



Australian Government
Productivity Commission

Right to Repair

Productivity Commission Draft Report *Overview*

June 2021

This is a draft report prepared for further public consultation and input. The Commission will finalise its report after these processes have taken place.

© Commonwealth of Australia 2021



Except for the Commonwealth Coat of Arms and content supplied by third parties, this copyright work is licensed under a Creative Commons Attribution 3.0 Australia licence. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/3.0/au>. In essence, you are free to copy, communicate and adapt the work, as long as you attribute the work to the Productivity Commission (but not in any way that suggests the Commission endorses you or your use) and abide by the other licence terms.

Use of the Commonwealth Coat of Arms

Terms of use for the Coat of Arms are available from the Department of the Prime Minister and Cabinet's website: <https://www.pmc.gov.au/government/commonwealth-coat-arms>

Third party copyright

Wherever a third party holds copyright in this material, the copyright remains with that party. Their permission may be required to use the material, please contact them directly.

Attribution

This work should be attributed as follows, *Source: Productivity Commission, Right to Repair, Draft Report*

If you have adapted, modified or transformed this work in anyway, please use the following, *Source: based on Productivity Commission data, Right to Repair, Draft Report*

An appropriate reference for this publication is:

Productivity Commission 2021, *Right to Repair*, Draft Report, Melbourne

Publications enquiries

Media, Publications and Web, phone: (03) 9653 2244 or email: mpw@pc.gov.au

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long-term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).

Opportunity for further comment

The Commission thanks all participants for their contributions to the inquiry and now seeks additional input for the final report.

You are invited to examine this draft report and comment on it by making a written submission by 23 July 2021. Further information on how to provide a submission is included on the inquiry website: www.pc.gov.au/inquiries/current/repair/make-submission#lodge

The final report will be prepared after further submissions have been received, and will be submitted to the Australian Government by 29 October 2021.

Public hearing dates and venues

The Commission is holding public hearings using a video and teleconference service, with the option of some in-person appearances. Please contact us if you would like to participate in-person in Canberra, Sydney or Melbourne as spots are limited.

Location	Date	Venue
Canberra	Monday, 5 July 2021	Flex by ISPT 4 National Circuit, Barton
Sydney	Tuesday, 6 July 2021	Wesley Conference Centre 220 Pitt Street, Sydney
Melbourne	Wednesday 7 July 2021	Level 8, 2MQ, 697 Collins Street, Docklands

Commissioners

For the purposes of this inquiry and draft report, in accordance with section 40 of the *Productivity Commission Act 1998* the powers of the Productivity Commission have been exercised by:

Paul Lindwall	Commissioner
Julie Abramson	Commissioner

Terms of reference

I, the Hon Josh Frydenberg MP, Treasurer, pursuant to Parts 2 and 3 of the *Productivity Commission Act 1998*, hereby request that the Productivity Commission undertake an inquiry into the Right to Repair within Australia.

Background

The term *right to repair* describes a consumer's ability to repair faulty goods, or access repair services, at a competitive price. This can relate to a range of product faults, including those for which the consumer is responsible. It may include a repair by a manufacturer, a third-party, or a self-repair option through available replacement parts and repair information.

The *Competition and Consumer Act 2010* (CCA) prohibits anti-competitive behaviour such as exclusive dealing (section 47); however, many right to repair issues are the result of conduct that is not being captured by the prohibition. In many cases, suppliers do not impose any such restrictions on consumers with respect to the repair of products they supply. Instead, consumers or third parties are prevented from being able to repair the products due to a lack of access to necessary tools, parts or diagnostic software.

For these reasons, existing provisions amount to some limited rights or protections in relation to repair facilities in Australia, but do not amount to a full 'right to repair'. As such, premature product obsolescence and a lack of competition in repair markets remain. The expense of repair and product design accelerate the transfer of consumer goods into waste.

Scope of the research study

The Productivity Commission is to examine of the potential benefits and costs associated with 'right to repair' in the Australian context, including current and potential legislative, regulatory and non-regulatory frameworks and their impact on consumers' ability to repair products that develop faults or require maintenance. In examining the Australian context, the Productivity Commission should identify evidence of the impact of relevant international approaches.

In undertaking the inquiry, the Commission should consider:

1. The legislative arrangements that govern repairs of goods and services, and whether regulatory barriers exist that prevent consumers from sourcing competitive repairs;
2. The barriers and enablers to competition in repair markets, including analysing any manufacturer-imposed barriers, and the costs and benefits associated with broader application of regulated approaches to right of repair and facilitating legal access to embedded software in consumer and other goods;

-
3. The impact of digital rights management on third-party repairers and consumers, and how intellectual property rights or commercially-sensitive knowledge would interact with a right to repair;
 4. The effectiveness of current arrangements for preventing premature or planned product obsolescence and the proliferation of e-waste, and further means of reducing e-waste through improved access to repairs and increased competition in repair markets; and
 5. The impact on market offerings, should firms have their control over repair removed.

Process

In undertaking this inquiry, the Commission should consult broadly, including with state and territory consumer affairs regulators. The Commission should undertake an appropriate public consultation process including holding public hearings, inviting public submissions and releasing a draft report to the public.

A final report should be provided to the Government within 12 months of the receipt of these terms of reference.

The Hon Josh Frydenberg MP
Treasurer

[received 29 October 2020]

Contents

Opportunity for further comment	iii
Terms of reference	iv
Acknowledgments	ix
Overview	1
Key points	2
1 The 'right to repair' is a multifaceted policy issue	3
2 Consumer law provides some rights to repair	6
3 Overcoming barriers to repair in Australia	9
4 Product design, obsolescence and e-waste	17
5 Are broader 'right to repair' policies needed?	23
Draft findings, recommendations and information requests	26

The full report is available at www.pc.gov.au

Acknowledgments

The Commission wishes to acknowledge all those who have participated in this inquiry. The Commission has used information from a range of sources in preparing this report and is grateful for the contributions made by individuals and organisations through submissions, brief comments and participation in meetings.

The Commissioners would like to thank the staff who worked on the inquiry. The team was led by Ana Markulev and included Paul Loke, Aaron Mollross, Paulene McCalman, Roger Hassan, Lisa Tarzia, Max Gillespie, Caroline Nguyen-Kim, Sophie Harwood, Holly Creek and James Thiris, with administrative assistance from Yvette Goss.

OVERVIEW

Key points

- This report finds that there are barriers to repair for some products and that there is scope to reduce these barriers. The proposed reforms would improve consumers' right to repair, without the uncertainty and costs associated with more forceful policy interventions.
- A 'right to repair' is the ability of consumers to have their products repaired at a competitive price using a repairer of their choice. Realising this aspiration in a practical way involves a range of policies, including consumer and competition law, intellectual property protections, product design and labelling standards, and environmental and resource management.
- Consumers already have considerable rights to have their products repaired, replaced or refunded under guarantees in Australian Consumer Law. These guarantees are comprehensive and generally work well, but they could be improved by:
 - the Australian Competition and Consumer Commission (ACCC) providing guidance on the reasonable period of product durability for common household products, so that consumers and manufacturers can better understand when consumer guarantees apply
 - providing regulators with alternative dispute resolution processes to assist consumers to resolve their claims, and enabling designated consumer groups to lodge 'super complaints' about consumer guarantees, with these fast tracked by the ACCC
 - the inclusion of text in manufacturer warranties that prominently states that consumers are not required to use the repairers or spare parts specified by the product's manufacturer to access their rights to a guarantee under consumer law.
- The Commission is seeking further evidence on other reforms that could help consumers obtain repairs and make more informed purchase choices. These potential reforms involve:
 - requiring manufacturers to provide software updates for a reasonable period
 - amending copyright laws to enable third-party repairers to copy and share repair manuals, and access repair data hidden behind digital locks
 - prohibiting manufacturer warranties from being voided if consumers do not use the repairers and spare parts specified by the manufacturer
 - developing a product durability or repairability labelling scheme to help consumers identify products that best meet their needs.
- There is also scope to improve the way products are managed when they become 'e-waste' by amending regulated product stewardship schemes to remove current incentives that focus solely on product recycling, rather than repair and reuse. Global positioning system (GPS) trackers should also be used to improve monitoring of e-waste.
- The Commission is seeking evidence on the net benefits of a more extensive right to repair policy through a 'positive obligation' that would require manufacturers to provide third-party access to repair information and supplies.
 - The Commission's preliminary analysis suggests that restrictions on third-party repair supplies could be harming consumers in repair markets for agricultural machinery and mobile phones and tablets. However, the evidence base on the magnitude of repair barriers in these markets is patchy and largely anecdotal, preventing a rigorous assessment of whether additional policies would provide net benefits to the community.
 - At a minimum, a review of the policy landscape in the coming years would be warranted, supported by an evaluation of the proposed mandatory scheme for the sharing of motor vehicle service and repair information, once it has been in operation for at least three years.

1 The ‘right to repair’ is a multifaceted policy issue

There are growing concerns in Australia and overseas that repairs of consumer products are becoming progressively more difficult (sometimes impossible), resulting in costly and wasteful outcomes for consumers and broader society.

The difficulty of repair, at least in part, reflects growth in the number of products that incorporate sophisticated technology. It is now commonplace for cars, fridges, and even coffee machines to have embedded software in them. These technological advances have provided many benefits to consumers, but can also increase the cost and complexity of repairs. The rise in tech-enabled products means that much of the information required to diagnose a fault is digital, embedded into the product itself and held behind ‘digital locks’, requiring passwords or special tools to bypass.

Increasing product complexity means that consumers often have to rely on the manufacturer of the product (or their authorised repairer) to fix or maintain their product. Manufacturers are typically the main and sometimes only provider of repairs for their products. This has contributed to widespread concerns that some manufacturers are using their dominant position in repair markets to restrict competition. Many participants made claims of manufacturers refusing to supply independent repairers with the parts, tools and information they need to do repairs.

Relatedly, there are concerns that the lifespans of everyday products are becoming unnecessarily short and that products are being discarded prematurely, contributing to wasted resources and the proliferation of ‘e-waste’. Some groups also claim that manufacturers are intentionally shortening product life through software updates and design strategies that force consumers into buying new products (‘planned obsolescence’). Such claims are often made with respect to consumer electronics, particularly smart phones.

