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Planned obsolescence

Built not to last



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About ELF

The European Liberal Forum (ELF) is the foundation of the European Liberal Democrats, the ALDE Party. A core aspect of our work consists in issuing publications on Liberalism and European public policy issues. We also provide a space for the discussion of European politics, and offer training for liberalminded citizens. Our aim is to promote active citizenship in all of this. Our foundation is made up of a number of European think tanks, political foundations and institutes. We work throughout Europe as well as in the EU Neighborhood countries. The youthful and dynamic nature of ELF allows us to be at the forefront in promoting active citizenship, getting the citizen involved with European issues and building an open, Liberal Europe.

About Fores

Fores – Forum for reforms, entrepreneurship and sustainability – is a green and liberal think tank. We are a non-profit foundation that wants to renew the debate in Sweden with a belief in entrepreneurship and creating opportunities for people to shape their own lives. Market-based solutions to climate change and other environmental challenges, the long-term benefits of migration and a welcoming society, the gains of increased levels of entrepreneurship, the need for a modernization of the welfare sector and the challenges of the rapidly changing digital society – these are some of the issues we focus on. We act as a link between curious citizens, opinion makers, entrepreneurs, policymakers and researchers.

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Executive summary

This report gives an overview of the concept of planned obsolescence and gives several examples of products and business practices which are affected by planned obsolescence. Planned obsolescence is directly linked to climate change as purposely designing products that stops working, works less well, or cannot be repaired before the end of its expected lifetime, is resource-inefficient. As such, attention is drawn to the environmental consequences of planned obsolescence and the conflict between the phenomenon and the transition towards a circular economy.

The transition towards a circular economy is crucial to achieve the goals set up in the Paris agreement to keep global warming to well below 2 degrees Celsius. The report gives examples of current legislation and business models aimed at solving the issue of planned obsolescence. This report also gives several

recommendations on how to counteract the negative effects of planned obsolescence based on the problems described. The recommendations include implementing mandatory EU labeling on product lifespan, enforcing requirements to ensure there is a supply of spare parts, reviewing legislation, taxes and policies aimed at supporting smart product and business plans. Another option considered is the possibility of criminalising the action of planned obsolescence. Ultimately, the report concludes that a plethora of policy measures will need to be put in place and allowed to be tried and tested before planned obsolescence is criminalised as has been done in France. These non-criminal policy measures are preferably implemented on a European level to have the affect needed to influence manufacturers as national legislations will be helpful in creating momentum and raising the issue, but not enough to tackle planned obsolescence in the large scale required.

What is planned obsolescence?

“Any manufacturer of a quality product will tell you that the article which refuses to wear out is a tragedy to business” – Printers’ Ink, 1928¹

Planned obsolescence is when a product stops working, works less well, or cannot be repaired before the end of its expected lifetime. Planned obsolescence is not a new phenomenon. In the 1930s a man called Bernard London suggested making planned obsolescence compulsory by law in the U.S., as a way to improve the economy following the American stock market crash of 1929. This originated from a fear that durable products would reduce consumption, which

¹ Printers’ Ink, New York City, May 12th 1928, Vol. CXLIII, No. 6

would reduce the need for industrial production and cause mass unemployment.² But at the time, environmental concerns were not considered and climate change was not on the political agenda.

Though planned obsolescence was never made compulsory by law, Bernard London certainly planted a seed. The concept was meant to be used as a stimulus tool to pull the U.S. out of the economic depression. The idea was that planned obsolescence would ensure there would be a constant demand for labour, driven by the constant demand for new products with short lifetimes determined by the manufacturer. This meant that discarding products would occur sooner than necessary, as without the planned obsolescence the products would have continued to work for a longer period of time.³ Planned obsolescence was thus originally meant to be a way for companies to release a new, updated version of their products regularly, which created a trend where consumers felt the need to buy the latest version of the product. That is planned obsolescence as we know it today.

² London. *Ending the depression by planned obsolescence*, 5-6.

³ *Ibid.*

Definition of planned obsolescence⁴

There is no one overarching definition of planned obsolescence and several definitions have been proposed. One approach is to categorise it into four different types, summarised below for ease of reference:

1. **Technological or functional obsolescence** – when a product becomes out of date because consumers are more interested in products with improved performance as a result of improved technology.
2. **Psychological or style obsolescence** – obsolescence driven by marketing campaigns. A product that in fact is still in perfect shape goes ‘out of style’ when a newer version, or model that includes new features, is released.
3. **System obsolescence** – the product itself functions, but is no longer supported or fully compatible with a larger system. An example is software updates that might

⁴ See; Packard. *The Waste Makers*. New York: David McKay Co., 1960.; Cooper. *Inadequate life? Evidence of consumer attitudes to product obsolescence*, 421-449.; Maitre-Ekern and Dalhammar. Regulating planned obsolescence: a review of a legal approaches to increase product durability and reparability in Europe, 378-394.; and Stamminger et al. *Towards a durability test for washing-machines*, 206-215.

slow a device or even make it stop functioning. Obsolescence related to software is an increasing worry as digitization increases. Another example is electronic devices, where only certain components become obsolete, such as batteries, but the cost of repair exceeds the cost of replacing the entire commodity, therefore consumers are often indirectly forced to buy a new product rather than repairing the broken one.

- 4. Product failure or breakdown** – obsolescence associated with products that are purposely designed to break easily, such as some plastic toys (though, with many cheap and poorly designed products, it is often difficult to determine if this is deliberate).

Obsolescence is not always ‘planned’ per se: in some cases, manufacturers simply strive for quality that is ‘good enough’ to be able to, for example, offer a cheaper product. In addition, planned obsolescence is about much more than whether a product is programmed to stop working or deteriorates after a certain time period. It is also about durability and reparability of goods. It touches on a plethora of areas, such as products that can’t be repaired, by not selling spare

parts or making them costly, or where consumers have to go to an authorised (often expensive) repair store.⁵ In some cases there are no spare parts available to buy, meaning consumers must replace the product. Finally, when no updates are available or planned, the consumer may also need to buy a new product.

A historical tale of planned obsolescence

It is hard to pinpoint the exact origin of the concept of planned obsolescence. The concept is said to have been discussed in 1924 at a meeting with light bulb manufacturers.⁶ This is commonly known as the Phoebus cartel case. The Phoebus cartel founded *The 1,000 hour life committee* with the purpose to ensure that no light bulb across Europe or the U.S. was manufactured to last longer than 1,000 hours.

