HOUSE OF COMMONS

Environmental Audit Committee

Oral evidence: Electronic Waste and the Circular Economy, HC 220

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Watch the meeting

Members present: Philip Dunne (Chair); Duncan Baker; Feryal Clark; Barry Gardiner; Mr Robert Goodwill; Ian Levy; Caroline Lucas; Jerome Mayhew; Kerry McCarthy; John Mc Nally; Alex Sobel; Mr Shailesh Vara; Claudia Webbe; Nadia Whittome.

Questions 65 - 125

Witnesses

I: Heather McFarlane, Project Manager, Fidra, Jim Puckett, Executive Director and Founder, Basel Action Network, and Libby Peake, Head of Resource Policy, Green Alliance.

II: Martyn Allen, Technical Director representing Electrical Safety First, Susanne Baker, Associate Director for Climate, Environment and Sustainability, techUK, and Ugo Vallauri, Co-founder and Policy Lead, The Restart Project.

Written evidence from witnesses:

Heather McFarlane, Fidra

Libby Peake, Green Alliance

Martyn Allen, Electrical Safety First

Susanne Baker, techUK

Ugo Vallauri, the Restart Project

Examination of witnesses

Witnesses: Heather McFarlane, Jim Puckett and Libby Peake.

Q65 **Chair:** Welcome to the Environmental Audit Committee. This is our third evidence session in our inquiry into e-waste and the circular economy. We have two panels today and I am pleased to be joined today by our

witnesses Heather McFarlane, Jim Puckett, who is on the west coast of America—particular thanks to you for getting up early, Jim—and Libby Peake. Could you each say which organisations you represent for this inquiry, starting with Heather?

Heather McFarlane: Good afternoon. I am from Fidra and I am Heather McFarlane.

Q66 **Chair:** Could you explain briefly what Fidra does?

Heather McFarlane: Yes, we are an environmental charity focusing on plastic pollution and chemical pollution.

Jim Puckett: I am with the Basel Action Network. I am the founder and director of it. It is a global organisation but we are based in Seattle. We have been following the Basel Convention and waste issues, particularly electronic waste, for many years.

Libby Peake: I am Libby Peake, Head of Resource Policy at Green Alliance, which is a charity and think tank that focuses on achieving ambitious leadership for the environment.

Q67 **Chair:** Thank you all very much. I am going to start with some quick questions. We have a couple of colleagues who have to leave to get into the Chamber by 3 pm. I would appreciate it if we could keep answers relatively brief for the first half hour and then you can elaborate a bit later.

Today, the Committee on Climate Change launched its report. One of the things I was very pleased to see in the presentation this morning was a focus on the circular economy. My sense and the Committee's sense is that a great deal more work needs to be done right across the world, but by the UK in particular. Could I start by asking Libby—perhaps Heather could contribute as well—why the current producer responsibility system fails to recycle enough of this electronic waste in a manner that is good for the environment? What is going wrong?

Libby Peake: Thank you, Chair. There is a lot going wrong, but I will start with a high-level summary. The main problem is that products, for the most part, are not designed with end of life in mind and they are not designed to incorporate full lifecycle impacts. On top of that, the system they are collected and recycled in is not really set up to deliver high-quality recycling.

I would say as well that I am looking forward to getting stuck into the more inner circles of the circular economy—reuse and re-manufacturing—because that is where you can maintain value, which is especially important with things like electronic devices. If you take an example like a mobile phone, the mobile phone is worth about £600 new. The parts themselves are worth about £188 and the materials, especially because a lot of the high-quality and high-value ones are used in such small quantities, are only worth £1.50. So what you want to do is to maintain

the product itself and, if you cannot maintain the product, the parts. When they became used, after a couple of years, the parts are still worth £170 and the phone itself is worth about half of its original value.

The reason why the materials themselves are so low value is because some of the most important ones, some of the critical raw materials and the precious metals, are used in really small quantities. When you take that on the large scale that does add up to quite a large-scale problem at the UK economy level. If you look at things like rare-earth elements, which are critical resources that are vital to the functioning of electronics and low-carbon infrastructure, the UK is currently 100% reliant on imports and it loses 100% of those through either the recycling process or through export.

Rare-earth elements are a particular challenge when it comes to recycling because they are used in such tiny quantities and in such complex formulations that recycling can be really, really difficult and the worldwide recycling rate is close to zero. It is 1%, so it might as well be zero. That highlights the fact that aiming for recycling is not necessarily where we should be and it highlights the problems of weight-based recycling targets, which is what the current producer compliance schemes are aiming for. I would say even at the best of times that that is quite a blunt policy instrument in terms of achieving good environmental results, but it is a particular problem with waste electricals.

It is probably also worth highlighting that the target that we are aiming for that has come through, through the waste directive, is not even for recycling. The 65% target is for collection for recycling and then you have supplementary targets that focus on recycling and energy use. Those range between 55% and 85% depending on the product type. So if we do everything right and we aim for those targets, the best that we are going to achieve is about 50% recycling, which I do not think is good enough.

Even within the system, to get to your question, there are problems with all the different stages. The different actors are all lacking the right incentives. I know you talked about this quite a lot in your last session, so I will quickly highlight that the producer compliance system in the UK is, fairly uniquely, market based, and it is quite a complicated sort of market that is not delivering the benefits that you would get from well-placed competition. One of the most striking things is that there are currently 28 producer compliance schemes and the barriers to entry for becoming a producer compliance scheme are quite low. You also have the problem that some of those producer compliance schemes are not engaging in the actual business of recycling; they are just collecting and trading evidence.

That was a massive problem at the beginning especially, because there was a problem with profiteering and there were inflated prices for the evidence notes, which has been countered through a compliance fee that was brought in. The compliance fee itself has helped with that problem,

but it has created another problem in that it is quite easy for producer compliance schemes to opt out of the recycling process and to pay the fee instead. I would say the fact that it raised £8 million in the last year is certainly cause for alarm.