These concerns have led to calls for government to introduce a ‘right to repair’. The ACT Minister for Consumer Affairs, Shane Rattenbury, noted that ‘the right to repair movement has been gaining momentum around the world. Legislative reforms are being introduced and strategies are being prepared.’ Although there is no universal definition of a right to repair (box 1), in essence it is about the ability of consumers to have their products repaired at a competitive price using a repairer of their choice. While on face value this is a desirable objective, it is not immediately clear what government should do to enable such a right. This is because no single policy alone enables a right to repair; a broad range of policies are involved, covering consumer and competition law, intellectual property protections, product design and labelling standards, and environmental and resource management.

Implementing or amending policies in any of these areas requires careful consideration, balancing the (sometimes competing) interests of consumers, manufacturers, suppliers and repairers. In weighing up the costs and benefits of potential right to repair reforms, the Commission has been mindful that it is not always preferable or cost effective for consumers to repair their products, or to keep them going for as long as possible. Consumers make

choices to repair their products by weighing up the cost and convenience of repair, their preferences for newer products, and concerns about the environmental impacts of their consumption choices. Further, it is not reasonable or efficient to require a manufacturer to support a product for an indefinite amount of time; at some point it becomes prohibitively costly for manufacturers to repair older products. Thus, the inquiry's focus has been on identifying if there are any unnecessary barriers to repair that are leading to adverse outcomes for the community as a whole, and if so, what policy responses may be needed.

Box 1 What is a 'right to repair'?

There was no single view of a 'right to repair' presented in submissions to this inquiry. Participants most commonly associated a right to repair with:

- independent repairers and consumers having access to the necessary parts, information and equipment needed to repair products, including access to embedded software in products
- consumers having the choice of repairer, with price competition in the repair market
- consumers being able to buy products that are repairable and durable
- repair/reuse of products to reduce e-waste and encourage the growth of the circular economy.

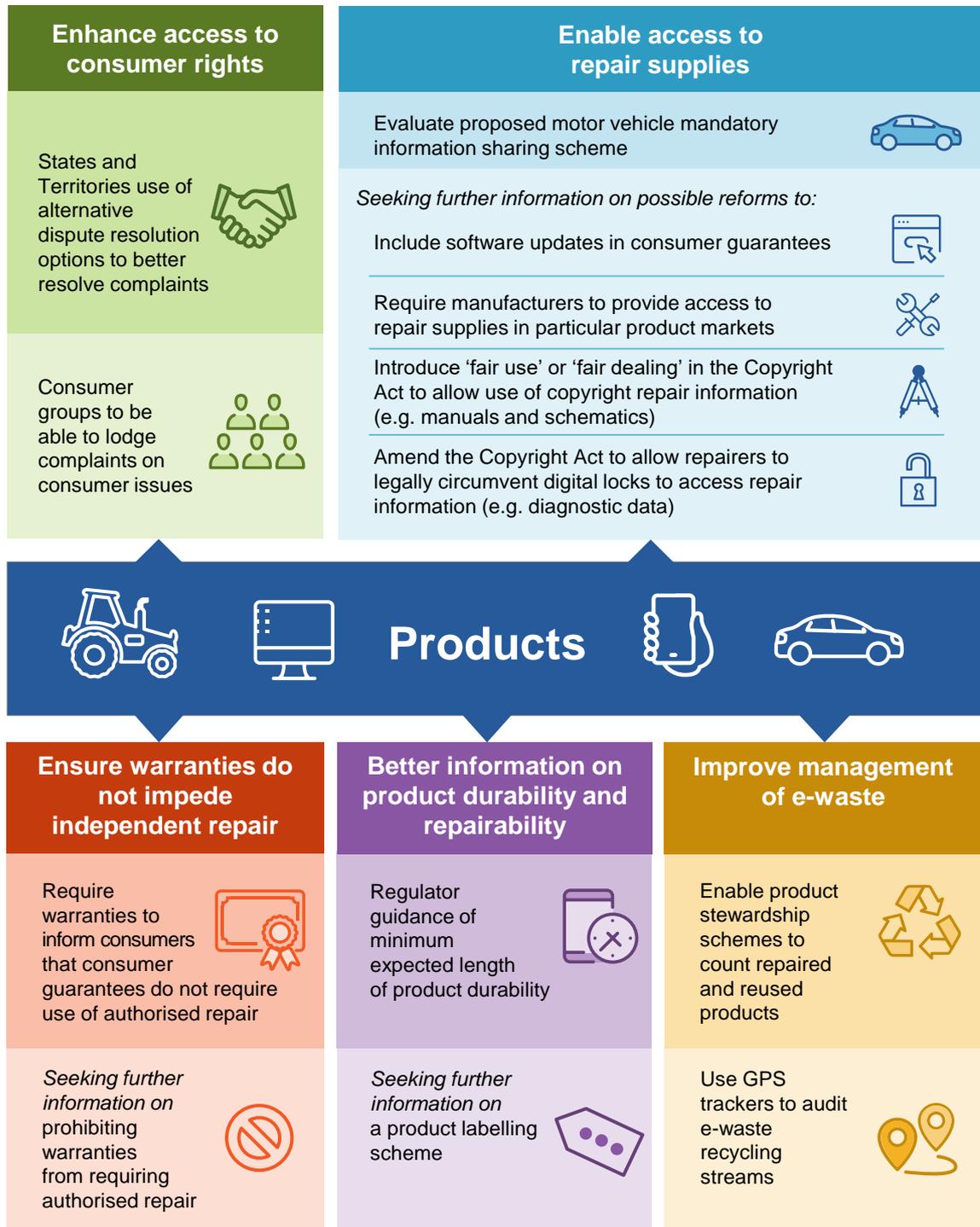
These differing views on what a right to repair entails were reflected in the broad range of policy proposals that were put forward, which included: legal obligations on manufacturers to provide access to repair inputs; strengthening of the consumer guarantees under Australian Consumer Law; changes to intellectual property protections to facilitate sharing of repair information and access to embedded software; introduction of unfair conduct provisions to address behaviours of manufacturers; and use of minimum product standards and labelling.

A wide range of reforms have also been connected to right to repair policies around the world. Many of these changes have been concentrated in the United States and the European Union.

- In the United States, much of the debate has focused on consumer and competition issues, particularly access to necessary spare parts, tools and information, and the tension this can create with intellectual property rights. The term 'right to repair' appears to have originated from legislation in Massachusetts requiring motor vehicle manufacturers to provide access to diagnostic and repair information. An industry agreement then led to nationwide adoption of this approach. Some US states have also proposed broader right to repair legislation for digital products, such as consumer electronics and agricultural machinery.
- In Europe, a right to repair is more commonly associated with product design and resource management, and is generally pursued through EU environmental regulations. For example, household appliances are required to have spare parts available to professional repairers for up to ten years, as well as repair and maintenance information. The European Union has also had similar requirements to the Massachusetts 'right to repair' law for motor vehicles since 2010.

Overall, this draft report finds that there are barriers to repair for some products that policy reforms could reduce. The proposed reforms fall into five broad categories that collectively support consumers to repair their products (where they choose to do so) (figure 1). In some areas, evidence on the materiality of barriers to repair is lacking, so the draft report also contains a number of requests for further information and feedback to inform the final report.

Figure 1 Possible reforms to overcome barriers to repair



2 Consumer law provides some rights to repair

Consumers already have considerable rights under the consumer guarantees in the Australian Consumer Law (ACL). The guarantees automatically (with some exceptions) provide consumers with a range of protections when they buy a product. Among other things, they require manufacturers and suppliers to guarantee that the products they sell are of acceptable quality (including that they are reasonably durable) and that manufacturers have spare parts and repair facilities available for a reasonable period. Suppliers are also required to guarantee that the products they sell are fit for any disclosed purpose. When these guarantees are not met, consumers may be entitled to a repair, refund or replacement, although the choice between remedies often rests with the supplier or manufacturer.

The consumer guarantees framework is comprehensive and operates reasonably well but it is sometimes difficult for consumers to access the remedies they are entitled to. There is lack of clarity in some areas (particularly regarding product durability timeframes) and it can be challenging for consumers to negotiate a remedy with a supplier when their product fails.

Uncertainty about the durability of consumer products

A guarantee that products will be of acceptable quality is at the heart of the consumer guarantees under the ACL. This includes that the durability of the product will be acceptable to a ‘reasonable consumer’. There is currently limited specificity in the ACL as to what reasonable durability is for various product classes — it is largely left up to the consumer and supplier or manufacturer to determine and negotiate an outcome. This uncertainty can lead to disagreement about whether a guarantee applies at all, or result in some consumers not seeking (or being offered) a remedy under the ACL.

One area of uncertainty appears to be for high value products that the consumer has owned for some time (such as high value washing machines and other household appliances that break after several years) rather than for products that fail in a short period of time. Improved regulatory guidance in this area could help to provide certainty for both consumers as well as manufacturers and suppliers, which would not only improve access to repair but would also improve access to refund and replacement remedies.

Greater clarity on reasonable product durability under consumer guarantees

Greater clarity could be achieved by the Australian Competition and Consumer Commission (ACCC) developing and publishing estimates for how long products could reasonably be expected to last without fault. Such estimates would be a guide only, developed in consultation with State and Territory ACL regulators, consumer groups (some of which have already developed estimates of product durability) and business groups (including those representing manufacturers and suppliers).

This guidance would build upon current guidance developed by the ACCC, by including more specific durability estimates for particular product classes, and should also draw on

estimates developed by manufacturers. Given the large number of different products available, and new products continually coming onto the market, specific guidance could be developed for common household electrical appliances and white goods, within specific price ranges. The time period estimates could also be a minimum and, given variability of performance of any particular product in practice, the time period could be a range. For example, a fridge could be estimated to last for a minimum of five to seven years without fault, with the upper and lower bounds of the range reflecting lower and higher value fridges. Technological developments would necessitate these estimates being reviewed regularly.

Accessing guarantees is often a struggle for consumers

Consumers often find it difficult to exercise their rights under guarantees, particularly for higher value products such as cars, electronics and white goods. Federal and State and Territory regulators receive thousands of complaints each year about consumer guarantees. For example, in 2019-20, the ACCC reported over 37 600 complaints about consumer guarantees and warranties, with motor vehicles (27 per cent) and electronics and consumer white goods (26 per cent) accounting for over half of these complaints. At the State and Territory level, complaints about motor vehicles are the most common.

It is largely left up to consumers to be aware of their rights and to be willing and able to pursue a remedy, such as repair of a broken or faulty product. But recourse through tribunals, if even available, can be costly (in terms of tribunal fees, legal advice, and costs of technical reports) and act as a deterrent. The process can also take significant time and can be inconvenient for consumers if they are required to go without their product for long periods.