When the original documents of the committee were studied, it became clear that they had agreed that light bulbs were not allowed to be sold with a guaranteed duration of more than 1,000 hours, even though this was not the product's true durability. The

⁵ Thus the 'right-to-repair', R2R is restricted as described in; Svensson et al. *The emerging 'Right to repair' legislation in the EU and the US.*

⁶ Krajewski. *The Great Lightbulb Conspiracy.*

committee even went as far as deciding to issue fines to the companies not staying within their recommendations. This stood in stark contrast to manufacturers' behaviour prior to 1924, as they had then often proudly advertised their light bulbs with a guarantee of 2,500 hours durability.⁷ In fact, one of the last remaining examples of the old bulb, called the Centennial Light Bulb, which was installed in a fire station in 1901, still functions today in 2019 and can be seen through a constant live webstream that has been set up to monitor it.⁸

⁷ Dokument Utifrån. *Glödlampskonspirationen*.

⁸ See website; LP Firefighter Foundation, Livermore's Centennial Light Bulb.

Current discussion around planned obsolescence

Planned obsolescence seems to occur more frequently in certain categories than in others. The examples in recent public discussion are products such as washing machines, smartphones and inkjet cartridges.⁹ There are also a few other examples that have been highlighted through the media, such as flat-screen TVs and consumer electronics.

Washing machines

The design of washing machines on the market today is different from their design 30-40 years ago. The main difference is that most of today's machines have a sealed drum. This becomes interesting when looking

⁹ Valant. *Planned obsolescence: Exploring the issue.*

into planned obsolescence, as the sealing of the drum makes it difficult and uneconomical to replace only certain parts.¹⁰ Hence, the consumer most likely has to replace the entire machine, although most of the product is in working order. As such, there is premature obsolescence attached to all of the other washing machine parts when parts inside the sealed drum break. This could be categorised as system obsolescence, as the whole unit has to be replaced, despite the fact that only one part is broken.

Smartphones

When it comes to smartphones, Apple products are perhaps the most commonly cited example of suspected planned obsolescence, with their devices having been in the greatest media spotlight. In 2016, the company acknowledged that earlier iPhone models included software to slow down certain functions after a period of time. Similar cases have been identified with Samsung.¹¹ In Apple's case the company argued that the decision to slow down older phones was to account for their diminishing battery capacity and that the choice was between either slowing the phone down or risk abrupt shutdowns.

¹⁰ Porter. *Are washing machines built to fail?*

¹¹ Vinocur. *Italy hits Apple, Samsung with fines over 'planned obsolescence', The country's Competition Authority accuses the phonemakers of pushing software upgrades that hit performance.*

The case of smartphones shows that a product can often fall under several types of planned obsolescence. It is partly a question of system obsolescence as the software is designed to slow down the phone at a certain time. But, it is also a question of both technological and style obsolescence, as new models are released at regular intervals and old phones quickly go out of style and become obsolete technically. The technical changes could, however, be minor or only relate to a certain phone function, such as the camera, but a new phone has to be bought to get access to that new function.

Inkjet cartridges

Data-chips in certain inkjet cartridges may indicate that no ink is left, even though in reality just one of the multiple inks in the cartridge may have run low. Ink cartridges are then replaced even though there is ink remaining – just not necessarily all colours. This issue has been documented in several studies. In one test, a cartridge was able to print about another 200 pages when this chip was covered. In some other cases, it has even been proven that after refilling certain cartridges, they would still not function as a result of manufacturer design.¹² This could be viewed as both system

12 Aladeojebi. *Planned obsolescence*, 1505–1506.

and product failure obsolescence, as the ink cartridges have to be changed prematurely because of the way the system is set up, but they are also designed to be a single-use product that is not possible to refill, creating unnecessary waste.

Flat-screen TVs

As flat-screen TVs were introduced on the market in the mid-2000s, many TVs were returned or brought in for repair when screens went dark. It was discovered that the voltage through the lights in the screens had been amped up too high, which resulted in them breaking more quickly and damaging the screen. With the appropriate voltage, more lights would have been needed in the design, and thus would have been more expensive to produce whilst also increasing durability. The manufacturer had instead used too few lights with too high a voltage. However, the vast majority of TVs lasted two or three years, enough to last the guarantee period.¹³ Decreasing the durability of a product can be defined as both system obsolescence, as well as product failure or breakdown.

¹³ Öhman. *Prylarnas Pris - Allt som säljs går sönder*.

Consumer electronics¹⁴

Many manufacturers of consumer electronics restrict consumers' ability to repair their products through a number of techniques. This can include the use of digital locks or copyrighted software, as well as a lack of provision of spare parts and manuals. Designs with proprietary screws (for example, Apple's pentalobe screws) require special tools, making repair less likely to occur. Gluing components together, such as gluing shut the casing so you can't open it without breaking it, or gluing batteries to other components, making repairs more difficult, are also examples of design barriers. Some businesses add clauses to their user agreements so consumers (often unknowingly) agree not to fix their own products. The restriction of the consumer's ability to repair the product is a typical case of system obsolescence.

¹⁴ See; Svensson et al. *The emerging 'Right to repair' legislation in the EU and the US.*; and Consumers international. Built to fail: 'is planned obsolescence really happening?'.

Why is planned obsolescence a climate issue?

Planned obsolescence is directly linked to climate change. To achieve the goals of the 2016 Paris climate agreement of limiting average global temperatures to well below two degrees Celsius, the use of fossil fuels must be cut. There is a need to manage the resources used better. Planned and/or premature obsolescence is resource-inefficient, and therefore, results in an overuse of the world's resources.

The issue with planned obsolescence is that it creates a never-ending need of constant 'virgin' production. According to the 2019 *Global Resources Outlook*, they assess that resource extraction and processing to materials, fuels, and food make up about half of the total global greenhouse gas emissions (disregarding

climate impacts related to land use) and more than 90 percent of biodiversity loss and water stress.¹⁵ Stopping planned obsolescence, thus, improves resource management and, therefore, contributes towards combating both climate change and the negative consequences of climate change.

There are many more examples of how stopping planned obsolescence has an environmental benefit. A report, published September 2019 by the European Environmental Bureau (EEB) calculates how much greenhouse gas emissions could be reduced if the life of electronic products were extended. The report states that a five-year extension of Europe's mobile phones, laptops, washing machines and vacuum cleaners would save around 10 million tonnes of carbon dioxide equivalents each year.¹⁶

Smartphones also provide a good illustration of this. The impact on the environment, if consumers choose to keep old phones instead of upgrading to the newest model, provides a clear link between climate change and planned obsolescence. A calculation done by the Green Alliance¹⁷ implies that just by extending a smartphone's life by one year, the embodied carbon saved, the primary energy saved and the water con-

15 United Nations Environment Programme. *Summary for policymakers. Global resources outlook, Natural resources for the future we want.*

16 Zuloaga et al. *Cool products don't cost the earth.*

17 Benton et al. *A circular economy for smart devices. Opportunities for US, UK and India.*

sumption saved was more or less a third for all categories. This indicates that some aspects of planned obsolescence hampers a shift towards a circular economy.