So there is a problem there but there is also a problem with the chain in the link—the collection—which is the local authorities. In the UK system, the local authorities are not incentivised to collect as much as they should because the basic compliance fees, as with other EPR systems in the UK, do not trickle down very well to local authorities. In other countries that operate on weight-based targets, quite often municipalities will be rewarded by the weight of the material that they collect but that does not happen in the UK.

There is also the problem with the fact that a lot of the local authority collection takes place at household waste recycling centres and there are problems with access to that. There is a very low density of household waste recycling centres per head of population and a lot of the time they are out in rural places and that means that people like me who live in the city centre and do not have cars can have a lot of difficulty in accessing those sorts of places.

That helps to provide another problem for the final link: the people—the householders—who do not necessarily have the right incentives to take part. The fact that they have to go so far and they are not necessarily aware of the services does provide a barrier. We are becoming more and more aware that people are hoarding a lot of waste electricals. The Recycle Your Electricals campaign published a report yesterday that shows that UK households are hoarding 527 million small old electricals. If you break that down by household, that is about 20 per household, so we do have a problem with hoarding.

If you look at just the cables as well—another shocking statistic—140 million of them are hiding in UK households. If you strung all those together it would go around the globe five times. The overarching message is that there are weaknesses at every stage of the supply chain that certainly need to be addressed and overhauled.

The last point I will quickly make is that Covid-19 has highlighted the frailty of the system. In terms of the waste and recycling sector, waste electricals has been one of the hardest hit parts and one of the last to get up and running. The main problem there is a reliance on high-volume, low-value recycling, and because a lot of household waste recycling centres were closed, their supply was completely shut off. Even now that they are opening, they are struggling to get up to the volume of material that they need to get started again.

Q68 **Chair:** Thank you, Libby. It is also the case that in rural areas it can be hard to recycle, particularly when household waste collection sites have been closed by your local authority, as has happened in my area.

I am conscious that we are going to run out of time if we all speak so long for each answer. Heather, could you give me your top-line position on this? Is it that we need incentives to encourage the recycling of these kinds of items that do not exist at present?

Heather McFarlane: Yes, I think there is a role for incentives for consumers. We also need to be thinking that it is not just a lack of awareness of what you can do; it is a lack of incentive with some of this waste. That lack of awareness also extends to what is in a product. People are not aware that there are harmful chemicals, for example, or rare-earth metals that need to be recycled, that these are valuable resources, and that they need to be handled with care.

That lack of awareness extends right through to the recyclers. You can get mixed waste at these household waste recycling centres. There is no labelling on it, and there is no information about what is in it or how old it is. That means that it is down to the recyclers to try to sort out the ones that are perhaps the most harmful and the ones that have banned chemicals in them. This can be easily solved, but at the moment it makes it very difficult with these quite dirty recycling practices instead of having much cleaner streams, having manufacturers taking back some of this equipment and having disassembly lines running along assembly lines, for example. I think there are some things that are not happening that could be happening that would make this a lot easier.

Q69 **Chair:** Jim, what are other countries doing that we should be learning from? It is not all about recycling, is it, as we have just heard; it is about repurposing and reuse?

Jim Puckett: Precisely. We have been a critic of the circular economy for two primary reasons. It is well intended, but it still focuses far too much on recycling. It is like recycling on steroids. We really should be thinking about turning off the tap. The waste management hierarchy has always said that the first priority is waste prevention, but the way that is being done, unfortunately, and implemented—that hierarchy—is people saying, "Can we prevent it? No, we can't; we will go on down to recycling." Well, yes, you can prevent it if you put the incentives at the top of the life cycle. For example, if we can incentivise a lease-based economy rather than an ownership economy, with tax breaks for those that lease their products rather than sell them, the incentive is placed on the manufacturer—the producer—to make sure that their products do not have liabilities, do not have toxic chemicals, are easy to recycle and have a long life ahead of them. That is how we turn off the tap.

The other problem with the circular economy is that for some reason there has been a failure to recognise the destructiveness of externalities and leakage. When you have a system that has gross externalities of pollution to the global economies or to developing countries, you will never have circularity. It will always be a toboggan downhill to the lowest common denominator—to the weaker economies—and that is the most linear thing you can ever have. If you do not shut off those externalities

with strong enforcement, legislation and mechanisms to internalise costs, you will never have a circular economy.

EPR is one way that people have thought of to try to internalise costs and to keep things out of the landfill, but again it is so focused on recycling, sadly, because when it was originally designed it was meant to drive green design but, unfortunately, with the way it has been implemented, that has not taken place. We can modify EPR—we can tweak it so that it does more for green design and we can make it more individualised to give a competitive advantage to companies that pursue green design—but if you really listen to the activists right now, and Heather put it very well, we are not going to be able to recycle our way out of our waste crisis. The over-emphasis on recycling has to be rethought. We have to start thinking not so much in terms of recycling as the first step.

Chair: Jim, that is a very good segue into our next set of questions about repair.

Q70 **John Mc Nally:** I have three questions, the first two to Libby and the third one to Jim on repair services. Research by Nottingham Trent University found that 45% of the population cannot name a commercial repairer that they can trust. What can we do to make it easier for people to get faulty electronic and electrical products repaired?

Libby Peake: Thank you very much—that is a really important question. There are several things that need to be done. The first and most important thing is to make sure that products are designed to be repaired. In a lot of instances they are not, and that stops that dead. You cannot get them repaired if they are not designed to be repaired.