Consumers can also get stuck in a cycle of repairs for multiple minor defects (particularly for motor vehicles), which is driven by sellers' preferences to repair defective (high price) products rather than offer a replacement. (In December 2020, changes to the ACL to clarify that multiple minor repairs constitute a major failure were passed, which may help to resolve some of the issues relating to motor vehicles).

Collectively, these costs and inconvenience mean that courts and tribunals are not an effective form of redress for many consumers. Often, the cost and effort involved in seeking a remedy through a court or tribunal will be greater than the value of the product. And while consumers can seek help from their State and Territory ACL regulator, most of these regulators have limited powers in dispute resolution as they are unable to compel businesses to participate in a conciliation process or make determinations.

Enhancing access to remedies under the consumer guarantees

Better complaint and enforcement options would improve the practical functioning of the consumer guarantees and provide consumers with increased access to remedies.

Additional enforcement powers for ACL regulators

Some jurisdictions have alternative dispute resolution processes that make it easier for consumers to obtain a remedy under the consumer guarantees.

- *Compulsory conciliation* — South Australia has introduced powers to compel businesses to participate in conciliation processes. When a consumer and business cannot come to an agreement privately, the regulator, Consumer and Business Services, can arrange a compulsory conference, acting as a neutral third party. In its first 2 years of operation (2013 and 2014), the conciliation process resolved 86 per cent of the 403 cases escalated to conciliation. And in 2018, the process resolved 90 per cent of cases (169 cases). The Australian Consumer Survey reported that 75 per cent of people who had participated in third party conciliation in 2015 found it either very or extremely helpful.
- *Enforceable directions* — New South Wales has introduced the ability for its regulator to make an enforceable direction for a business to comply with the consumer guarantees. The NSW Commissioner for Fair Trading can issue a consumer guarantee direction requiring the business to repair, replace or refund certain products (up to the value of \$3000 within 6 months of the date of purchase). If the business does not comply with the direction, the consumer can apply to their local court to have it enforced.

Other Australian jurisdictions should adopt similar alternative dispute resolution processes, to better resolve complaints about consumer guarantees, potentially using the models in place in South Australia and New South Wales. Sufficient regulator resourcing would be required prior to implementation.

Enabling designated consumer groups to lodge complaints

A complementary reform would be the introduction of a ‘super complaint’ mechanism, whereby designated consumer organisations are able to lodge complaints on consumer guarantee issues. Once a complaint is lodged by the consumer group, it would be fast tracked by the regulator, who would be required to provide a response within a certain period (such as 90 days). The response would state how the regulator proposes to deal with the complaint and whether any action will be taken. The United Kingdom operates a super complaint process and one was trialled in New South Wales between 2011-2013. Complaints lodged as part of the NSW trial related to misleading free range egg labelling and a complaint on electricity switching websites. The NSW trial did not lead to a super complaint regime in New South Wales. The Commission understands that this was not due to its failure, but rather because such a scheme would best reside with a national regulator, given the nationally significant issues super complaints focus on. For this reason, the Commission proposes that a super complaint mechanism be directed to the ACCC.

A key benefit of a super complaints process is that it provides regulators with an additional source of intelligence and ensures that major consumer issues are responded to by the regulator (due to the time-limited and public nature of the process). On this point, CHOICE claims that the super complaints lodged with NSW Fair Trading were escalated to wider,

national processes, resulting in outcomes that they did not believe would have been achieved outside of the super complaints mechanism.

Although the process could arguably divert regulator resources away from higher-priority activities, there is no indication that well-established consumer groups are likely to use super complaints processes inappropriately or derail regulatory priorities. Gathering the necessary evidence and lodging a complaint could be a costly exercise for a consumer group both in terms of resources and in reputation and influence should such a complaint be founded on scant evidence.

Nonetheless, a super complaints process in Australia would need to be supported by operational guidance and principles, to ensure that the process is effective and efficient. This should include requirements for designating (and removing) consumer bodies, evidentiary requirements to support a claim, and the process by which the ACCC will respond.

These reforms would enhance consumers' ability to exercise their existing rights under guarantees. However, additional reforms are also needed to address barriers to repair identified in this inquiry.

3 Overcoming barriers to repair in Australia

Concerns have been raised about barriers to third-party repair arising from:

- manufacturers limiting third-parties from accessing the parts, tools, equipment and information they need to conduct repairs, including diagnostic tools (such as software and code) that are needed to diagnose repair issues
- the use of contractual arrangements that discourage independent repair, particularly manufacturer warranties that become void if third-party repairs are undertaken.

Actions of manufacturers can impede access to repair supplies

While the evidence is incomplete, some inquiry participants have raised concerns that product manufacturers are using their dominant position in the repair markets for their products to impede independent repairers from accessing the necessary parts, information and equipment needed to repair products. Of the concerns raised in submissions, about 80 per cent related to a 'refusal to deal', where manufacturers refused to provide repair supplies to anyone outside their authorised network. For example, a medical equipment supplier said that it 'has made many attempts to purchase parts, components and equipment from [manufacturers] and these have been flatly rejected'. Similarly, the National Farmers Federation said that agricultural machinery manufacturers refuse to supply technical information, diagnostic tools and parts to anyone outside their authorised network.

While less common, other inquiry participants noted that some manufacturers will sell repair supplies to any purchaser, but set their prices prohibitively high (*'margin or price*

squeezing’) or only sell the necessary repair supplies with other repair services or products (*tying*’ or *bundling*’). For example, an independent phone repairer claimed that Samsung sets its prices for replacement mobile phone parts at the same level as the cost of parts *and* services in its authorised repair network.

Such impediments were commonly reported for consumer electronics, agricultural machinery, cars and high-end watches. Concerns about limited access to repair supplies were roughly evenly split across the different types of repair supplies (such as spare parts, tools and equipment and information).

- *Spare parts* — concerns about accessing spare parts mostly related to manufacturer-branded spare parts. For watches, issues accessing spare parts comprised more than half of all complaints received relating to watches. The Watch and Clockmakers of Australia said that ‘the watch repair industry around the world has been subjected to the effects of a policy by many major watch brands of not supplying spare parts to independent watchmakers’. Another participant noted that some manufacturers of electronic devices often refuse to distribute parts that are essential to repair and maintenance.
- *Tools and equipment* — issues accessing tools and equipment was more of a barrier to repair for agricultural machinery and consumer electronics. For agricultural machinery, access to diagnostic software tools was the primary barrier, whereas for consumer electronics, access to calibration tools (such as computer equipment to fine-tune products after new parts are installed) was the main issue. iFixit said that agricultural machinery manufacturers do not make diagnostic software available to anyone except their authorised technicians, making it impossible for farmers to debug their own equipment, although this was denied by the manufacturer concerned. Another participant noted that some printing manufacturers restrict access to calibration software needed to use refilled (or non-manufacturer) ink cartridges.
- *Repair information* — accessing repair information was more of a barrier to repair for cars and household appliances. For cars, access to data (such as diagnostic, product-use or consumer data) was the primary barrier, whereas for household appliances, access to product schematics was the primary issue. The Australian Automotive Aftermarket Association suggested that most car manufacturers in Australia are not fully sharing technical data (including diagnostic and product-use data).

Are restrictions on repair supplies harming competition and consumers?

One of the main ways that repair barriers can generate harm to consumers is through higher-priced repairs. Much of this depends on the characteristics of the individual product market. There are some features of repair markets that can indicate when a product manufacturer may be more likely to restrict competition — including where consumers are ‘locked in’ to using authorised repairers or face difficulties estimating repair costs, and where manufacturers are able to generate significant revenues from repair (box 2).

The strength of competition in the market for the original product (the primary market) is also critical to considering consumer harm. Where product markets are highly competitive, manufacturers may ‘compete away’ the profits they earn in the repair market by lowering prices for the original product, thus compensating consumers for higher repair prices. The Commission conducted some empirical analysis to test the extent to which this effect exists. It used a natural experiment created by policy interventions in the United States (that mandated sharing of repair information and tools for motor vehicles). By comparing new car prices and repair prices in the United States and Australia around the time of policy change, the analysis found some evidence that the benefits of the policy for consumers seeking repair was somewhat offset by higher new car prices.

Beyond changes in prices, repair barriers can also lead to other adverse outcomes for consumers, such as reduced repair access or choice, and increased time and travel costs for repairs (particularly for people living in regional and remote areas). Higher repair prices (and lower primary product prices due to any offsetting price changes) may also tilt consumer decisions towards replacement rather than repair, leading to product disposal.

Overall, while there is some evidence that third-party repairs are being inhibited, the evidence is patchy and reliant on claims made in submissions. On the one hand, manufacturers often have valid reasons for why they limit third-party repair of their products (such as risks to safety, security or brand reputation). However, in some cases, these risks appear to be overstated. Many common, low-risk repairs (such as replacements of smart phone screens or batteries) do not require extensive expertise. Further, many higher-risk repairs are governed by occupational and product licensing requirements (such as gas and hot water appliance technicians or medical products requiring approval from the Therapeutic Goods Administration). On the other hand, the consumer harm from limits to third-party repair is also likely to be less than suggested by many inquiry participants, as offsetting gains from lower primary product prices often benefits consumers. And non-price outcomes (such as reduced choice and convenience) are likely to have small effects for most products, particularly those that do not require regular maintenance.

However, consumer harm varies between product markets based on the market characteristics discussed above. To determine whether barriers to repair are generating harm in any given product market, an in depth, case-by-case analysis (of both the repair market and primary market for each product) is required. This analysis is complex and resource-intensive, with data limitations hindering quantitative evaluation. Undertaking such a detailed assessment was beyond the scope of this draft report. Instead, the Commission has taken a largely qualitative approach, supported with data where possible, to arrive at a judgment about whether there appear to be competition issues in select repair markets, and where further investigation may be warranted.

Overall, the assessment (box 2) finds several products (agricultural machinery and mobile phones and tablets) for which market characteristics (particularly consumer lock-in and limited competition in the primary markets for these products, combined with a relatively large repair market) indicate that consumers may be harmed from limits on repair supplies.

Box 2 Preliminary assessment of competition in key repair markets

The Commission's approach to assessing competition in repair markets involved analysing market features that indicate whether consumers may be harmed from limits to third-party repair.