Traditionally, policymaking related to climate and resource efficiency have been treated as separate issues, but there are signs that this is about to change. It is increasingly understood that materials, buildings and products contain ‘embedded carbon’ or ‘embedded emissions’ (also referred to as embodied emissions) – these are the greenhouse gases that are emitted in the process of mining, manufacturing and supplying the products.¹⁸ Both in the case of buildings and products, recent research has established that ‘embodied carbon’ is a large part of the total carbon emissions.¹⁹

Several trends lead to a situation where embedded carbon is increasing, whereas ‘traditional’ carbon emissions (those connected to actually using the products and buildings) are decreasing:

1. The energy mix is getting ‘greener’ as the share of renewables are increasing, leading to fewer greenhouse gas emissions caused

¹⁸ UK Green Building Council. Tackling embodied carbon in buildings.; Scott et al. *Extending European energy efficiency standards to include material use: an analysis*, 627-641.

¹⁹ UK Green Building Council. Tackling embodied carbon in buildings.

by using products or buildings.²⁰

2. In some cases, materials are becoming more advanced and products more efficient (for example, the advanced materials needed to create a more energy-efficient building or a LED light bulb), which require a more complex manufacturing process, leading to more embedded carbon.
3. For some product groups, such as consumer electronics, the lifetime has become shorter as consumers switch products more often; then embedded carbon becomes a bigger issue as more materials are needed to produce more products.²¹

The discussions around industry emissions have focused on the supply side: reducing the emissions from the production of materials like steel, cement, chemicals, etc. Less attention has been given to the demand side: how a circular economy could reduce emissions through better use and reuse of the materials that already exist. A study from Sitra et al.²² found that the potential for demand-side measures can take

²⁰ Ibid.

²¹ Material Economics. *The Circular Economy - a Powerful Force for Climate Mitigation. Transformative innovation for prosperous and low-carbon industry.*

²² Ibid.

us more than halfway to net-zero emissions in the EU, and hold as much promise as those on the supply side. Moreover, they are often economically attractive. A 2018 study found that emissions embodied in material-intensive manufactured products consumed in the EU represent the equivalent of over 40% of EU production emissions, offering significant scope for emissions reductions along product supply chains.²³

²³ Scott et al. *Extending European energy efficiency standards to include material use: an analysis*, 627-641.

Stopping planned obsolescence as part of the Circular Economy

A **'take, make, waste'** approach, also called a linear economy, is the opposite of a circular economy. In a circular economy, the value of products and materials is maintained for as long as possible. Waste and resource use are minimised, and when a product reaches the end of its life, it is used again to create further value.²⁴ In a circular economy, the aim is to reduce the amount of raw materials extracted from the earth. It also helps to reduce the levels of consumption to stay within the limits of what the earth is able to provide and replenish. This means that a circular economy reduces the amount of waste produced.²⁵

²⁴ European Commission, *Circular Economy*.

²⁵ Naturskyddsforeningen, *Cirkulär ekonomi - istället för slängsamhället*.

As global economic development increasingly raises standards of living, consumption levels are also increasing. With a linear economy, this means that even greater pressure is put on the earth, leading to further extraction of raw materials and greater amounts of waste products that are not being re-used, repaired or even recycled.²⁶ It has been estimated that 99% of the material content of goods become waste within six weeks and that 80% of all products are one-way products.²⁷

Both the EU and UN advocate a shift towards a circular economy, but the question of how remains. Eléonore Maitre-Ekern and Carl Dalhammar outline the necessary building blocks of a circular economy:

“The circular economy (CE) is meant to achieve a gradual decoupling of economic growth from the consumption of finite resources and lead to designing waste out of the system. ... there are certain generally shared notions of what it means, notably the four building blocks that are deemed vital for the transition to a CE: (i) materials and product design; (ii) new business models; (iii) global reverse networks; and

²⁶ Ibid.

²⁷ Allenby. *The Greening of Industrial Ecosystems*.

*(iv) enabling conditions (namely policies and infrastructure). Without policy interventions, the chance of realizing the CE vision is small. Businesses that have, or plan to adopt, a circular business model face a systemic ‘web of constraints’ such as people’s preferences and life circumstances, weakly developed infrastructures and conflicting policies.’*²⁸

²⁸ Maitre-Ekern et al. *Towards a hierarchy of consumption behavior in the circular economy.*

Planned obsolescence as a consumer-rights issue

Tackling planned obsolescence has widespread popular support. A 2016 study by the European Commission shows that European consumers would be willing to contribute to the shift towards a circular economy by repairing products instead of replacing them, given the circumstances that information on how to do this was more accessible.²⁹ There is some evidence that this is supported by EU citizens, with 92% of respondents to a 2013 Eurobarometer study agreeing that the lifespan of products available on the market should be communicated to consumers.³⁰

The main problem with planned obsolescence from

²⁹ Valant. Jana, *Planned obsolescence: Exploring the issue*.

³⁰ Flash Eurobarometer 367. *Attitudes of Europeans towards building the Single Market for green products*.

a consumer perspective is that the information asymmetry is too high. In essence, durable products are not valued on the market because durability criterias are not visible. A well-functioning market is obstructed by planned obsolescence as important information is concealed from the consumer, thereby restricting the consumer's choice when buying a product. Access to correct information is key to ensure a free market can work as intended. Not sharing information about the durability of a product could also be considered to be in contrary to consumer rights.

The EU Consumer Rights Directive provides a guarantee for a product for a period of two years. However, after the first six months the burden of proof that there was a defect at the time when the consumer bought the product lies with the consumer. As such, this Directive does not cover planned obsolescence since the the date a product reaches planned obsolescence or premature obsolescence may occur after two years. In the last couple of years, several EU member states have adopted more progressive rules for consumer guarantees than listed in the Directive (which the Directive allows). Some, like Finland, have even linked their rules to the expected product lifetimes. Finnish consumer law stipulates that with regards to durability the goods shall “correspond to what a con-

sumer ordinarily may expect in the purchase of such goods”.³¹ If this is not the case, the goods are considered defective. The expected lifespan of the product is, in practice, very much dependent on the product category. The generosity in terms of duration of the guarantee is, however, somewhat counterbalanced by the fact that the burden of proof passes to the consumer after six months.³²

³¹ Ministry of Justice, Finland. *Finnish Consumer Protection Act*.