The other factor is that you need to make them repairable at a reasonable price and preferably by the people themselves. There are some examples like a washing machine. One of the most common things to go wrong with a washing machine is a paddle in the drum and there is increasingly a tendency for the paddles in the drum to be made of one incorporated unit, so if you want to replace the drum it costs you about £200, which is very close to the price of a cheap new electronic washing machine. If they were designed to be repaired like they used to be, you could replace one of the paddles for about £5 and potentially do that yourself, so that is really important as well.

The final thing that I will touch upon is that you also need to make it convenient. We have done a lot of research with people and we know that 81% of people are in favour of having businesses provide repair and maintenance support, so there are some potential options for businesses to establish relationships with people and provide ongoing support with them that people would like.

Apart from that, something that I am sure you will hear about more in the next session is the idea of the right to repair. People who have bought their electronics should be able to, wherever possible, repair the

things that go wrong. They should have access to spare parts for as long as the product should last and they should have, as much as possible, the instructions to be able to do it themselves. We know that if people have to go through an extra step of hiring a repair person in to do the repair, that puts up an unnecessary extra barrier in many cases.

Q71 **John Mc Nally:** Could we move on to a nudge effect and how do we get there? For example, we have heard on the EAC from many businesses—a whole range of businesses—on how a reduction of VAT might nudge people to repair services. How effective, in your opinion, do you think zero VAT or a very low VAT threshold would help to move people in that direction? Would it be effective at all?

Libby Peake: We certainly think that it could be effective. Crucially, we know that it might find support with people. We have done some research with Cardiff University and with the Centre for Industrial Energy, Materials and Products. That found that 76% of people in the UK would either support or would not oppose the idea of replacing VAT or changing VAT with something that better reflected environmental impacts. There are wider questions of how the VAT system could be used to drive better environmental performance, but at the moment there are multiple perversities that mean that it is not driving things in the right direction and it is not helping people to overcome the barrier that expense puts on repair, for products as well as for buildings. That is another big concern.

Certainly when you are looking at products, there are other countries that have tried lower VAT rates. Under the EU VAT rules at the moment the lowest rate that you can have on repair services is 6%. There are countries like Belgium that have done that for ages to try to incentivise repair. There are other countries like Sweden that recently has changed its tax rules to incentivise repair. In the first instance it has halved the amount of VAT on small repairs on things like bicycles, but not on electronics. On electronic devices, it has introduced a new system where the labour services for repair are tax deductible. That is with the explicit aim of driving more resource-efficient policies. They have balanced that out—obviously money is going to be a real concern—with an additional tax on hazardous chemicals. The site is in Swedish, so I could be wrong, but as far as I could understand it is on brominated flame retardants, which I am sure we will get on to in a moment.

I definitely think the tax system is not being used to its full extent to drive the sorts of environmentally beneficial behaviours that we know people want to incentivise this.

Q72 **John Mc Nally:** I would agree with that. I think we could probably repurpose it in better ways than we are doing at the moment.

My last question is for Jim. Do you think there is anything that we can do or should be doing regarding exports of products supposedly being sent for repair, possibly by unscrupulous actors exploiting a loophole in the law? Do you think that these products are being repaired and there is no

real problem?

Jim Puckett: No, as much as we support repair, we have to be very wary because right now the European Union, for example, is trying to put a loophole into the Basel Convention, the global treaty that controls waste trade, to say that if something is repairable it is no longer a waste. That sounds good, but the problem is that anybody can declare something is repairable. It is a very loose term. Once you do that and you get out from under the Basel Convention, there are no export controls whatsoever, so of course unscrupulous actors will say everything is repairable and away it will go. This is a loophole that we cannot live with.

We have had a policy until now that you have to make sure things are tested if you are going to export them. If they are functional, only if they are functional and you declare them as such, are they allowed to be declared as a non-waste. Otherwise you are going to end up with all this material being dumped in Africa. A recent study we did with IPEN, the group working on POPs, found some of the highest levels of brominated dioxins ever recorded in the world at the Agbogbloshie dumpsite in Ghana, where so much of the European electronic waste ends up and where it is burned. They tested the chicken eggs in the slum there—where the workers are living among these chickens, eating the meat and the eggs—and every day they are poisoning themselves, not only from what they breathe but from what they eat as well.

Chair: Jim, that is another brilliant segue into our next questions on exports from Caroline Lucas. Thank you, John, I know you have to go to the Chamber and Caroline has to follow shortly.

Q73 **Caroline Lucas:** Thank you. I want to pick up from where you left off, John, and continue the conversation with Jim. You have set out in a nutshell what some of the problems are with the export, but could you tell us more about what is driving the export trade?

Jim Puckett: Of course it is economics that drives all trade. Unfortunately the economics is not a true economics. People are not paying the true costs of things; they are avoiding costs and that is what drives the international waste trade. That is why we call it an externality. They are trying to externalise real costs rather than internalising them into the costs of the product and thereby profit. So it is not even a true economy. Some people say it is all about the economy. We would love it to be all about the economy, a true economy, where you pay for the damage you do and hopefully pay for mitigating the damage and preventing that damage from ever taking place.

This is what has been happening. We have been having a linear dumping situation for years and years. There is so much electronic waste ending up in Asia and Africa and not being dealt with properly at home. We are going to need better enforcement, because the EU has great laws, much better than the US in this regard. They are parties to the Basel

Convention; the UK is a party to the Basel Convention. Unfortunately, powerful interests are trying to push loopholes into those laws, as I mentioned. This repairables loophole is very dangerous. We are hoping the UK can step out in front and join Africa and India in supporting the closure of that loophole that is taking place in the guidelines at the Basel Convention on determining what is waste and what is not waste.

Until now the UK has been very strict about functionality as the divider line and that is what we need to maintain. If it is functional, it is a non-waste. You could certainly export it for refurbishment, but the basic functionality is there and therefore we are not going to end up with a dumpsite like we have in Ghana at the moment.