Approach to identifying possible competition issues in repair markets

A. Is there evidence that competition in repair markets is restricted?

- High-level measures indicate a lack of competition (concentration, barriers to entry, profit margins)
- Specific cases of manufacturers restricting competition (limits on third-party access to repair supplies)

B. Is there harm to consumers?

- Consumers are 'locked-in' to the repair market (high switching costs)
- Consumers face difficulties estimating repair costs (lack of information, complexity)
- The repair market is large (relative to the primary market)
- Manufacturers have financial ties to the repair market (in-house repair, contracts)
- Consumers are not compensated by lower prices in the primary market
- Adverse non-price outcomes for consumers (reduced choice, inconvenience)
- Risk from third-party repair (to safety, security, quality or innovation) are limited

This required a case-by-case analysis of select product repair markets, focusing largely on those markets where participants raised concerns about lack of competition.

- Agricultural machinery — manufacturers have an incentive to increase repair prices as this repair market is large compared to the market for new equipment. Consumers can also face: a high cost of switching to other products; financial losses if they cannot access timely repair; and reduced access or choice due to the primarily regional customer base. While most farmers are businesses that are likely to consider the cost of repair at the initial purchase, competition in the market for new machinery may not be sufficient to compensate consumers through lower product prices. A recent Australian Competition and Consumer Commission (ACCC) market study also found that weak competition in this market may result in less choice, higher prices and delays.
- Mobile phones and tablets — the market for new devices is dominated by Apple, followed by Samsung, indicating that competition may be insufficient for manufacturers to compete away repair market profits. And some consumers cannot easily switch to alternative products, due to lock in from low product compatibility and the loss of content. While any harm may be small per consumer, it could add up to be significant across the economy.
- Motor vehicles — manufacturers have an incentive to limit access to repair supplies because this repair market is large. Further, it can be difficult for consumers to assess the cost of repairs at the initial purchase and they can face a high cost of switching to alternative brands. In 2017, the ACCC found that limited access to motor vehicle repair information increased costs, and reduced choice and convenience for consumers. It recommended a mandatory repair information sharing scheme for motor vehicles, which was recently introduced to Parliament.

The Commission also analysed several other repair markets, however, these appear less likely to result in material consumer harm. For example, although construction machinery shares similar characteristics to agricultural machinery, the Commission did not uncover evidence of constrained competition in its repair market. Medical equipment is also a sizeable market and involves high switching costs, but most customers are businesses that are likely to consider the cost of repair at the initial purchase. And while high-end watches are expensive and repair is highly technical, consumer harm is likely to be small given the small size of that repair market.

The ACCC has also previously raised concerns about consumer harm (in terms of increased repair costs, inconvenience and delays) from limited access to repair information for motor vehicles. This led to the development (and introduction into Parliament in March 2021) of a mandatory repair information sharing scheme for motor vehicles.

The Commission is seeking views on its preliminary assessment, and further information and evidence to support a more detailed analysis for the final report. This would help determine whether additional policy responses are required to reduce barriers to third-party access to repair supplies. A ‘positive obligation’ on manufacturers (to provide greater access to repair supplies) is one possible approach. A positive obligation could target specific product markets and types of repair supplies (such as repair information for motor vehicles (as above), or repair information, diagnostic software tools, and spare parts for agricultural machinery, as recently proposed by the ACCC in its market study into agricultural machinery). Further evidence on the extent of consumer harm from impediments to third-party access to repair supplies would help to inform the Commission’s view on whether a positive obligation is likely to provide net benefits to the community.

Manufacturer warranties can discourage independent repair

Most goods come with a time-limited manufacturer warranty (‘warranty against defects’), outlining the available remedies if the product develops a fault. Some of these warranties include terms that permit the product manufacturer to void the warranty should *any* non-authorised repairs, maintenance or modification occur, even where those repairs are unrelated to a subsequent fault covered by the warranty. A prominent version of these clauses are warranty seals, such as the common ‘warranty void if removed/broken’ stickers found on some products (for example, the PlayStation 4). Examination of over 30 warranties by the Commission found examples of these warranty voiding clauses in 7 warranties, covering a range of products, including washing machines, mobile phones, gaming consoles and high-end watches.

Even where the warranty does not contain these voiding clauses, reports from the United States suggest that customer service representatives often (in 28 of 31 companies tested) tell consumers their warranty is void anyway (whether this occurs in Australia does not appear to have been tested). Many warranties also use dense and difficult to understand language, leading consumers to incorrectly believe that their warranty would be void if they sought independent or self-repair services. For example, manufacturer warranties on motor vehicles generally do not contain voiding clauses, but a survey conducted for the ACCC found that 30 per cent of people cited worries about voiding the warranty as a reason for getting vehicle repairs at dealerships, while 28 per cent stated it was mandatory under the warranty.

Although most consumers would not seek repairs from an unauthorised repairer for a defect that is covered by a warranty (as the repairs are typically provided for free by the manufacturer), warranties seldom cover accidental damage. Independent repair may also be more convenient or cost effective, particularly if the warranty does not cover shipping costs.

Several participants raised concerns that warranty voiding clauses are restricting competition within the repair market by discouraging consumers from seeking independent repair during the period of their warranty coverage. Manufacturers, however, raised concerns about being held liable for poor-quality repair work by unauthorised parties, or of safety issues for their staff conducting subsequent repairs.

Manufacturer warranties are also separate to the consumer guarantees and cannot displace the guarantees. A recent court case has also confirmed that non-authorised repairs do not extinguish the right to a remedy under the guarantees. Yet suppliers have no obligation to mention a consumer's rights when discussing remedies, leading to potentially disparate outcomes for identical defects, depending on whether a claim is under the warranty or the guarantees.

Proposed changes to ensure warranties do not impede independent repair

The Commission is considering a recommendation prohibiting manufacturer warranties from containing 'warranty void' terms (including warranty seals) that require consumers to use authorised repair services or parts from a particular company to keep their warranty coverage. By making such terms (or any statements from customer service representatives that such terms exist) unlawful, a prohibition could help to simplify and clarify some of the ambiguous warranty language, reducing misconceptions and improving access to independent repair for consumers. This kind of prohibition already exists across most products in the United States under the Magnuson-Moss Warranty Act, and for motor vehicles in the European Union.

To inform its final recommendation, the Commission is seeking feedback on the costs and benefits of prohibiting warranty voiding clauses. These could include benefits to independent repairers and consumers (from greater choice and convenience of repair) but also potential costs for consumers (if warranty coverage is scaled back or product prices increase to compensate for the regulatory change). Costs to businesses include potential exposure to liability for defects or failures created by poor-quality independent repairs, although these could be reduced by allowing warranty terms to limit manufacturer liability for defects or failures created by poor-quality independent repairs.

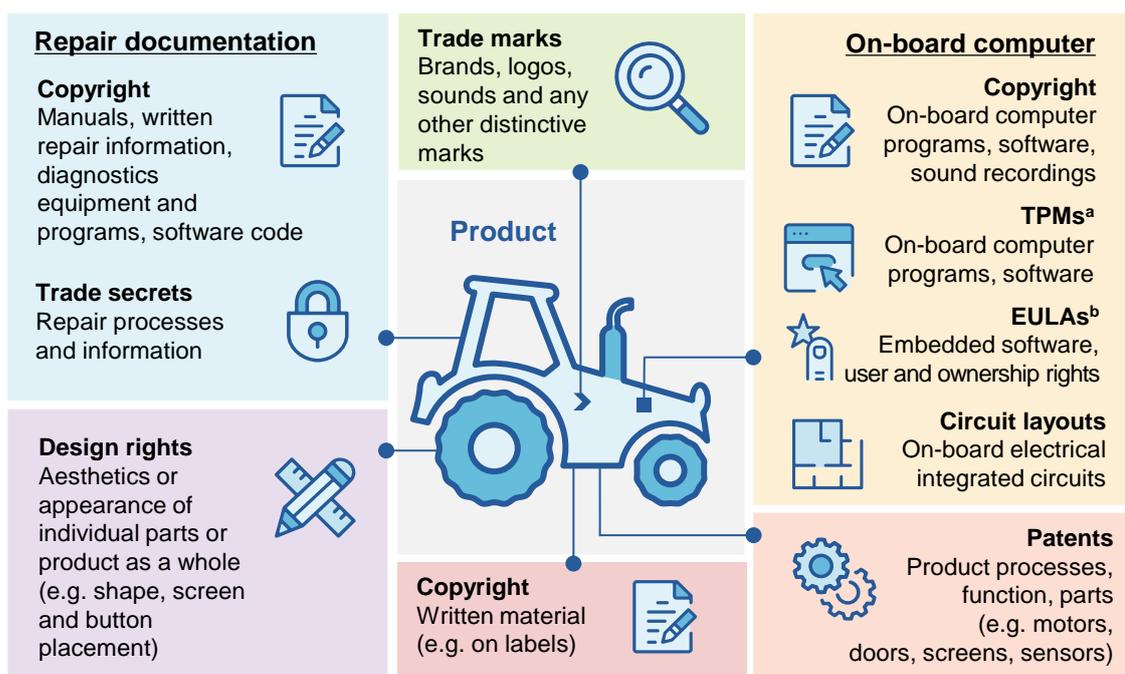
As a complementary policy option, the Australian Government should aim to improve consumer awareness about the consumer guarantees, particularly that the guarantees do not cease to apply simply because of independent repair or the use of third-party parts, and cannot be extinguished or altered by the terms of a manufacturer warranty. This would require changes to existing regulations that require all manufacturer warranties to contain text about consumer guarantees. New text should be included stating that entitlements to consumer guarantees under the ACL do not require consumers to use an authorised repair service or authorised spare parts. The warranty text should be placed in a prominent position on the warranty to improve awareness for consumers. Public communication of the changes from the ACCC could also help to ensure that consumers are aware of and understand the changes. Although changing the required warranty text would create some implementation

costs for manufacturers — as the text of their warranties would need to be updated and their customer service support staff trained on the new requirements — these should be minimal.

Intellectual property protections can impede access to repair information

Various concerns have been raised during this inquiry that intellectual property (IP) protections are being used to unnecessarily restrict repairs. Different IP rights provide different forms of protection and manufacturers may use multiple IP rights to protect a single product (figure 2). Based on the evidence presented to this inquiry, the most significant IP-related barrier to repair appears to be the inability of independent repairers to access repair information. Concerns about IP protections impeding access to repair information have been raised for products such as consumer electronics and agricultural machinery.

Figure 2 A single product may be covered by multiple IP protections



^a Technological protection measures. ^b End-user licence agreements.

Copyright may be used to impede access to two main types of repair information.