³² Maitre. *Regulating planned obsolescence: a review of legal approaches to increase product durability and reparability in Europe*, 378-394.

Action against planned obsolescence

European Union developments

There are rumblings in Brussels that legislation related to planned obsolescence is on the cards. Frans Timmerman, the Commissioner for Climate Action, has been made responsible to coordinate work on the ‘European Green Deal’, emphasising the priority given to climate change by the new EU Commission President, Ursula von der Leyen. In her mission letter to Timmermans, she wrote: *“You will coordinate our work on the circular economy, as well as on the new ‘Farm to Fork’ strategy for sustainable food. This will cover every step in the food chain from production to consumption, looking at consumer information.”*³³ An educated guess,

³³ Von der Leyen. *Mission Letter, Executive Vice-President-designate for the European Green Deal.*

therefore, points towards legislation in relation to planned obsolescence that focuses on consumer information is on the cards.

Although there may be developments coming, currently there is not much concrete action addressing all aspects of planned obsolescence. Yet, there have been some developments worthy of note. For example, the EU Commission published a Communication entitled *Closing the loop – An EU action plan for the Circular Economy* COM/2015/0614 in 2015. In this text the Commission proposed that it would investigate whether planned obsolescence occurs, and if actions to address it were necessary. However, this has yet to result in any specific action encompassing planned obsolescence directly on the Commission's part.

Instead, the subject currently loosely ties in with EU legislation on ecodesign, waste, use of natural resources, consumer information and the circular economy. Increasing the durability, repairability and recyclability of products represents the next big step for ecodesign and energy labelling policies. Recently, the EU adopted some requirements related to repair and disassembly. One example concerns manufacturing laws to make fridges and freezers more easily repairable and longer-lasting.³⁴ The agreed text foresees that repairs should be able to disassemble some

³⁴ Anastasio. *EU governments support first set of laws for more repairable products.*

critical parts without damaging the product with the use of commonly available tools.

On October 1st, 2019, the Commission adopted ten ecodesign implementing regulations, which will extend the life of many appliances by ensuring replacement parts are easier to get hold of for certain product groups such as refrigerators, washing machines, dishwashers and Electronic displays, which includes televisions. Yet, while manufacturers will have to make spare parts widely available under the Ecodesign Directive, they will only have to supply them to professional repairers. Although repairs will have to be possible using readily-available tools, and without causing damage to the appliance, it may, therefore, still be hard for individuals to repair these products by themselves.³⁵

These requirements in the Ecodesign Directive (2009/125/EC) have been supported by consumer organisations and environmental NGOs, which propose even stricter rules, for instance, spare part availability to non-professionals. The consumer movement also stresses the importance of ensuring that software updates for these appliances are easily available to consumers, especially as all appliances are becoming connected.³⁶

³⁵ European Commission, *The new ecodesign measures explained*.

³⁶ Anec. *Consumer organisations' views on the implementation and enforcement of the Ecodesign Directive: Greener, Better, Faster, Stronger Ecodesign*.

The European Parliament resolution

On July 4th, 2017 a non-binding European Parliament resolution entitled *A longer lifetime for products: benefits for consumers and companies* was adopted.³⁷ It advocates that prolonging the lifetime of goods would benefit not only consumers, but companies as well. The resolution is a wide-ranging text and includes sections on: designing robust, durable and high-quality products; promoting reparability and longevity; operating a usage-oriented economic model and supporting SMEs and employment in the EU; ensuring better information for consumers; and finally, a section on proposed policy measures on planned obsolescence. It also calls for minimum standards that could be set with help from the European standardisation organisations. Other possible improvements involve manufacturers using easily replaceable materials and techniques that allow for repairs (for example, using screws rather than melding parts together). More specifically, in the section on measures on planned obsolescence the resolution states that the European Parliament:

³⁷ Durand. *A longer lifetime for products: benefits for consumers and companies* (2016/2272(INI)).

*“Calls on the Commission to propose, in consultation with consumer organisations, producers and other stakeholders, an EU-level definition of planned obsolescence for tangible goods and software; calls on the Commission, furthermore, in cooperation with market surveillance authorities, to examine the possibility of establishing an independent system that could test and detect the built-in obsolescence in products; calls, in this connection, for better legal protection for ‘whistleblowers’ and appropriate dissuasive measures for producers”.*³⁸

The European Commission welcomed the resolution in its response, but has, thus far, not proposed any new measures from the EU’s side (as of October 2019). Instead, it merely lists ongoing work and already existing regulations as examples of work that in some way go towards addressing the issues brought up in the resolution. In response to the call for action on measures on planned obsolescence referred to earlier, the Commission’s response sets out that:

³⁸ Ibid.

“The Commission highlighted in its 2016 Guidance on the implementation/ application of Directive 2005/29/EC on unfair commercial practices (SWD(2016) 163 final, 25.5.2016, Section 3.4.8) that if a product is proven to have been designed with a limited lifetime and the consumer is not informed about this fact, on the basis of a concrete case-by-case assessment by Member States’ competent bodies, it could be considered as an unfair commercial practice under the Unfair Commercial Practices Directive.

*With regard to design features, the Commission is of the view that the objective of extending the useful lifetime of products by supporting their durability and upgradability needs to be reconciled with the need to foster the development of new and better-performing products, and the need to preserve consumer choice. There are trade-offs to be arbitrated in prolonging the lifetime of products, in terms of costs, energy and material resources, which need to be examined carefully, together with stakeholders, on a product-by-product basis”.*³⁹

³⁹ The European Commission’s response to the text adopted in plenary, see; <https://oeil.secure.europarl.europa.eu/oeil/spdoc.do?i=29938&j=0&l=en> (collected 2019-08-08).

The response was sent to the European Parliament on December 1st, 2017, and although there has been discussion and media attention around the issue, no action to address planned obsolescence in its entirety has been taken at a European-wide level since then.

The resolution has met criticism for being too vague. The global pro-standardisation organisation ECOS has been particularly critical, expressing disappointment in how the final outcome of the resolution seems to be a diluted version of the original proposal. The critique is mainly based on the fact that the resolution only promotes voluntary measures, not regulations.⁴⁰

EU Standardisation

There have, however, been some developments that could be seen as an important step, as the European standardisation bodies have established new standards that could support future legislation. In 2015, the Commission issued a standardisation request (M/543, 2015) to the European Standardization Organisations (CEN/ CENELEC/ETSI) to develop generic/horizontal standards relevant to energy-related products

⁴⁰ ECOS. *New European Parliament Resolution on longer lifetime for products.*

that address major aspects of material efficiency, namely: reparability, durability, upgradability, recyclability, or the identification of certain materials or substances. The main objective was to have standards that can be used as a framework for the development of product-specific material efficiency standards and regulations. New standards related to: 1) durability; 2) Reparability, Reusability, Upgradeability, and; 3) Recyclability are recently finalised, or will soon be finalised.⁴¹ These standards can be used as a basis for setting other product-group specific standards, which can be used for manufacturers to show compliance with legal requirements on durability and reparability.