Q74 **Caroline Lucas:** On the issue of the UK, it was your research that suggested that the UK was the worst offender in the EU when it came to illegal e-waste exports to developing countries. I know some people have pushed back on some of your research and suggested that the situation is not as bad as you say. Could you respond to that criticism?

Jim Puckett: The criticism is that when you do a study of this kind—we took GPS trackers and embedded them into electronic waste, and we took them recycling centres in the UK and nine other countries in Europe, so there were 314 pieces in total in Europe—that is going to be a small sample size compared to the massive volumes of e-waste we generate. But if we extrapolated that, we can equate in the UK alone to what was exported. There were five devices exported to Nigeria, Tanzania and Pakistan from the UK. It is a small number, yes, but if we were to extrapolate and ask if this is representative—and let's assume it is—even a conservative extrapolation meant that 209,000 metric tonnes per year leave the UK for developing countries. So we did put our finger on the pulse of something very dangerous that is happening every day. It is far too easy to load up shipping containers with electronic waste and export them to Africa, for example. That is taking place right now and we proved that with real-time trackers on real waste that we followed to the ends of the world. Again, five devices out of 39 deployed, or 13%, were exported from the UK. You might not think that is terrible, but if you extrapolate that, it is really quite significant.

Q75 **Caroline Lucas:** How do you think we can ensure that exports of WEEE support the local economy in the destination country without damaging the environment, or would you challenge the premise of the question? Do you think it will not be possible to do that because there are so many ways in which the illegal trade can seep into the legal trade?

Jim Puckett: No, you have done a great job in the UK, compared with a lot of European countries, on having a team of people in government. It is their job to have intelligence-led investigations and enforcement. Where we need to shore things up is that the penalties have been quite weak. You do not need to have that many prosecutions, if the penalties are strong, to send a very good message. Of course, any laws—and you have good laws in Europe and the UK—are worthless without

enforcement. They are probably even worse than having none at all. You have to enforce these laws, and enforcement means having not only intelligence-led prosecutions, but penalties commensurate with the crime.

Q76 **Caroline Lucas:** I will come to Libby because I can see that she wanted to intervene, but I imagine on that issue of enforcement, one of the issues is that the Environment Agency has had its budget slashed and therefore the amount of resource that is available for enforcement is not as high as it should be. Could I put that to Libby and ask what it is that you wanted to respond to?

Libby Peake: That is exactly the point that I wanted to make—that between 2010 and 2019 the Environment Agency had its budget slashed from £120 million to £52 million, which was a 57% drop. You will see knock-on effects in terms of the ability to regulate and to enforce the regulations that we do have. The NAO did a report on packaging exports that found that in 2016-17, the Environment Agency was only able to conduct 124 compliance visits to exporters and recyclers, out of a target of 346. When it comes to unannounced visits, in 2017-18 there were only three, so the chances of getting caught are vanishingly small. It is quite easy for waste cowboys to avoid the cost of legitimately dealing with waste, and it is far too easy for them to misdescribe waste and send it abroad. That is definitely something that we need to tackle. On the countries that we send waste to—even if it is legitimately sent for reuse—we need to make sure that when those electronics eventually reach their end of life, there is appropriate infrastructure to handle them, because if they are reused and then still being burned, with exposure to toxic chemicals, it is not good enough when we know that the electronics have come from this country. We have a responsibility for making sure that everyone has the right sort of infrastructure.

Jim Puckett: I want to warn really quickly that you will never have a circular economy if you allow such externalities to take place, and they are seriously taking place now. It should be an absolute priority to close that back door.

Caroline Lucas: Thank you so much. I am sorry I have to go but I will catch up with the *Hansard* later.

Q77 **Mr Goodwill:** I would like to pop back to John Mc Nally's question about repair. Is there any evidence that manufacturers are going out of their way to prevent their items being repaired? On my own farm I can think of a moisture meter where they obliterated the chip identification so you could not replace the chip. It needed a very expert person to identify what the chip was. More recently we had a case with a tractor, manufactured in the United States, where we were quoted £3,000 for a new gearbox control unit. The dealer said, "I am sorry, we can't send it for repair because it is not within our terms and conditions. We need to replace the part." We found another dealer who sent it away for repair and it was £300. I think they would have lost their franchise if they had got that part repaired. Should we outlaw this practice so that it is more

easy to identify how components can be replaced?

Libby Peake: Yes, there is some evidence. There are some dispiriting examples where, for example, batteries slow down or batteries are impossible to replace. If you are looking at mobile phones, the average life of a mobile phone battery is about two years and there is an increasing trend to make it impossible to access those, so if those fail you will never be able to get into it, certainly not legally, to replace the batteries. That is a design flaw that could be easily outlawed if you mandate that these parts that are going to fail have to be accessed in a relatively easy way.

I would add as well that it is not just technical problems that do prevent repair and products reaching their full lifetime. We also have obsolescence of software. In a lot of instances products are not designed in order to be upgraded. An additional problem in terms of something failing is not just the hardware; it could also be the fact that the new software is not supported. Again that is something that could be legislated for. It could be mandated that products can be upgraded. That is something that I would like to see brought in in terms of eco-design regulations.

Q78 **Mr Goodwill:** Thank you. That was useful. I hope in our report we could look at that particular issue.

Could I turn to Heather and talk specifically about toxic elements of waste? You have already talked about valuable things like gold and some of the rare earths, which in such small quantities it is difficult to identify, but there are a number of toxic chemicals, particularly flame retardants but also heavy metals, that could be a problem—lead, cadmium and that sort of thing. Can you explain the class-based regulation of toxic chemicals, please?

Heather McFarlane: There are a number of different chemicals that can appear in electronics that are problematic. They are quite widespread. They can be in the circuit boards, they can be in the outer casing. You can find that in TVs the outer casing is made of plastic and it can make up to a third of the weight of that plastic, so a high proportion could be a flame retardant but you wouldn't know it was there from looking at it. There is nothing on it to say that it is in there.