- *Repair information such as manuals* — advocates for a right to repair have expressed concern about how easily manufacturers can use copyright protections to restrict the accessibility and distribution of information (such as repair manuals) on how to repair products. For example, iFixit raised issues with some product manufacturers (including Apple) exerting their copyright and using legal threats to prevent retransmission of service schematics. Such restrictions can prevent owners and repairers from learning about their products, effectively blocking repair (or at least making it more difficult).

There has been a high-profile case in Australia of a laptop manufacturer, Toshiba, exerting its rights under copyright to prevent reproduction and dissemination of repair manuals for its products. Overseas, similar instances have been reported, for example, for Apple laptop manuals and schematics and hospital ventilator manuals.

- *Embedded (digital) repair information such as diagnostics* — manufacturers can also use technological protection measures (TPMs) or ‘digital locks’ that protect embedded software and computer code to prevent third-parties from accessing embedded repair data (such as diagnostic data, and consumer and product-use information that would be important to know when troubleshooting and debugging problems). Further, independent repairers are unable to bypass or circumvent manufacturers’ TPMs (even when doing so for the purposes of repair may be lawful) because copyright laws prevent a person (including repairers) from buying or selling or even just distributing devices to circumvent TPMs. For example, one repairer of agricultural and earthmoving equipment submitted that lack of access to diagnostic equipment meant that he had to rely on manual diagnostic processes, which are time consuming and increase repair costs to farmers. Another submitter stated that independent repairers are unable to repair Touch ID sensors on iPhones, as they do not have access to the necessary diagnostic software.

Manufacturers cite a range of reasons for why they restrict access to repair information. In the case of restrictions on information such as repair manuals, they claim that their information is proprietary, or that there are safety and other concerns resulting from the use of information by unskilled repairers. For TPMs, concerns have been raised by the Interactive Gaming and Entertainment Association, which suggests that ‘TPMs underpin the entire video game ecosystem and the willingness of developers to invest the tens or hundreds of millions of dollars that it can take to innovate their products and to develop new games’. The association raised concerns that greater access to TPM circumvention devices would better arm malicious actors. While such risks need to be balanced against the benefits of reforms in this area, it is important to emphasise that unauthorised use of copyright material carries with it substantial penalties which would still provide deterrent to non-repair TPM circumvention.

Proposed changes to the copyright regime to facilitate sharing of repair information

There are two broad ways the government could amend copyright laws to assist independent repairers access copyright repair information. The *Copyright Act 1968* (Cth) could be amended:

- so that repairers can legally procure tools required to access repair information hidden behind TPMs (such as digital locks)
- to allow repairers to reproduce and share copyright repair information (such as repair manuals and schematics) without the need to seek permission from the copyright holder under certain circumstances. This could be done through either:
 - a **specific** copyright exception for the reproduction and sharing of information for the purpose of repair (a new **fair dealing** exception in Copyright Act)

-
- a **general** copyright exception that may encompass the reproduction and sharing of information for the purpose of repair (a broad **fair use** exception in the Copyright Act).

A repair-specific *fair dealing* exception has the benefit that it specifically identifies ‘repair’ as a circumstance under which third-parties may use (including reproduce) and share copyright information. This could provide certainty to independent repairers that use of the information for repair purposes is lawful, provided that such use is considered ‘fair’. This approach provides scope for government to clarify the circumstances under which third parties may (or may not) use and share copyright information for the purposes of repair. Indeed, the Australian copyright regime currently provides for a range of specific ‘fair dealing’ exceptions — for example, where copyright material is used for research or study; criticism or review; parody or satire; or reporting news.

A general *fair use* exception may not provide as much certainty for repair uses. However, it is broader, more flexible and technology-neutral, and applicable to any potential use of copyright material, including currently non-existent or unforeseen uses and contexts. This approach therefore provides other benefits to the community. As previously argued by the Commission in its 2016 inquiry into Intellectual Property arrangements — in which it recommended the introduction of a fair use exception similar to the system in the United States — allowing for greater use of copyrighted material would facilitate new, valuable and socially-beneficial uses of copyright material by members of the public, thereby improving local creative industries, culture and knowledge.

Both approaches could help promote competitive repair services by increasing third-party repairers’ access to repair information. However, on their own they do not overcome all barriers to accessing repair information, as they would not prevent manufacturers from using TPMs to protect digital repair information in the first place. Additionally, they would not address instances where manufacturers are in sole possession of the desired information and use confidentiality agreements to prevent access to it. This could potentially be addressed, in part, by including in the exception (or Copyright Act generally) a prohibition on the use of contractual arrangements that seek to ‘override’ exceptions. To address these issues, some form of ‘positive obligation’ on manufacturers to make their repair information available may also be required.

To inform a decision for the final report, the Commission is seeking feedback on the proposed copyright changes outlined above. In particular, to what extent the proposed reform options would assist repairers in accessing repair information, and therefore facilitate independent repair, and the costs, benefits and risks of pursuing each option.

4 Product design, obsolescence and e-waste

There is growing concern in Australia and overseas that the lifespans of everyday products are becoming unnecessarily short (‘premature obsolescence’) with detrimental impacts on consumers and the environment (including by contributing to the proliferation of e-waste). Some consumer groups claim that manufacturers are intentionally shortening the lifespan of

products, such as consumer electronics and white goods, to force consumers to purchase new products (planned obsolescence). This view is based on the premise that the product as a whole had not reached the end of its technical lifespan, and that consumers would have preferred to continue using their product longer. Claimed planned obsolescence strategies include:

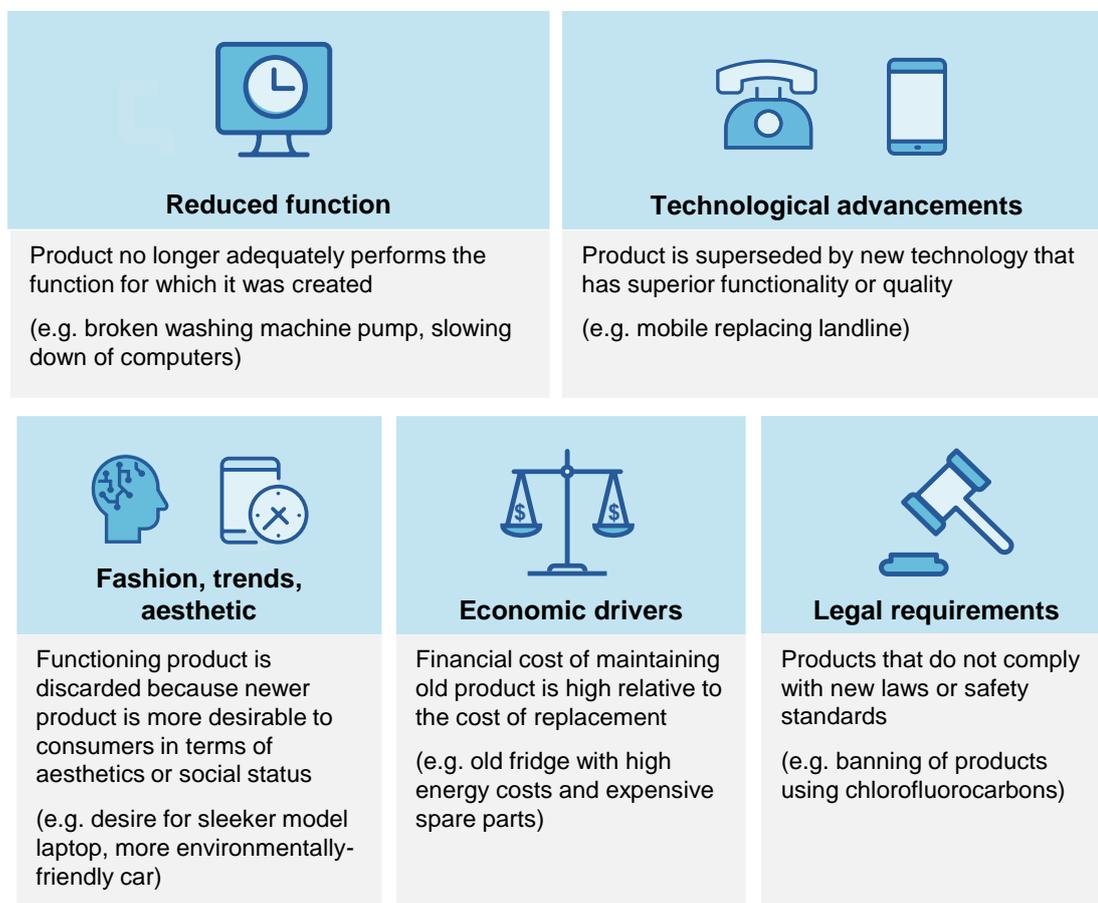
- designing products with structural weak points so they fail after limited usage (for example, designing fans with poor quality metal components)
- software that reduces a product's performance (for example, software updates that slow down older model smart phones)
- designing products in a way that prevents repair or upgrade (for example, using glue instead of screws or soldering components together to construct a device can make it more difficult to disassemble for repair).

Such strategies can be frustrating for consumers if it means that product repairs are more difficult or they have to replace their products sooner than expected. However, product obsolescence does not always result in negative outcomes for consumers as it may simply reflect that a product that better meets consumer preferences has replaced an older 'obsolete' product. Indeed, a variety of factors contribute to product obsolescence, including changes in product function, technology, fashion, regulatory standards, and the relative cost of maintenance and repair (figure 3).

Various arguments have been made for governments and regulators to step in and prevent premature obsolescence (whether due to an intentional strategy by the manufacturer or some other reason). These include to: protect consumers from unfair or misleading conduct; overcome information asymmetries regarding product qualities (such as durability and repairability) that prevent consumers making informed purchase decisions; and reduce external environmental impacts associated with short-lived products.

While it is not possible to rule out that some manufacturers engage in strategies to intentionally reduce product lifespans, the Commission has not found evidence to suggest that such practices are widespread. The ACCC submitted that it has seen little evidence of manufacturers designing a product to fail, and competitive pressures and reputational risk will often mitigate incentives for such behaviour. Although a recent German study found evidence that the first useful life of some products (such as washing machines, televisions, and notebook laptops) are becoming shorter, this was often driven by consumers choosing to replace their products with newer ones, rather than because the products broke. There is also evidence that some products are becoming more reliable or durable. For example, data from surveys conducted by Consumer NZ reveal that product reliability of a range of white goods (such as dishwashers) increased between 2009 and 2018.