The development of standards are crucial as there cannot be any legal requirements set on consumer information around expected durability and how long the product is expected to last, unless these can be quantified and measured. Further, the Joint Research Center (JRC) has recently published a report on a possible scoring system to inform on the ability to repair and upgrade products.⁴² It proposes a general framework that provides technical guidance for the identification of the most relevant aspects and priority parts

41 Schlegel, M.-C., McAlister, C. and Spiliotopoulos, C. 2019. Ecodesign spinning towards the circular economy – the contribution of new standards on material efficiency. Proceedings from PLATE2019, Berlin.

42 Cordella. *Analysis and development of a scoring system for repair and upgrade of products.*

for products on the market, as well as for scoring and aggregating different aspects of repair and upgrade. Thus, recent developments are able to support future regulation related to durability and reparability.

French legislation

Although there is no general all-encompassing legislation at a European level that prevents planned obsolescence, some action has been taken at a national level. In particular, France introduced a definition of planned obsolescence into its legislation, making it a punishable offence in 2015. It did so by using the French Act on the energy transition for green growth to amend the consumption code.

The French legislation was the first of its kind to introduce a definition of planned obsolescence. As a result, planned obsolescence is now an offence punishable by two years' imprisonment with a fine of up to €300,000 (or up to 5% of the company's average yearly turnover on French territory). It is, however, still unclear whether this would be calculated on French turnover or global turnover. Planned obsolescence is defined as any technique through which a product has its life deliberately reduced by a producer in order to

increase its replacement rate in the French law.⁴³ A more exact translation of the French legislation reads:

“I.-Planned obsolescence is defined by all the techniques by which a manufacturer aims to deliberately reduce the life of a product to increase the replacement rate.

II.-Planned obsolescence is punishable by a two-year prison sentence and a €300,000 fine.

*III.-The amount of the fine may be increased, in proportion to the benefits derived from the breach, to 5% of the annual average turnover, calculated on the last three annual turnovers known at the date of the facts”.*⁴⁴

In addition to the above law that regulates planned obsolescence, France is also at the forefront of this issue as since 2014 it is mandatory, according to French law, to display how long a product has spare parts in stores.⁴⁵ However, this obligation is only enforceable in law when spare parts exist and when there are no spare parts available, the seller has no obligation to inform the customer of this.⁴⁶ There are also discus-

⁴³ Legifrance. *Code de la consommation. Obsolescence programmée.*

⁴⁴ Legifrance. *Relative à la transition énergétique pour la croissance verte.*

⁴⁵ Legifrance. *Code de la consommation. Créé par Décret.*

⁴⁶ Direction Générale de la Concurrence, de la Consommation et de la Répression des Frauds. *Les pièces détachées.*

sions in the upper house in France, the Senate, around waste and circular economy. They span proposals like creating a mandatory repairability scoring system for electronic devices to improve the information on spare parts and access to second-hand spare parts.⁴⁷ As such, we may see France continue to be a forerunner in the area.

The HOP organisation in France

A French non-profit, pro-consumer, environmental organisation, known as “Halte à L’Obsolescence Programmée” (HOP), was founded in 2015 to spearhead putting the new French legislation on planned obsolescence into action. The organisation campaigns for more-durable and repairable products from both an environmental point of view and a consumer rights perspective. It also aims to raise awareness of the issue on a global scale by linking it to several threats, such as the social, geopolitical and environmental risks of planned obsolescence whilst also showcasing and providing solutions to ensuring that products last longer. In addition to this, it also works with companies to cre-

⁴⁷ Sénat. *Projet de loi. Relatif à la lutte contre le gaspillage et à l'économie circulaire.*

ate a network around sustainable business models.⁴⁸

When approached and asked⁴⁹ HOP recommended that its work is upscaled to a European and global level by banning and criminalising planned obsolescence practices at those levels. More generally it advocated creating a legislative system that encourages durable and repairable products; implement longer legal warranties to protect consumers against premature failings, compulsory available spare parts for products, supporting repair by tax cuts, and including education on repairing products in schools, to name a few examples. It also advocates that another important public-policy measure is to introduce mandatory durability labelling on products.

The HOP organisation has not only been advocating taking a stand against planned obsolescence by campaigning against it, it has gone further and taken legal action against companies in instances of suspected planned obsolescence. The organisation has, therefore, filed several lawsuits against companies under the new French legislation. The biggest target group is printer manufacturers, such as Epson, HP and Brother, which HOP considers to have knowingly curtailed the durability of printers and cartridges. These

48 Halte À l'obsolescence Programmée. *Le Manifeste*.

49 Chasson. *Chargée de mission, Association Halte à l'Obsolescence Programmée (HOP)*.

cases are still ongoing so there is no final legal judgement to refer to as of yet.⁵⁰

HOP filed a legal complaint against Apple in December 2018. This followed Apple admitting that older iPhone models were deliberately slowed down through software updates. The company said this was because the phone's battery performance diminished over time. According to HOP, the concerns were based on discoveries, disseminated in the media, revealing that multiple older models of iPhones were deliberately slowed down by their latest software update, which seemed to have occurred at the exact same time as a new model of the iPhone was released. HOP saw this as evidence of planned obsolescence. HOP states that it has chosen to fight for this cause, not only to protect consumer rights, but to also protect the environment from the damage that e-waste causes.⁵¹

⁵⁰ Nelson. *France goes after companies for deliberately shortening the life of hardware. French prosecutors investigate a planned obsolescence' complaint against printer maker Epson. A conviction could have far-reaching global ramifications.*

⁵¹ Halte À l'obsolescence Programmée. *HOP porte plainte contre Apple pour obsolescence programmée.*

The Italian Competition Authority

Italy is also a European country that has decided to tackle planned obsolescence at a national level, and done so successfully. In October 2018, Italy's competition authority fined Apple and Samsung €10 million and €5 million, respectively. The two companies were found in violation of the Italian Consumer Code in relation to:

“the release of some firmware updates for their mobile phones which caused serious malfunctions and significantly reduced their performance, in this way speeding up their replacement with more recent products. The two companies have induced consumers – by insistently proposing to proceed with the download and also because of the significant information asymmetry of consumers vis-a-vis the producers – to install software updates that are not adequately supported by their devices, without adequately informing them, nor providing them an effective way to recover the full functionality of their devices.”⁵²

⁵² Autorita Garante della Concorrenza e del Mercato (AGCM). *Apple and Samsung fined for software updates that have caused serious troubles and/or have reduced functionality of some mobile phones.*

Industry initiatives

Planned obsolescence does not necessarily have to occur in technical goods only, it could occur in a wide variety of goods. Nor does the fight against it necessarily have to be carried out by states, pro-consumer organisations or individuals. There are various advantages for a company to act in such a way that also tackled planned obsolescence. A few of the benefits tackling the phenomenon includes stimulating innovation, building a better brand image, gaining customer loyalty and trust. A shift to such a new business model can therefore be an opportunity rather than a burden.