Q79 **Mr Goodwill:** They would be the brominated and chlorinated retardants that are the most toxic?

Heather McFarlane: Yes, brominated and chlorinated are particularly toxic and long lasting. One of the ways that regulators can try to address this is using what is called this class-based or group-based legislation that you mentioned. They can try to regulate a whole group of chemicals based on the knowledge that they have about some of the toxic ones in that same chemical family. The idea of this is that it would stop what is called regrettable substitution where you have one chemical that is replaced by a very, very similar one. It is chemical brother and sister, if

you like. The idea is to use a precautionary approach. If you know one chemical in that group is toxic, it is likely that others in that group will have similar properties and need to be also regulated at the same time.

This has been done with some groups of chemicals, the polybrominated diphenyl ethers. The problem is that they have been slightly changed—one atom different—and they are a new class. So we do need to use a group-based approach but we also need to make sure that we are thoroughly assessing chemicals before they are put on to the market, and looking out for the environmental impacts and health impacts. At the moment, very little is known about some of the chemicals that are already on the market, let alone the ones that could be coming in to replace those that are known to be toxic.

Q80 **Mr Goodwill:** That sounds a bit like the legal-highs loophole, where people are synthesising drugs that are just a bit like the others but one atom different.

Could I move on? You said that you can buy a television and not realise that a third of the plastic casing is made up of these toxic chemicals. In our toxic chemicals inquiry we recommended clear product labelling for products containing harmful chemicals. Can you explain why this is particularly important in the context of electronics and how this will help consumers and recyclers? Would you suggest that the labelling is on the product or that there should be some sort of database that you can access via the internet so the recycler can identify what is there?

Heather McFarlane: Yes, it is needed at both levels. Consumers have said that they would like more information about the chemicals that are in their products. That has come through surveys from people like the Royal Society of Chemistry, and they do not feel informed enough about the chemicals that they come across every day. We have also seen in California, where they have taken flame retardants out of furniture, that there have been increased markets for flame-retardant-free furniture, for example. So there is interest in this from the consumer side but, as you said, it is also from the recycling side so that you know what is in a product so that you can recycle it more efficiently and more effectively, and make sure that some of these products are not recycled if they have particularly high levels of toxic or banned chemicals.

It would also help right the way through the supply chain. Some manufacturers will buy components in from suppliers and may not be aware of everything that is in that component. If they knew about what was in there then if, at a later stage, something is banned or there is a recall on it, they would be better equipped for taking it out of their supply chain and have a greater awareness at that stage, too. So it is right across supply chains—it is at the point of sale as much as it is needed at the end of life. That kind of information will help us to manage these chemicals better through supply chains.

Q81 **Mr Goodwill:** Where manufacturers use these types of chemicals,

particularly flame retardants, is it because there is no alternative to meet the safety requirements, is it because of cost, or is it just that the aesthetics of putting an aluminium case around a television would not look like a product that people would want to buy?

Heather McFarlane: Most of these flame retardants are added to the plastic component of an electronic device, and plastics are used because they are lightweight and because they have some electrical insulating properties. But of the flame retardants that are being used, there are some that are particularly harmful and there are alternatives out there. For example, Apple took out brominated flame retardants over 10 years ago now, but there are still other flame retardants that are emerging to be quite problematic as well. We need to make sure that flame retardants are only used when they are absolutely needed.

Then you have the problem that some of these flame retardants leak out of the product because they are added quite late in the manufacturing process. If we can move towards different types of flame retardants, inorganic flame retardants that may be easier to remove on disposal, we might be able to think about having flame retardants that are integrated into the product—integrated into the actual material better—rather than being added at a late stage.

We can also think about developing new chemical flame retardants that perhaps do not have lifetimes of thousands of years and will not break down in the environment. There are things that we can do now, but there are also future developments that we need to make using green chemistry to come up with better materials. Yes, there does seem to be quite a lot of use of flame retardants in every single component of a device, as well as thinking about the whole device.

Mr Goodwill: I will turn to Libby next and I see Jim waving as well.

Libby Peake: A potential way to keep going forward is by pairing restrictions of hazardous substances along with whatever you are doing at the end of life. The WEEE directive was developed in conjunction with the restrictions of hazardous substances and I would say that that is something that is important. It is important to keep developing it with the explicit aim of ensuring that when products reach the end of life they have as few legacy or harmful chemicals in them as possible.

There is a problem that we need to reckon with about legacy chemicals and the fact that we do not necessarily know what is in these devices, as Heather has pointed out. If we can do this testing and if we find that these materials are present in plastics or whatever, we should not be recycling those for the sake of recycling them. We do need to have a system in place to remove the toxic chemicals from the circular economy unless we want the circular economy to get a toxic label—and we definitely do not want to do that.

I want to pick up quickly on the issue of data—of knowing what is in things. This is incredibly important, and something that hampers progress throughout the lifecycle of products is not knowing what is in things or where they have been. There are a few policy concepts that have been mooted and that could potentially be really effective at changing that. One is the National Materials Data Hub, which has had at least provisional, theoretical support from Government, which would aim to trace materials throughout the economy when they are used. You use big data and you know exactly what is in what and where it has been. That was supported in the Resources and Waste Strategy, but there has not been any funding committed to it, which is a shame. We would call for that certainly to be offered to it but also for it to be fast-tracked. In the current timeline it would take about 10 years for it to be up and running, which is perhaps realistic because it is such a big project, but if you are looking at particular sectors like electronics, there would be a case for prioritising those and making sure that you have data about this material as quickly as possible.