Figure 3 **Mind, matter, money: factors contributing to obsolescence**



Further, Australian consumer and competition laws contain provisions that provide some protection against behaviours commonly associated with planned obsolescence (such as prohibitions on misleading conduct). For example, in 2018 the ACCC required HP PPS Australia to compensate customers for misleading information and conduct for failing to disclose at the time of sale that a subsequent software update would cause the printer to reject non-HP printer cartridges (at the time of purchase the printer accepted non-HP printer cartridges). Similar cases have been filed overseas against large tech companies (box 3).

In many cases, consumers' decisions to 'prematurely' dispose of their products, or to opt for shorter lived or less repairable products, reflect personal preferences, rather than information gaps on product durability or repairability at the time of purchase. And for some types of products, such as smart phones, there is publicly-available information on product qualities such as durability or repairability if consumers are sufficiently motivated to seek them out.

With respect to environmental concerns relating to premature obsolescence, there is a clear role for government to reduce the external environmental impacts associated with the production, consumption and disposal of goods. However, studies used to support policies to reduce environmental impacts by extending product lifespans (such as mandatory

durability standards) often omit or do not fully consider other impacts that matter to the community (such as the effect of new policy measures on business costs and product prices). And in many cases, there are more effective and efficient ways (other than product design requirements) to address environmental concerns (particularly with respect to e-waste).

Additional policies to combat premature product obsolescence (in the form of product standards or expanded consumer protection laws to address planned obsolescence) would be unlikely to have net benefits for the community. However, the Commission is seeking views and evidence on whether product labelling standards would provide net benefits to the community, and how the government and industry might jointly approach such a scheme, given such schemes are still in their early stages of development overseas. Other potential reforms relating to enhancing consumer rights (such as making it easier for consumer groups to lodge complaints about current consumer protection laws) and enabling access to repair supplies (such as expanding the consumer guarantee to include software updates) could also help address some concerns associated with premature obsolescence.

Box 3 Legal cases relating to ‘big tech’ and software

There have been a number of cases filed against tech companies internationally in response to concerns they were using software or other technical devices to deliberately reduce product performance. In 2017, for example, the French environmental association ‘Halte à l’obsolescence programmée’ (HOP) filed a criminal complaint to the DGCCRF (French regulator) that printer companies including Epson, Hewlett Packard, Brother and Canon were inserting sensors into their printer cartridges to stop them working before they were actually empty. The outcome of this case is still pending. In 2017, HOP filed another complaint against Apple claiming it was using software updates to deliberately slow down the performance of older smart phone models. Although the French regulator did not find that Apple used updates to deliberately slow down the performance of older models, it fined Apple for not informing iPhone owners that the updates would likely cause their device to run more slowly.

In Italy, in 2018 the AGCM (Competition Authority) investigated claims that Samsung and Apple had deliberately used software updates to slow down the performance of their smartphones. The AGCM subsequently found that the software updates were misleading to consumers and fined both companies €5 million. The AGCM also fined Apple an additional €5 million Euros for inadequately informing consumers about the essential characteristics of lithium batteries (such as average duration and deterioration factors).

In the United States, Apple settled a class action lawsuit in 2020 in regard to software updates slowing down devices. A lawsuit was also issued against Tesla in 2019 in regard to software updates reducing the battery capacity of Model S and X cars.

Improving the management of e-waste in Australia

Australia’s generation of e-waste is growing relatively quickly compared to other forms of waste (more than doubling over the past decade) (box 4), but remains less than one per cent of total waste generation. And roughly half of Australia’s e-waste is recycled, with the remainder sent to landfill. Key drivers of global growth in e-waste include population and

economic growth and increasingly fast product turnovers (linked to consumer preferences and advancements in technology). The electrification and computerisation of previously simple or analogue products (such as toothbrushes) has also been a contributing factor.

The relatively fast growth in e-waste has led to community concerns about valuable resources that are lost when e-waste is landfilled, and the subsequent risks to the environment and human health caused by the hazardous materials contained in e-waste.

While many of the materials in e-waste are relatively inert and no more harmful than general waste — such as glass, silver and aluminium — other materials in e-waste are hazardous to the environment or human health. However, the potential impacts on the environment and health from such hazardous materials is estimated to be moderate and manageable due to Australia's generally well-developed landfill management practices (box 4). Further, markets typically provide incentives to prevent the loss of valuable materials contained within e-waste (such as copper, zinc and other rare earth metals), when their value exceeds the costs of extraction.

The main way that Australian Governments have sought to address concerns about e-waste in Australia is through product stewardship schemes. The Australian Government established product stewardship schemes through the *Product Stewardship Act 2011* (Cth) (which was recently replaced with the *Recycling and Waste Reduction Act 2020* (Cth)).

Product stewardship aims to manage the environmental, health and safety impacts of products, including electrical and electronic products that become e-waste. It promotes the shared responsibility of these impacts between consumers, producers, manufacturers and retailers across the full life cycle of a product. Existing Australian product stewardship schemes collect and recycle a range of products, including televisions, printers, computers, mobile phones, printer cartridges and some lighting units. And a new battery recycling scheme is under development. These are mostly voluntary industry schemes, although there is one co-regulatory scheme — the National Television and Computer Recycling Scheme (NTCRS), which covers televisions, computers, printers and computer parts. Manufacturers, importers and distributors of NTCRS products are required to fund the scheme through a levy payable to one of three co-regulatory bodies, which are responsible for recycling the products, based on a recycling target set by government. To meet the recycling targets, products must be recycled to a specified standard.

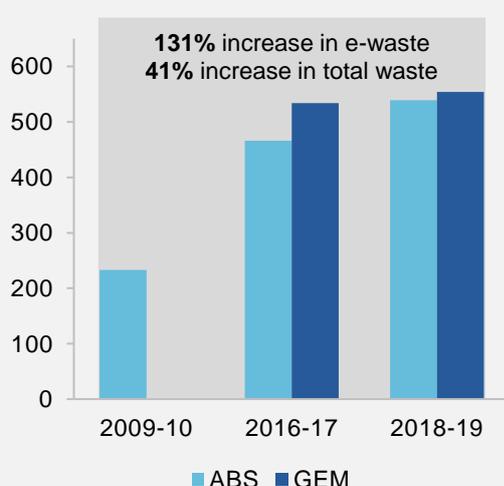
The NTCRS has had some success. Since 2012-13, about 350 000 tonnes of televisions, computers and printers have been recycled. However, the current design of the scheme may be generating adverse incentives that limit its capacity to provide net benefits to the community. There is little incentive for NTCRS bodies to do anything other than recycle collected e-waste, resulting in some otherwise functional products being dismantled and destroyed for their component materials, rather than being put to higher value uses through repair and resale.

Box 4 E-waste growth in Australia and potential impacts

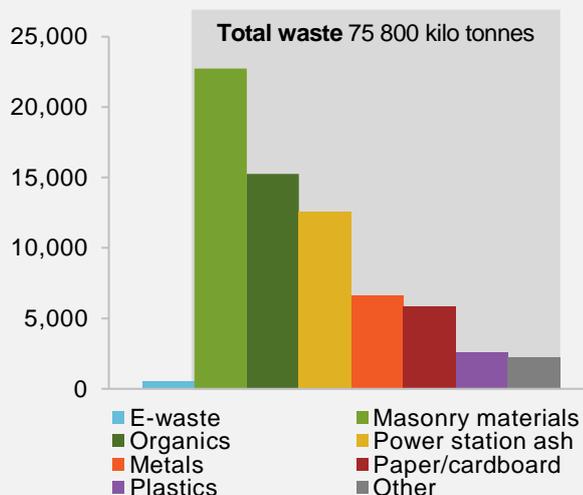
'E-waste' refers to a broad range of electrical and electronic products (including batteries and all products with plugs or cords) that become waste once they are discarded. Australia's annual generation of e-waste has grown relatively quickly over the past decade, compared with other types of waste. Between 2009-10 and 2018-19, the weight of e-waste generated annually has more than doubled (a 131 per cent increase), while total waste increased by 41 per cent (figure).

E-waste generation has grown but is a small share of total waste

(a) Australia's annual generation of e-waste (kilo tonnes)^a



(b) Mass of different types of waste, 2018-19 (kilo tonnes)^b



^a GEM refers to the Global E-waste Monitor estimates of Australia's annual e-waste generation.

^b E-waste figures are double counted, as e-waste is not a formal waste stream. 'Other' includes glass, textiles, leather and rubber, and other wastes.

The relative hazardousness of e-waste is difficult to measure. Everyday use of electrical and electronic products is unlikely to cause harm, with risks mostly arising during disposal and varying both by disposal method and product materials. Many materials (such as aluminium and gold) are relatively inert and recyclable, others (such as lead and, lithium) can be hazardous but are recyclable, and some (such as arsenic and brominated flame retardants) are hazardous and cannot be recycled.

When disposed to landfill, e-waste can affect the environment and human health. For example, heavy metals used in e-waste products and brominated flame retardants (used to coat plastics in a range of products to reduce flammability) can be toxic to humans, plants and aquatic organisms. However, Australian landfills are generally well-managed, significantly reducing hazards associated with e-waste. And thus, the overall impacts of e-waste in landfill are estimated to be relatively moderate (ranging from \$11 to \$17 per tonne, compared to e-waste recycling costs ranging from \$490 to \$1198 per tonne).

Proposed changes to the NTCRS to facilitate repair and reuse of e-waste

Reuse of e-waste helps to extend product lifetimes and potentially lead to better environmental outcomes compared to recycling. In addition, it may help to reduce the overall cost of the scheme, particularly given the high cost of recycling in Australia (due to limited domestic recycling capacity, which is driven in part by insufficient scale for cost-effective mechanical recycling and a highly dispersed population).

The Australian Government should amend the NTCRS to include repair and reuse as an option. To do so, annual recycling targets for the NTCRS should be modified to count products that have been repaired or refurbished for reuse by co-regulatory bodies. This would allow NTCRS co-regulatory bodies to jointly determine the best outcome for collected e-waste. As part of these changes to the target, reuse would need to be clearly defined, to avoid double-counting of the same e-waste.

Permitting reuse under the NTCRS also requires careful management of the export of e-waste, to reduce the risk that existing e-waste export controls will be circumvented. To support better monitoring and enforcement of e-waste, the scheme should be amended as necessary so that scheme regulators can track high-risk e-waste streams using global positioning system (GPS) transmitters.

