pro-climate, pro-human and anti-slavery. It's legislation that Australia and Earth needs.

a) What data are available on the amount of e-waste generated in Australia? *What data is there on the composition of e-waste in terms of particular materials (such as hazardous materials) by product type? How does hazardous e-waste compare to hazardous general waste in its prevalence and risks? Is there merit in distinguishing between hazardous e-waste and non-hazardous e-waste? And if so, how could this be done in practice?*

According to Clean Up Australia,³⁰ millions of consumer electronics are discarded in Australia each year. Clean Up's latest figures are highly worrying:

- *88% of the 4 million computers and 3 million TV's purchased in Australia every year will end up in landfill - this contributes to the 140,000+ tonnes of electronic waste generated by Australians every year*
- *Fewer than 1% of TVs and around 10% of PCs and laptops are recycled Australia wide*
- *E-waste is responsible for 70% of the toxic chemicals such as lead, cadmium and mercury found in landfill - and 23,000 tonnes of CO2 emissions would be saved if half of the televisions discarded annually were recycled*
- *Electronic rubbish is growing at three times the rate of any other waste stream*
- *Discarded devices are piling up around the world at a rate of 40 million per year*
- *98% of the components in your computer or television can be fully recycled*

SOURCE: CLEAN UP AUSTRALIA³¹

There is merit in distinguishing between e-waste and non-hazardous e-waste this is due to the fact that hazardous e-waste should

be disposed of differently, and properly so that it does not damage our ecosystems. This distinguishment can be made at a recycling/e-waste handling facility for example – and these toxic components can go through a procedure to be disposed (or reused) in an eco-friendly way.

b) What estimates are available on the costs of e-waste disposal on the environment, human health and social amenity, in Australia and internationally?

Evidence shows that **e-waste disposal has a critical cost** on the environment, human health and social amenity.

E-Waste Disposal **is one of the most pressing environmental issues** that we currently face.³²

The trend shows us that the problem is getting worse worldwide, with the global e-waste monitor³³ reports that e-waste had seen an increase of 21% in the five year period leading up to 2019. The Global E-Waste monitor shows us that on this trend – by 2030, our global E-Waste figure will be almost double the 2014 figure. Australia can play a fundamental role as a member of the international community.

POLICY REFORMS

a) What policy reforms or suite of policies (if any) are necessary to facilitate a 'right to repair' in Australia?

Major policy reforms are required to facilitate a right to repair in Australia. These include reforms to **legislation concerning the physical build** of the device – and features within hardware and software. Policy must also address the Repair Market in Australia, and in particular the imbalance where OEM's **tend to have a monopoly**.

CONCLUSION

The Australian Democrats support the introduction of powerful and enforceable legislation which protects the Right to Repair. Right to Repair reform can restore a better balance of rights between the manufacturer and the consumer. In a free market economy, the monopolisation of repairs by manufactures deeply undermines those rights for consumers.

We need reform to incentivise competition within repairs, reduce the cost to the consumer and improve the quality of the repairs. Right to Repair reform is also an step in the right direction for the significant issue of e-waste, reducing emissions and land/air pollution.

Adrian Lozancic

National Coordinator of the Young Australian Democrats
Right to Repair Campaign Team

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