The other concept that is related to that is the idea of product passports. This is something that the EU is exploring and that we would encourage the UK also to explore, and at least to meet if not exceed what the EU is doing, as we have promised that we would do. The idea is that there is some sort of electronic record of what is in every product and of what has been added to it throughout the supply chain. That would be potentially accessible through a QR code that would be quite easy to scan. Then when it comes to a recycler or it comes to end of life, you know what is in it, and you know if something is dangerous and you need to remove it. That sort of approach is really important to prioritise if we want to have a circular economy that is not toxic.

Q82 **Mr Goodwill:** I am guessing that if we do need to incinerate these products, it would be better if it is done in Europe or the UK, where we have quite strict restrictions on incineration and energy from waste plants, than sending it to Ghana and letting them deal with it in a different way.

Libby Peake: Certainly open burning of electronics is incredibly dangerous. You expose people to things that are basically the same as Agent Orange when you are burning some of these plastics, so you definitely want to avoid that. I was speaking to Heather the other day about a process that was preferable to high-temperature incineration and I might try to pass it over to her to explain. There might even be better ways to handle it that we do not have to turn to incineration for.

Q83 **Mr Goodwill:** Maybe I will take Jim first, because we do have the large combustion plants directive that does very strictly control dioxins, for example, in flues. Anything incinerated in Europe would have to be done in that way. Can I go to Jim and Heather for a quick point after?

Jim Puckett: I wanted to add the point that the toxicity issue is so fundamental and part of the reason why recycling is less than ideal. It

turns the recycling industry into a toxic industry. This is particularly true if it is done in developing countries. The toxic materials, like brominated flame retardants, will end up being recycled into things that were never meant to have such poisons in them, like foodstuffs, food containers, toys and so on that children can put into their mouths. This is what happens when you have toxic equipment at the front end. It is going to come out at the back end. Recycling has a lot of flaws, but this is one of the more scary ones out there and it has been proven to be the case that many of these toys that are coming out of Asia, for example, are contaminated.

Again, front-end design is so much more important, as is how we can incentivise getting the toxicity out, making products more long-lived and making them repairable and recyclable, if you have to get to that point. That has to be done through design. Design is only going to be incentivised if we can put the onus back on the manufacturers. The lease-based economy is one way to do it with a market system—with a capitalist system. You are not going to command and control; you are going to say, "Okay, manufacturers, you have made the product. You are not going to sell it to people; you are going to lease it and therefore you have those liabilities". I think that is very promising.

Q84 **Mr Goodwill:** That is a good point. I must add I am a proud owner of a 21-year-old Sony television and a fridge that is a couple of years older than that. I think if you buy good quality up front, you are likely to have a longer-lasting product, but there are a lot of products out there, particularly own-brand-type products you can buy from the supermarkets, that do not last five minutes. Then, of course, we are contributing to even more waste—many are from China, sadly.

Jim Puckett: Sadly, planned obsolescence is real. More and more manufacturers, as was mentioned, are intentionally making things not repairable and not long-lived. We have to reverse that.

Q85 **Mr Goodwill:** Could I ask my last question in this section to Libby and maybe Heather can come in at the very end? This is about persistent organic pollutants, as moderated by the Stockholm Convention. What impact has the Environment Agency's updated guidance on persistent organic pollutants had on the treatment of electronic waste?

Libby Peake: That is probably a question that Heather would be better placed to answer.

Heather McFarlane: One of the recent changes that has been brought in because of some of the concerns about recycling, as I understand it, follows reports about toys. About 50% of toys that were tested in a IPEN study contained octaBDE, a flame retardant that was banned in 2004, but was turning up in toys in 2018. That was from recycled plastic. To stop that from happening, we need to take recycled materials out of circulation.

That applies not just to the plastic itself, but to electronic equipment. We need to make sure that electronic equipment that is from pre-2004 is not being used, is not being sold on and is not being reused in the same way. That has meant there have been some changes to guidance recently because this loophole that allowed recycled materials and the reuse of things that have these banned flame retardants needed to stop. That was because it was happening. We were seeing recycled materials with toxic chemicals in. These are chemicals that have been found in toys and they have been associated with neurological damage and changes to hormone systems, so they are of particular concern to children and to infants. That is one of the reasons why we need to keep this guidance updated and, as new laws come in and as we get a better understanding of some of the pitfalls of this circular economy, we have to make sure that we close those loopholes.

Q86 **Mr Goodwill:** Are you suggesting that we should not recycle this plastic from these older materials? Do we use landfill, or should we try to recover the energy in a way that does not produce pollutants in the atmosphere?

Heather McFarlane: There are two issues here. There is what we do in the future and the redesign that we have talked a lot of about and developing new materials, but we do have a backlog of waste. Even with the electronics that we perhaps bought in lockdown to work from home, to do our hair or whatever it is, we might find in the coming years that some of those things are more persistent than we originally thought and that they are more toxic because, as I said, there has often been one atom different in the materials. There will probably be a time when these too are banned. We have a toxic legacy that is building up and we do need to make sure that we address the existing waste that we have until we have redesigned, better thought-through products, and better thought-through materials.

There are a number of ways we can do that. Landfill is certainly not the ideal solution. You can get leachate from landfill as well as the loss of resources that go along with that. Recycling, as I have said, is very often not the best option because of some of the plastics involved and the risks of flame retardants.

Although it is the least-worst option, some cases may involve total energy recovery in a well-regulated system, but before we do that we need to sort this material, preferably on the basis of more information, so that ones with the brominated flame retardants are incinerated and those that perhaps do not have high levels of it could maybe be recycled in the right circumstances. Other processes and options are starting to become available, too. There are solvent-extraction processes, something called the CreaSolv Process, which it is said can remove some of these brominated flame retardants. That would allow the plastic itself to be recycled and the brominated flame retardants extracted.

None of these are an ideal situation, necessarily, and we do need to work towards this redesign and having more information in the system about what these chemicals are and what they are doing before they even go on to the market. But we do need to address that backlog. We can sort things out with things like X-ray fluorescents that we can use so that recyclers make better decisions about what goes to incineration, what goes to perhaps some recycling, and what might go to a solvent extraction process.