5 Are broader ‘right to repair’ policies needed?

The policy and regulatory changes outlined above (summarised in table 1) are aimed at enhancing access to existing consumer rights under the Australian Consumer Law, as well as removing unnecessary barriers to repair in several areas. These reforms are expected to increase consumers’ ability to access their existing rights and to obtain repairs of their products when they choose to do so. But they stop short of compelling manufacturers to provide third-party access to their repair supplies. Views are polarised on whether such a ‘positive obligation’ is needed.

Some participants (mostly independent repairers and consumer groups) called for an economy-wide policy that would oblige manufacturers to make repair supplies (such as repair information, tools, equipment and parts) available to third-parties. Yet others, including some manufacturers and the Law Council of Australia, argue that existing laws generally provide adequate rights and remedies to consumers in relation to repairs. There are existing remedies available under Part IV of the *Competition and Consumer Act 2010* (Cth), including a new effects test, to address anti-competitive behaviours in repair markets, such as provisions to prevent the misuse of market power, exclusive dealing or anti-competitive agreements.

Introduction of an obligation on manufacturers to provide repair supplies (in addition to the current regulatory requirements), could in principle improve access to repair supplies for independent repairers and consumers. The benefits might be expected to flow through to consumers as a greater choice of repairer and improved convenience, as well as lower priced repairs, although this may be offset (entirely or in part) by higher new product prices. However, it would be a significant regulatory step that could impose considerable compliance costs on manufacturers, and may have unintended consequences, particularly if restrictions to access to repair information and supplies are necessary to protect public safety or cyber security.

A broader issue relates to which product markets such arrangements would apply to. As noted above, a mandatory service and repair information sharing scheme is being implemented for motor vehicles. Expansion of such a scheme to other product markets would need to be carefully considered.

At this stage, it is not clear that the benefits of such a regulatory intervention would outweigh the costs. However, there may be some product repair markets, such as for agricultural machinery, mobile phones and tablets, that exhibit features that present a higher potential for consumer harm from third-party restrictions on repair. As noted earlier, the Commission is seeking further evidence to support a more in depth analysis of these markets for the final report.

The reforms proposed above go in the direction of enabling consumers to access repair services at a competitive price, without the uncertainty and costs associated with more significant regulatory intervention. Nevertheless, there would be merit in further assessment of the policy landscape in the coming years, supported by an evaluation of the costs and benefits of the repair information sharing scheme for motor vehicles after it has been in operation for at least three years.

Table 1 Possible reforms to reduce barriers to repair

Barrier	Draft recommendation or information request	Number
Enhance access to consumer rights		
Consumers can find it difficult to obtain a remedy under consumer guarantees and regulators have limited powers to assist.	State and Territory Governments to introduce alternative dispute resolution mechanisms to better resolve consumer complaints (such as compulsory conciliation or directions).	Draft rec 3.2
	The Australian Government to enable designated consumer groups to lodge 'super complaints' on consumer guarantee issues, with complaints to be fast tracked by the Australian Competition and Consumer Commission (ACCC).	Draft rec 3.3
Enable access to repair supplies		
Limited access to repair supplies (such as spare parts, repair information and tools) can impede competition from independent repair.	The Australian Government to evaluate the costs and benefits of the proposed motor vehicle mandatory information sharing scheme after three years.	Draft rec 4.1
	The Commission is seeking further evidence on the extent of consumer harm in different repair markets, to determine if an additional policy response is needed.	Info request 4.1
	The Commission is seeking evidence on the costs and benefits of a 'positive obligation' that requires manufacturers to provide access to repair supplies in different repair markets.	Info request 4.2
Manufacturers may not provide reasonable access to repair facilities and spare parts (including software updates).	The Commission is seeking evidence on whether repair facilities, spare parts and software updates are adequately available under consumer guarantees.	Info request 3.1
Third-party repairers may be unable to access repair information under copyright law.	The Commission is seeking feedback on the merits of introducing a 'fair use' or 'fair dealing' exception in the Copyright Act to allow third-party repairers to share copyright information (such as manuals and schematics).	Info request 5.1
Third-party repairers may be unable to obtain tools to circumvent digital locks to access repair information.	The Commission is seeking feedback on the merits of amending the Copyright Act to allow third-party repairers to legally procure tools to circumvent digital locks to access repair information (such as diagnostic data).	Info request 5.1
Ensure warranties do not impede independent repair		
Manufacturer 'warranty void' clauses can deter consumers from using third-party repairers, impeding competition.	Require additional text in warranties to inform consumers that consumer guarantees do not require authorised repair or spare parts.	Draft rec 4.2
	The Commission is seeking further information on prohibiting warranties from containing terms that require use of authorised repairers or spare parts to maintain the warranty.	Info request 4.3
Better information for consumers on product durability and repairability		
Uncertainty about what constitutes a reasonable period of product durability and whether consumer guarantees apply.	ACCC to develop and publish guidance on how long common household products could reasonably be expected to last without fault (durability) under consumer guarantees. Guidance could use ranges for different value products.	Draft rec 3.1
Consumers may lack durability and repairability information, affecting purchase decisions.	The Commission is seeking further evidence about how significant these information gaps are, as well as the costs, benefits and design of a product labelling scheme.	Info request 6.1
Improve management of e-waste to facilitate repair and reuse		
Existing product stewardship schemes do not enable e-waste to be reused.	Amend the National Television and Computer Recycling Scheme (NTCRS) to count repaired and reused products in annual targets.	Draft rec 7.1
Risks of stockpiling, and unlawful exports of e-waste.	Amend the NTCRS to use global positioning system (GPS) trackers to monitor e-waste recycling streams.	Draft rec 7.2

Draft findings, recommendations and information requests

The Australian repair sector

DRAFT FINDING 2.1 THE AUSTRALIAN REPAIR SECTOR

A consumer's decision to repair or replace a broken product is principally driven by price. Convenience, product repairability and consumer preferences for up-to-date products can also be important.

The repair sector accounts for about one per cent of all business revenue in Australia and has grown modestly over the past decade.

- Most repair activity (revenue, number of businesses and workers) comes from industries with more expensive products, such as motor vehicles and machinery, that require regular maintenance and where repair is often more cost-effective than replacement.
- There was less activity in repair industries for less expensive products, such as electronics and appliances, where replacement tends to be more attractive. This is likely due to the relatively low and falling prices of these products over time, rapid technological development, and consumer preferences for new and up-to-date products.

Existing consumer rights under consumer law

DRAFT FINDING 3.1 SCOPE TO IMPROVE THE APPLICATION OF CONSUMER GUARANTEES

The Australian Consumer Law provides consumers with considerable legislative rights to obtain a remedy (repair, replacement or refund) for defective products through consumer guarantees.

The consumer guarantees are comprehensive and operate reasonably well but there is scope to enhance consumers' ability to exercise their rights when their product breaks or is faulty — by providing guidance on the expected length of product durability and better processes for resolving claims.

DRAFT RECOMMENDATION 3.1 GUIDANCE ON REASONABLE DURABILITY OF PRODUCTS

The Australian Competition and Consumer Commission (ACCC) should develop and publish estimates of the minimum expected durability for products within major categories of common household products.

The estimates would be a guide only to support application of the acceptable quality consumer guarantee in section 54 of the Australian Consumer Law. It could use ranges to take into account lower and higher value products in each category.

The ACCC guidance should be developed in consultation with State and Territory consumer law regulators, consumer groups and business groups representing product suppliers and manufacturers, and should be updated over time.

DRAFT RECOMMENDATION 3.2 POWERS FOR REGULATORS TO ENFORCE GUARANTEES

State and Territory Governments should introduce alternative dispute resolution mechanisms to better resolve complaints about the consumer guarantees, such as compulsory conciliation or direction powers (as are used in South Australia and New South Wales).

To inform the most effective design and use of any alternative dispute resolution mechanism, appropriate cost-benefit analysis and sufficient regulator resourcing would be required prior to implementation.

DRAFT RECOMMENDATION 3.3 ENABLING A SUPER COMPLAINTS PROCESS

The Australian Government should enable designated consumer groups to lodge 'super complaints' on systemic issues associated with access to consumer guarantees, with the complaints to be fast tracked and responded to by the Australian Competition and Consumer Commission (ACCC).

The Australian Government should design the super complaints system in consultation with the ACCC, relevant State and Territory regulators and consumer groups. The system should be underpinned by sound operational principles — including criteria for the assignment (or removal) of designated consumer bodies, evidentiary requirements to support a complaint, and the process and time period by which the ACCC should respond.

INFORMATION REQUEST 3.1 REPAIR FACILITIES, SPARE PARTS AND SOFTWARE UPDATES

To better understand whether consumers have reasonable access to repair facilities, spare parts and software updates, the Commission is seeking further information on:

- whether consumers have faced difficulties accessing spare parts or repair facilities under guarantees when their product breaks or develops a fault, including specific examples of the type and age of the product, and the costs incurred by the consumer
 - costs and benefits of businesses being required to hold physical spare parts or operate repair facilities for fixed periods of time
 - whether consumers are experiencing problems using their products due to a software fault or lack of software updates, including specific examples where manufacturers have not addressed the problem because of claims that it is not covered by consumer guarantees
 - the costs and benefits of requiring that software updates be provided by manufacturers for a reasonable period of time after the product has been purchased.
-

Competition in repair markets

DRAFT FINDING 4.2 LIMITS ON THIRD-PARTY ACCESS TO REPAIR SUPPLIES

Available evidence does not point to a systemic competition problem in repair markets. However, for some products, anecdotal evidence suggests that manufacturers are limiting third-party access to repair supplies (such as spare parts, repair information and tools). While manufacturers often justify these limits as a way to safeguard against risks from poor-quality repair (such as to safety and security), these risks can be overstated.

The Commission's preliminary assessment indicates that limits to repair supplies could be leading to consumer harm in some repair markets.