There are several positive examples of companies with policies aimed at strengthening consumer rights, thereby avoiding the negative effects of planned obsolescence. Miele is one example, and the company provides information about the expected lifetime of its products, allowing consumers to make an informed choice. For instance, Miele provides information on the number of programmes its washing machines are expected to run before they have to be replaced,⁵³ Another example is Volvo, which remanufactures worn out auto parts that can then be used as replacement parts in existing cars. The range of replacement

⁵³ Miele. *Highest Miele quality for a long service life. Unique Quality.*

parts covers parts for cars up to 15 years after production.⁵⁴ A final example is the lifetime repair guarantee by Nudie jeans. Nudie has a policy to repair free of charge any pair of Nudie jeans, regardless if they were bought directly from their store or second hand. These are just three examples of how company policies can counteract planned obsolescence, which other companies could use as blueprints for their own businesses.

Tyre manufacturer Michelin has also pushed the issue of planned obsolescence from a corporate perspective. At the moment, a car is not legally allowed on the road once its tyres have reached the legal tread depth of 1.6mm. This minimum requirement was implemented for safety reasons, as a tyre driving in wet weather runs a risk of losing its grip. But, if the tyre has a certain tread pattern, it operates as a drainage, ensuring the car will stay securely on course at 1.6mm.⁵⁵ Yet, a study from 2014 found that the average tread depth of tyres on European landfills are about 3mm. As such, Michelin believes that some actors are encouraging consumers to purchase new tires at a 3mm depth, leaving them under the impression that

54 Volvo Cars. *Remanufactured Cars*.

55 Baboulet et al. *Planned obsolescence is not inevitable. Environmental and social impacts related to the general removal of tires at 3 mm tread depth across the European Union*.

this is “safer”.⁵⁶ Michelin goes as far as countering this with the argument that “new tyres” do not really exist because tyres begin to wear out from the moment they roll off the production line. The company has, therefore, raised the issue and started an initiative called “Movin’On” to discuss this issue and planned obsolescence in a wider sense.⁵⁷

Sustainable business breaking with the planned obsolescence model

Whilst some companies engage in planned obsolescence, most companies do not. As illustrated previously, some companies even prosper and grow by tackling planned obsolescence even though it is not very common to have business models that are clearly and directly aimed against planned obsolescence. As society moves towards a more sustainable future, businesses will have much to gain by finding and promoting more sustainable and responsible business models. Three brief examples demonstrating this are outlined below:

⁵⁶ Ibid.

⁵⁷ For more information, see; <https://www.movinonconnect.com/en/>.

- **Houdini**, the Swedish clothes manufacturer, has changed its business model from selling skiing clothes to renting them out. For the consumer, this means they will always be able to have the latest clothes at a reasonable price, choose the garment best suited for the activities planned and prevailing temperatures. For the climate and environment, it means much reduced total demand for garments, since on average a person may be skiing for a week, while the ski season is 20 weeks, in theory meaning that ski clothes can last two years and can be used by 40 different users, with a 95% reduction in the sets needed. Obviously, with this business model it makes economic sense for Houdini to develop clothes that are long lasting; both in the sense that they do not tear and break, and that they do not feel outdated after just one season. Since the clothes will be returned after use, it also makes sense to develop clothes that can easily be cleaned, repaired and recycled.

- **Philips**, the Dutch light bulb manufacturer, also offers lighting as a service, where instead of buying light bulbs the consumer – typically an office or a factory – decides how much light they want in the room, as well as the colour or hue of lighting. For Philips, this is an opportunity to use its lighting expertise to generate more revenue than just by selling light bulbs, and it creates a longer ongoing business relationship. For the consumer, it means that the important question of how to best create a good work environment is undertaken by experts, who will then also have to ensure that quality is maintained with minimum delay if the light bulbs break down. For the environment and the climate, this is a positive game-changer since the logic of lighting-as-a-service is to satisfy demand with the minimum of light bulbs possible and to never replace any them if not needed; the exact opposite of selling the bulbs.
- **Tesla**, the car manufacturer, wirelessly upgrades its vehicles so that they over time improve their performance. Past updates

have included increased self-driving (auto-pilot) abilities and faster charging, while the owner can also, at cost, upgrade the battery online so that it can store more energy. In the future, Tesla will incorporate technology so that the car is fully autonomous and can be rented out when not used. This means that Teslas age better than other cars, and that the reason for buying a new Tesla, and ultimately scrapping the old one, is significantly diminished. For Tesla, this creates brand value, enables it to charge better for new cars and gives an additional revenue stream since some of the updates are fairly costly. For the climate, the benefits are much the same.

- **SOS Accessoiré and Spareka** are two French companies that promote repairing devices and who want to simplify the process so that individuals can easily repair their own products. SOS Accessoiré runs a web page, which is designed to make it easy to find and spare parts for electronic devices that they sell. A customer can order spare parts online and repair the product at

home. Spareka also sell spare parts for electronic devices, but they combine this with instructional videos on Youtube showing how to perform repairs at home. As such, both of these companies promotes a circular economy by having business models that focus on repairability and prolonging a product's life.

It's all so complicated, or is it?

There are some complexities to take into account when discussing planned obsolescence.

Faced with environmental concerns, a consumer might be encouraged to replace a working product with a new model that is more environmentally friendly. Planned obsolescence could potentially help us out of unsustainable behaviour in some cases. An extreme example that can be used to illustrate this is, for example, that it could be good for the climate if it was no longer possible to repair fossil-fuel vehicles once there is a well-running market for non-fossil-fuel vehicles. Yet, as demonstrated by the examples we have illustrated, early replacement may only make sense in some exceptional cases. It is also important

to bear in mind that planned obsolescence done in a way where information about the products lifetime is concealed for the consumer or customer always needs to be addressed.