Q87 **Mr Goodwill:** It sounds from what you have just said that the new guidance from the EA is not likely to have any immediate impact. It maybe moves us in the right direction, but there is such a backlog of old material out there that it is going to be a long time before we get into a clean and green circular economy for electronic equipment.

Heather McFarlane: Yes. I think we have to deal with the waste that we have at the moment and that needs a set of guidance and a set of regulations. We also need new regulations now so that we are not building up these problems again in the future.

Mr Goodwill: I did note Libby waving, but we should probably move on to the next question, Chair, as we have to finish at 3.30 pm, do we not?

Chair: Thank you, Robert, we do. We have 10 minutes now for Barry Gardiner.

Q88 **Barry Gardiner:** I want to focus my questions on the importance of eco-design and the system for collective extended producer responsibility. It seems that you are as tired as I am of talking about recycling when what we actually mean is taking a load of used electrical products, crushing them up and seeing if you can get any critical raw materials from the resulting mess before you burn it. We could talk about disassembly instead of recycling, and how you build in the capacity to disassemble products at the end of their life by designing them properly at the beginning.

Libby, what is the incentive for you to design a better product that can be disassembled, and then reused and remanufactured, if you are still going to be paying to dispose of your competitor's badly designed products under a collective extended producer responsibility scheme? Is the correct translation of collective extended producer responsibility not in fact free-rider producer irresponsibility, and how would you propose a more effective EPR system?

Libby Peake: I am not sure if I would use such strong language, but I would say definitely that the current system is not fit for purpose. I would also agree with what Jim said earlier about the concept of extended producer responsibility and how it has really, really narrowed from what was originally envisaged. As something that was meant to incorporate full-lifecycle thinking, it narrowed down into focusing just on covering end-of-life costs. You see that in many Government documents, including in the Environment Bill, where producer responsibility schemes are being

held responsible for the end-of-life costs of whatever they are putting on the market. To be fair to them, they have defined end-of-life costs fairly broadly, but it still is the wrong mindset by narrowing down to just that aspect.

I would say that extended producer responsibility is not necessarily the best mechanism for delivering better design, but it is an important part of the puzzle and it should definitely be used in conjunction with design standards. We do have the mechanism with which to set better design standards. We have eco-design standards already that for the most part have focused exclusively on energy in use, but which, by even the most conservative of estimates, have delivered massive carbon savings. In 2020 BEIS says that they will be saving the average household in the UK £100 on their energy bills.

These have been really successful in terms of policy and there have long been calls for this to move from energy efficiency to also look at resource efficiency and set boundaries on that. That is not something that we have seen that much movement on, although people are talking about it. There was one initial set of standards anyway that was passed in January that the UK voted in favour of, which was in relation to extending the provision of spare parts and of making sure that products were repairable, at least by professional repairers.

Q89 **Barry Gardiner:** We have no such requirement for that in the UK at the moment, do we? It is one of the areas in which France has put in place regulation, but the UK has not.

Libby Peake: The UK voted in favour of the EU regulations that are going to come into force from 2023[1]. We have not, certainly, gone as far as France, which is introducing a repairability index, and we certainly have not looked very far at the potential that these sorts of standards could play in driving this.

There are multiple things that we can measure that you could set regulations for, like durability, repairability, maximum time for disassembly, upgradeability and recycled content. It is something that is being talked about and BEIS at the moment has an open call for evidence that is looking at how to extend these eco-design regulations in the UK. Still a lot of it is focused on energy in use, but the idea of resource efficiency is increasingly prominent in that. I would say that that is an ideal way to drive these sorts of changes.

Q90 **Barry Gardiner:** Thank you. Jim, one of the most important issues we have to grapple with as a Committee is whether regulation or economic incentives are more effective in driving producers to minimise the environmental footprint of their products and to design modular systems that can be easily disassembled, repaired and reused. Do you think that

[1] Witness later issued a correction that the regulations will come into force from 2021, not 2023.

the targets that we currently have for the sector by weight support and encourage eco-design, or are they pushing us down the cheapest possible disposal route?

Jim Puckett: Yes, EPR is unfortunately not doing what it was originally intended to do, and now it can be tweaked. I would not throw it out. It is an important part of a package, but everything you do to reform it should be about giving it green design. Again, we have to turn off the tap if we are ever going to solve this problem. That means not only quantity, but working qualitatively: getting things to be less toxic; and getting them to be designed for longevity, for reuse and so on, and for repair. That has to be what you do to EPR. You can tweak it with modifications and give incentives on costs for people who are moving in that direction. Your insinuation that it should have been competitively designed so that people have a competitive advantage by brand; that might be a train that is out of the station already, but you could look at that.

Everything you do for EPR should be not to scuttle it, but to improve it to move upstream in the lifecycle. If you are not going to be able to do that, move on to something very radically different, such as incentivising the lease-based economy. To me, that is the market driver that is most promising—much more than EPR.

On your question about regulatory command and control-type legislation, you need that as well. That is part of the package as well. Certainly for stopping leakage you need that in place with strict rules about trade. So you are going to need a package, but everything has to be looking upstream. We are not going to be able to recycle our way out of this problem.

Q91 **Barry Gardiner:** Jim you have talked very persuasively about a lease-based economy. The problem we have here, though, is that in the data that we have, 63% of people disagreed that they would prefer to lease products rather than own them, and 80% said that they would be worried about entering into contracts with service providers. So there is hardwired resistance in public opinion here. How do you think we get over that?

Jim Puckett: I am not so sure that that is true. Your numbers may be true, but the younger generations, I have to say, are much more amenable to service-based economies. It is us old stodgy people who like to have things in our garage and say, "I own this," but we are becoming the dinosaurs. You do not have to own stuff; you need to have services. This is a really important mind shift for all of us. To incentivise that is a role for Government.