- Agricultural machinery — manufacturers have an incentive to limit third-party access to repair supplies to increase repair prices because these markets are large relative to the market for new machinery. Competition in the market for new machinery may be insufficient to compensate consumers through lower product prices. Further, consumers can be exposed to large financial risks if they are unable to access timely repair and face a high cost of switching to alternative products.
 - Mobile phones and tablets — there is a high concentration of manufacturers in these markets, suggesting competition in the market for new devices may not be strong enough to compensate consumers through lower product prices. Some consumers may also be locked-in to using authorised repairers as they cannot easily switch to alternative brands (for example, due to low product compatibility or the loss of content). While any harm may be small per consumer, it could add up to significant harm across the economy.
-

INFORMATION REQUEST 4.1 CONSUMER HARM FROM LIMITS ON ACCESS TO REPAIR SUPPLIES

The Commission is seeking feedback and evidence on its preliminary assessment of consumer harm (chapter 4) in repair markets for agricultural machinery, mobile phones and tablets. In particular:

- is there any evidence of systematic differences in quality, safety or security between authorised and third-party repairers? If so, what is the cost to manufacturers (for example, damaged brand reputation, determining the cause of a fault, or other liability issues)?*
- what is the size of the repair market compared to the primary market? What proportion of repairs are conducted by authorised repairers?*
- how difficult is it for consumers to estimate the lifecycle costs of these products at the time of purchase?*
- to what extent are consumers locked in to using authorised repairers (for example, can consumers easily switch to other products or non-manufacturer repair supplies)?*
- is competition in the primary market sufficient to compensate consumers for any harm in the repair market (as indicated by low concentration and/or barriers to entry)?*
- to what extent are consumers harmed by less choice, high transportation or travel costs, delays, and inconvenience, particularly in regional and remote locations?*

The Commission is also interested in evidence of where there is substantial consumer harm in other repair markets, including but not limited to medical equipment and high-end watches (which were raised as areas of concern by participants to this inquiry) as well as construction machinery.

DRAFT FINDING 4.3 COMPETITION PROVISIONS ARE AVAILABLE TO ADDRESS REPAIR ISSUES

Although infrequently relied upon, there are existing remedies available under Part IV of the *Competition and Consumer Act 2010* to address anti-competitive behaviours in repair markets, such as provisions to prevent the misuse of market power, exclusive dealing or anti-competitive agreements.

Based on the evidence presented to this inquiry, the Commission does not see a strong case for changes to these provisions to address specific issues in repair markets (such as refusals to deal or tied servicing arrangements), particularly as the remedies have had recent changes that are yet to be fully tested in court.

INFORMATION REQUEST 4.2 A POSITIVE OBLIGATION TO PROVIDE ACCESS TO REPAIR SUPPLIES

The Commission is seeking feedback and evidence on the costs and benefits of different approaches to designing and implementing a positive obligation on original equipment manufacturers to provide access to repair supplies to third-party repairers. In particular:

- evidence on the effectiveness of positive obligation schemes overseas (such as motor vehicle repair information schemes in the United States and Europe, and spare parts requirements in Europe)
 - should a positive obligation be applied across all product markets or targeted towards particular product markets? If so, which product markets, and why?
 - should a positive obligation mandate access to all repair supplies or a subset of repair supplies (such as repair information, spare parts, or diagnostic tools)?
 - how should a positive obligation be implemented and enforced in practice?
-

DRAFT RECOMMENDATION 4.1 EVALUATE MOTOR VEHICLE INFORMATION SHARING SCHEME

The Australian Government should evaluate the Motor Vehicle Service and Repair Information Sharing Scheme that is designed to improve access to repair information, once it has been in operation for three years.

The evaluation should focus on compliance with the scheme, the costs imposed on manufacturers, the benefits to independent repairers and consumers, and any implementation issues that require changes to the scheme, including consideration of whether the scheme should continue.

Manufacturer warranties and their influence on repair

DRAFT FINDING 4.1 VOIDING WARRANTIES FROM INDEPENDENT REPAIR

Terms within manufacturer warranties that automatically void such warranties if non-authorized repairs are undertaken (including 'warranty void if removed' stickers) can deter consumers from using third-party repair during the warranty period. The Commission found examples of such terms in warranties for mobile phones, gaming consoles, washing machines and high-end watches.

Even where these terms do not exist, many consumers appear to be under the mistaken belief that their warranties will be void if they undertake third-party repair. They may also not be aware that consumer guarantees (that they are entitled to under the Australian Consumer Law) cannot be displaced by terms in warranties and are not extinguished due to independent repairs.

DRAFT RECOMMENDATION 4.2 ADDITIONAL MANDATORY WARRANTY TEXT

The Australian Government should amend r. 90 of the Competition and Consumer Regulations 2010, to require manufacturer warranties ('warranties against defect') on goods to include text (located in a prominent position in the warranty) stating that entitlements to consumer guarantees under the Australian Consumer Law do not require consumers to use authorised repair services or spare parts.

INFORMATION REQUEST 4.3 A PROHIBITION ON WARRANTY VOID TERMS

The Commission is considering recommending provisions similar to the Magnuson-Moss Warranty Act in the United States, which prohibit manufacturer warranties from containing terms that require consumers to use authorised repair services or parts to keep their warranty coverage. We are seeking feedback and evidence on the costs and benefits of this approach. In particular:

- *would manufacturers respond by increasing product prices or making their warranties less generous? Would this latter change have any practical impact on consumers given they are also covered for defects under consumer guarantees?*
- *how could such a prohibition be designed and communicated to ensure that consumers are aware that voiding terms are now prohibited?*
- *how could the prohibition be designed to limit manufacturer liability for damage beyond their control? For example, the Magnuson-Moss Warranty Act permits warranty terms that limit manufacturer liability for damage caused by unauthorised repairs or parts, if they can demonstrate third-party fault.*

In a similar vein, should terms within end-user license agreements that purport to restrict repair related activities (discouraging third-party repair) also be prohibited? Is a disclosure as proposed under draft recommendation 4.2 sufficient or is a legislative prohibition required?

Intellectual property protections and repair

DRAFT FINDING 5.1 INTELLECTUAL PROPERTY-RELATED BARRIERS TO REPAIR

In Australia, evidence on the extent to which intellectual property protections restrict repair is patchy and largely anecdotal. Notwithstanding this, copyright laws that prevent third-party repairers from accessing repair information (such as repair manuals and diagnostic data) appear to be one of the more significant intellectual property-related barriers to repair.

DRAFT FINDING 5.2 OPTIONS TO IMPROVE ACCESS TO REPAIR INFORMATION

There are two main options to amend intellectual property protections to improve access to repair information.

- Amend the *Copyright Act 1968* to allow for the reproduction and sharing of repair information, through the introduction of a *fair use* exception or a repair-specific *fair dealing* exception.
- Amend the *Copyright Act 1968* to allow repairers to legally procure tools required to access repair information protected by technological protection measures (TPMs), such as digital locks. This may also require the Australian Government to clarify the scope and intent of the existing (related) exception for circumventing TPMs for the purpose of repair.

To reduce the risk of manufacturers using contractual arrangements (such as confidentiality agreements) to ‘override’ the operation of any such reforms, it may also be beneficial to amend the *Copyright Act 1968* to prohibit the use of contract terms that restrict repair-related activities otherwise permitted under copyright law.

INFORMATION REQUEST 5.1 IMPROVING ACCESS TO REPAIR INFORMATION

The Commission is considering recommending amendments to intellectual property laws to improve access to repair information through the options outlined in draft finding 5.2. It is seeking views on each option, in particular:

- *whether the proposed reform options will assist repairers in accessing repair information, and therefore facilitate third-party repair*
 - *what types of contractual arrangements that could override such reforms are most likely to be of concern*
 - *the costs, benefits and risks of pursuing each option.*
-

Product obsolescence and e-waste

DRAFT FINDING 6.1 PREMATURE OBSOLESCENCE IN AUSTRALIA

There is growing community concern in Australia and overseas that product lifespans are becoming unnecessarily short (premature obsolescence), with detrimental impacts on consumers and the environment.

Premature obsolescence is unlikely to be a significant problem in Australia.

- There is little evidence that manufacturers are intentionally reducing product lifespans.
- Consumers often choose to upgrade their products well before they come to the end of their useful life or break.

Additional policies to prevent premature product obsolescence (in the form of product standards or expanded consumer protection laws to address planned obsolescence) would be unlikely to have net benefits to the community.

Further views and evidence (in response to information request 6.1) will help clarify the potential net benefits of a product labelling scheme in Australia.

INFORMATION REQUEST 6.1 PRODUCT LABELLING SCHEME

The Commission is seeking further evidence on the significance of information gaps that might contribute to premature obsolescence, including:

- *the specific type of information gaps (such as on product repairability, durability, or the environmental impacts of products) that prevent consumers from making informed purchase decisions*
- *the significance of these information gaps (for example, the cost to consumers from obtaining information independently)*
- *evidence that these gaps are undermining the efficient operation of the market (for example, evidence that consumers are systematically overestimating product durability and repairability when making purchase decisions)*
- *whether these information gaps affect specific types of products more than others.*

The Commission is also seeking input on how government and industry might work together to design a product labelling scheme to maximise the net benefits to consumers and the community.

DRAFT FINDING 7.1 E-WASTE IS A SMALL BUT GROWING WASTE STREAM

Annual e-waste generation is growing relatively quickly (more than doubling by weight between 2009-10 and 2018-19), but is a small share (less than one per cent by weight) of total waste generated in Australia.

Information on e-waste is limited, but available data suggests that:

- the main sources of e-waste (by weight) over the past decade were tools, washing machines, air conditioners, small domestic appliances (such as adapters, irons and clocks), cooking appliances (such as food processors and grills), and cathode ray tube televisions
- solar panels and lithium-ion batteries are expected to generate growing quantities of e-waste over the coming decade.

Although e-waste contains some hazardous materials that can be harmful to the environment and human health, Australia's landfill management systems and regulations are generally effective in substantially reducing these impacts (particularly in newer and larger landfills).

DRAFT RECOMMENDATION 7.1 IMPROVING THE MANAGEMENT OF E-WASTE

The Australian Government should amend the National Television and Computer Recycling Scheme (NTCRS) to allow e-waste products that have been repaired or reused by co-regulatory bodies to be counted towards annual scheme targets.

The exact design features that need to be incorporated into the NTCRS to enable reuse options should be determined in consultation with the scheme's liable parties and co-regulatory bodies. The changes should be designed in a way that minimise any adverse incentives, including risks from:

- double-counting, where the same products cycle through the scheme without legitimately being reused
- unlawful exports for reuse that result in more products in the informal recycling sector, generating worse health and environmental outcomes.

Any future co-regulatory or mandatory product stewardship schemes should also include repair and reuse as options within their targets.

DRAFT RECOMMENDATION 7.2 USE OF GPS TRACKERS TO MONITOR E-WASTE EXPORTS

The Australian Government should amend the monitoring arrangements for the National Television and Computer Recycling Scheme so that global positioning system (GPS) trackers can be used to determine the end-of-life location of e-waste collected for recycling as part of the scheme. This should be done using a risk-based sampling approach that focuses on the types of products and supply chains that present the highest risk of unlawful exports or disposal of e-waste.