Another possible complication is the question ‘replace or repair?’ As technology has evolved, electrical appliances have become increasingly energy-efficient, which is beneficial to the environment but modern machines are often resource-intensive to produce, meaning they have a big environmental footprint. This leaves the question – is it better for the climate to replace an old home appliance that has a defect or to repair it? The short answer is that it depends on the product. For example, producing a modern washing machine has major environmental consequences, which means that the more environmentally friendly option is to repair an old washing machine, even if it is less energy efficient. Another example are electronic notebooks, where even if a newer notebook uses around 10% less energy than the old one, it would have to remain in service for around 80 years in order to compensate for the energy used to manufacture it. Whether to replace or repair in other cases will depend on the energy rating of the current appliance owned, this is true for fridges, freezers, vacuum cleaners and tumble dryers. The most eco-friendly option will

depend on how big an improvement a new appliance would bring compared with the current one owned, which means consumers have to be well informed in order to be able to properly determine whether it is better to replace or repair.⁵⁸ The environmental benefits of repairing over replacing also depends on how clean the electricity is in the country where the product is being used. In countries with a cleaner electricity mix (e.g. Norway or Sweden), it is generally better to use products longer because the climate impacts of energy-using products are less in these contexts.⁵⁹

The complexities involved may mean that policy-makers should not always aim for policies that incentivise very long lifetimes, as this depends on the characteristics of a given product group, the user behavior in relation to these types of products, and the energy mix. However, it should be understood that ensuring a minimum lifetime is part of the product quality. People expect a certain quality, and historical cases show that the attractiveness of many climate-friendly technologies – e.g. heat pumps and wind power – have been dependent on them being reliable and well-functioning.

Information about whether a product is affected by planned obsolescence is more complicated than at

⁵⁸ Institute für angewandte Ökologie. *Repair or replace? Extending the life-span of your home appliances.*

⁵⁹ Richter, J.L., Tähkämö, L. & Dalhammar C. *Trade-offs with longer lifetimes? The case of LED lamps considering product development and energy contexts*

first glance. Labelling gives consumers information about the durability of products, but it can be complex, as described in a study by Eléonore Maitre-Ekern and Carl Dalhammar:

“This type of label could be mandatory or voluntary; a mandatory label would of course have a greater effect in the market and could trigger innovation among manufacturers to compete for durability. In any case, designing such a label is complex for several reasons, including: (i) consumers may have different ideas on what ‘durability’ entails and it may differ between consumer segments and product groups; (ii) for some product groups, such as lighting, durability has many dimensions (for example, switching cycles, colour and luminous flux); (iii) for very durable products it is hard for market surveillance authorities to establish whether the manufacturers’ claims are true; unless there is an access to ‘stress tests’, the only way to see how long a product lasts is to test it continuously for years; (iv) the durability of the product is not only linked to the design as such; access to spare parts at a reasonable cost is equally important; (v) durability may vary depending on the pro-

duct usage (frequency; conditions of use and storage; maintenance)”.⁶⁰

It is also hard to prove that a manufacturer intentionally reduces the lifetime of a product. For example, the process of testing and surveying that design requirements are followed has been criticised on the basis that they cannot be properly enforced. In order for any regulations regarding planned obsolescence to be efficient, proper surveillance and monitoring, which can ensure compliance, is needed. If the rules are not enforced, there will be room for non-compliant products on the market which could distort the market, putting companies that are complying at a disadvantage.

Yet the pro-standardisation organisation ECOS argues that efficient monitoring and surveillance is feasible and can be done in a cost-effective way that requires minimum training while ensuring objectivity, consistency and replicability. To do so, it has developed a toolbox of verification approaches that can be used to assess resource efficiency requirements, divided into three categories: product design, information and service.⁶¹ ECOS also outlines how this can be monitored:

⁶⁰ Maitre-Ekern et al. *Towards a hierarchy of consumption behavior in the circular economy*, 7.

⁶¹ ECOS. *Ecodesign as part of a circular economy - implications for market surveillance*.

“Product design requirements can cover aspects such as durability, ease of disassembly, and hazardous or valuable material content restriction. Each of these can be verified using already-existing methods with accelerated use test or destructive test. Information requirements on aspects such as content and location of valuable or hazardous materials within the appliance, life expectancy of the product, reparability rating, warranty duration, repair and maintenance documents, etc. are important to consumers, repairers and recyclers. Authorities can check that the access to information is provided as requested. Such cost-effective documentation checks require minimal expertise/training and market surveillance authorities have long experience in this type of verification as it is the most common approach (compared to full testing). Authorities can also organise a blind test with a professional repairer to verify that the information is accessible to professional repairers in non-discriminatory conditions.... After they put products on the market, manufacturers may be required to provide complementary services to facilitate repair and maintenance. For example, requirements on the provision and fast delivery

*of spare parts could be very effective. Provision of key spare parts or software updates by manufacturers can be checked cost-effectively immediately when the product is procured and after a number of years. The authorities can check that the list of key spare parts and the procedure for ordering them are publicly available, order one or more, and check that the part delivered corresponds to the order. Checks can be carried out online or via direct contact with the manufacturer. Time is crucial for consumers when facing the possible repair of a product. Requirements on the maximum delivery time for spare parts (e.g. two weeks) could be easily verified by authorities themselves by ordering such spare parts, and assessing the number of working days between the date of the order and the date of send-out.*⁶²

62 Ibid.

Need to tackle planned obsolescence

Tackling planned obsolescence is likely to create new jobs in the reuse and repair industry – sectors where it is difficult to introduce automated processes. This is rather ironic as planned obsolescence started as a way to incentivise more production and employment in the economy.

Due to the overwhelming evidence of planned obsolescence, and it being used in such a way that is detrimental to both the climate and consumers, it is not a question of if legislation to stop planned obsolescence should be implemented, but of how.

Improving product reuse and repair through better enforcement of the rules in place on product guarantees would go some way to addressing the issue.

Maitre-Ekern and Dalhammar have also, for example, proposed changes in EU consumer law to promote the circular economy.⁶³ For example, consumers are often free to choose between repair and replacement of a defective product, but the consumer law framework could incentivise and prioritise repairs. Other policy measures such as more intensive measures to make green claims more trustworthy will also enable the transition to more sustainable modes of consumer behaviour. Information to consumers creates economic incentives for companies to design products that are more durable, repairable and do not have planned obsolescence features.

Three Swedish researchers, with the Swedish Swedish Consumers' Association, have proposed a set of recommendations for the Swedish government to tackle planned obsolescence:

- *“Enhance and prolong the time period attached to the legal guarantee given to consumers and prolong the time period for when the burden of evidence for faults shifts from the seller to the consumer. Producers and distributors should get extended responsibility to repair or swap faulty products during at least four years, and in time this time period should be extended fur-*

63 Maitre-Ekern et al. *Towards a hierarchy of consumption behavior in the circular economy.*

ther. When customers have the ability to make higher demands on product durability, incentives increase for companies to provide higher quality products.

- *Review legislation, taxes and policies to support resource smart products and business plans, in the shape of better durability and repairability, as well as alternatives to traditional ownership such as the sale of a specific function instead of a product. Increased environmental benefits will be achieved if products are used for longer and by more people, through, for example, sharing- and renting services.*
- *Act to implement enhanced repairability and lower repair costs on an EU-level. The EU-commission has already begun talks in this direction and it is important that Sweden shows political will concerning this issue.*
- *Act to implement a mandatory EU labelling system that displays the product's normal expected lifespan as well as the costs for common repairs. Such a labelling system could also contain information about total energy consumption during the products life cycle. It would be helpful for the consumer to know the real price of the product.*

- *Prevent producers and distributors to make repairs unnecessarily expensive by including certain demands or conditions in the guarantee terms or other agreements with repair shops, or in other ways hinder repairs done by freelancing shops.*
- *Ensure that repair manuals, and instruction films, on how to make minor repairs are required and easily accessible to the public through the internet. A lot of products are currently being thrown away, although they could be repaired with relatively simple means.*
- *Make it obligatory for producers and providers to provide spare parts to external actors, and ensure that the costs for this are reasonable.*
- *Make a government agency or a relevant body responsible for informing the public about differences in durability for different products, as well as the advantage of having information about repairability and life cycle costs when a consumer makes a purchasing decision.”*

These recommendations can be translated into EU-wide recommendations and can, and should also be used for other governments at a national level if EU action is not forthcoming. Yet, these policy meas-

ures are preferably implemented on a European level to have the affect needed to influence manufacturers. National legislations will be helpful in creating momentum and raising the issue, but not enough to tackle planned obsolescence in the large scale required as member states and nations separate markets are quite small and will therefore find it hard to affect a global company's manufacturing standards, but the EU as a whole is a big enough market to be able to seriously start tackling planned obsolescence on a global scale.

The policies implemented to address planned obsolescence should be well designed, and not lead to unnecessary burden for industries. Neither should they lead to absurd situations, for instance, that companies should be obligated to provide spare parts, repair services or software updates for product models that most consumers have abandoned a long time ago. This also means that, in some cases, mandatory regulations can provide a minimum guarantee for lifetime and reparability, but other policies that do not directly interfere with corporations' product design and innovation activities – for example, reduced taxes for repair services - are more suitable to support consumers that want to own products for a long time.

The case of the French legislation and Italian com-

petition authority are interesting examples as they show that an active state legislator or national authority can be paramount in tackling planned obsolescence. However, no other national European nation or competition authority has followed suit, and copied the Italians' investigation. Samsung has also stated that it will appeal the decision by the Italian authority⁶⁴ and the French law has so far not led to any convictions, so it is unclear whether this approach is a useful tool to tackle the issue. Nonetheless, the legislation has not only made consumers aware of the issue, it has put manufacturers under pressure. As such, this policy option has still helped the issue by bringing into the spotlight.

64 BBC News. *Apple and Samsung fined by Italian Authorities over slow phones.*

Conclusion

Planned obsolescence refers to deliberate practices that reduce the lifetime of products, so that a product stops working, works less well, or cannot be repaired before the end of its expected lifetime. This can be motivated by attempts to cut costs or the pursuit of more frequent sales. Obsolescence comes in several categories: technological, due to outdated performance; psychological, when a product goes ‘out of style’ due to marketing or cultural shifts; and system obsolescence, where an otherwise functioning product is no longer supported and compatible within larger systems and finally product failure or breakdown that include products that are purposely designed to break easily. It applies to a wide variety of appliances most of us own and use every day. Examples of recent public discussion on the issue are products such as washing machines, smartphones, flat

screen-TVs and inkjet cartridges.

Planned obsolescence is a climate issue because it contributes to greater increased emissions. Tackling planned obsolescence helps facilitate the transition to a circular economy, which is characterised by repair, reuse and recycling of products, as well as their increased lifespan, all of which consequently decreases emissions. As such, a circular economy could reduce emissions through better use and reuse of existing materials. Research shows that measures for sustainable consumption could take us more than halfway to net-zero CO₂ emissions in the EU. A five-year extension of the life of Europe's mobile phones, laptops, washing machines and vacuum cleaners would, for example, save around 10 million tonnes of carbon dioxide equivalents each year.

In order for free markets to function well, there must be some equality in information access between producers and consumers. In many cases, it is impossible for consumers to know that a company is engaging in planned obsolescence, and many probably expect that the the products they buy are designed to last as long as possible. When consumers do not have access to this information, they cannot make informed choices about what products to buy. This reduces market efficiency because companies do not

have to compete on product attributes consumers may find valuable, such as longevity. Regulation of planned obsolescence practices is therefore not about restricting markets, but about adding a dimension for companies to compete and giving more choice to consumers.

To date, there has not been much concrete legislative action addressing all aspects of planned obsolescence. While both the European Commission and the European Parliament have published various documents highlighting the issue, there is currently no EU legislation addressing obsolescence directly. More concrete action has, however, been taken on a national level. Most notably, France introduced a definition of planned obsolescence in French law, and made it a criminal offence in 2015. Under this law, a company proven to engage in planned obsolescence may be fined €300,000 or up to 5% of its annual operating income. Italy has also started tackling the issue as the Italian competition authority has fined Apple and Samsung €10 million and €5 million, respectively, for inducing users to install software updates which it says »significantly reduced« the performance of their products. However, other than those two examples, there are few general or direct approaches to tackling planned obsolescence. Instead, there is a patchwork

of policy measures in place, as well as some relevant industry initiatives.

A variety of further policy tools to tackle planned obsolescence are possible. Measures such as improving product reuse and repair through better enforcement of product warranties in consumer law, implementation of mandatory EU labelling on product lifespans, enforcing requirements to ensure there is a supply of spare parts, ensure repair manuals are easily accessible, and review legislation, taxes and policies to support smart products and business plans, among others, will all support the transition to more sustainable modes of consumer behaviour. It is preferable that these policies are implemented on an EU-level. Member states and national action to tackle planned obsolescence is good, but a European wide approach is likely to have more of an effect as the market is bigger and thus more likely to influence and change global manufacturing standards and information labelling.

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