Libby Peake: Can I come in, because those figures that you just quoted are from a report that I wrote? Thank you very much for citing them. The point of those figures was not that people would always be resistant to this sort of this thing; it is that there are barriers. One of the barriers that they have is that they do not trust business. They don't trust Government

very much, but they definitely don't trust big business. They think there are always going to be loopholes in the leases and that they are always going to be at the worst end of the contract. What is really important is to make sure that people have rights and that the contract rules and regulations are really clear so that they can enter into those sorts of contracts with confidence. As Jim says, lots of younger people are more interested in this sort of thing and there is definitely a movement that you can capitalise on to make a products-leasing economy much more effective.

Q92 **Barry Gardiner:** As the author, thank you for that. I am certainly with you. I just think we need to be conscious that there are problems with putting this into effect. As you say, perhaps the Government have a role here in the regulatory structures that are put around this.

Finally, Heather, there is the question of what other European countries are doing in this area. We know that the UK signed up to the circular economy action plan and the introduction of resource efficiency requirements through the eco-design directive that provides specific regulations on repairability and resource efficiency for things like fridges and washing machines. But even though the UK voted for those measures when it was still a member of the EU, the circular economy action plan will not apply to us now that we are out of the EU, will it? As part of the recommendations from this Committee, would you like to see us recommending that we transpose that into the UK? Under the proposals, how effective are economic incentives likely to be if they are not harmonised across Europe but specific to one country?

Heather McFarlane: There are some interesting things going on in other countries that we have touched on already. Libby mentioned some of the taxes coming out of Sweden, for example, on chemicals in products as well. Alignment where possible with the EU will be preferable. There are some other things happening at the moment where the EU is developing a chemical road map for example, and they are looking at things like group-based legislation that we have identified as a possible way of getting us out of some of these toxic flame retardants being continually used and applied with only minor tweaks.

It is important that there is some alignment and we also need to think about how that will make it easier for manufacturers to make things that will work across multiple markets, which is always what they aim to do. There are things that we can do and we should be doing that we voted for and that we should be transposing. It is also important to realise that legislation does work; we have seen flame retardants in gannets that I can see from my window—we have the largest UK population here—and the regulation that was brought in did start to lower the amount of flame retardants that were turning up in those birds on an uninhabited island. You can see that when regulation was brought in the levels came down and when other flame retardants started being used those levels went up. Regulation does have a direct impact on what happens in the environment.

Q93 **Barry Gardiner:** Are you looking out at the Bass Rock, then?

Heather McFarlane: I am.

Q94 **Barry Gardiner:** Which is the biggest gannet colony in the UK, absolutely wonderful. Libby, you wanted to come in on this as well. I think you were waiting.

Libby Peake: I wanted to observe that the Government have made the really welcome promise to match or exceed what the EU does in this area. There are roles for people like us and people like you in holding them to account on that, because the Circular Economy Action Plan that the EU has presented does go farther than what the UK has legislated for or promised, certainly in this area. They have promised to introduce the right to repair for people, they have promised to ban in-built obsolescence and they have promised to ban greenwashing. We do not know exactly how they are going to do it yet; it is a high-level strategy, but the fact that this is on their radar should put it on our radar as well so that we can match or exceed what they are doing. Having an arms race to the top is the most useful thing that can come out of it.

Jim Puckett: I liked hearing the word "exceed". We would love to see the UK now take on the EU and become leaders. There are a lot of opportunities for that.

Chair: Thank you very much, Barry. I am glad that was the last of your questions because that could have prompted another whole debate, Jim. This concludes the first panel and I would like to thank our witnesses for their contributions, in particular Jim—you can go and get some breakfast now—but also Libby and Heather.

Examination of witnesses

Witnesses: Martyn Allen, Susanne Baker and Ugo Vallauri.

Q95 **Chair:** We now move to our second panel, where we have representatives from repair advocates The Restart Project, the manufacturers' body, techUK, and campaigners from Electrical Safety First. Welcome to Martyn Allen, Susanne Baker and Ugo Vallauri. I will ask our second panel of witnesses to introduce themselves, starting with Martyn.

Martyn Allen: I am Martyn Allen from Electrical Safety First. We are a consumer safety charity that aims to reduce death and injury caused by electricity in people's homes.

Susanne Baker: I am Susanne Baker and I am associate director for climate, environment and sustainability at techUK. We are the trade association for companies in the digital economy.

Ugo Vallauri: Good afternoon. My name is Ugo Vallauri, co-founder and policy lead at The Restart Project. We are a charity and a people-powered social enterprise aiming to fix our relationship with electronics.

Q96 **Chair:** Thank you very much indeed. As my technology is not good I am going to ask some quick questions and then pass over to those who have a better signal. First, to Susanne, can you explain why the collection and recycling targets that the UK Government have set are not being met?

Susanne Baker: This is a big question and one of the things that we have not really dug into in much detail during the discussion so far is that there is a lot of variability in performance across the different targets or different product categories. For display, we are recycling well over 60%. For IT and telecoms, for example, over 77% is being recycled and there is a similar figure for consumer equipment. Where we have issues and challenges is around small mixed WEEE and these are the products that are easily hoardable in homes. I think Libby mentioned the Material Focus research that indicated there are hundreds of millions of products hoarded away in people's homes and equally they are things that can be easily disposed of. They can go into people's bins.

The situation is not really helped by the model that we have at the moment in how we operate EPR, so in the previous sessions that you ran there was a lot of discussion about predictability within the system and certainty for actors within it. One thing for sure is that the competitive PCS system means that schemes are not investing sufficiently in measures such as kerbside collections and communications because they lack the long-term visibility of the market share they will be representing in future. One thing that we would certainly like to see is a rethink about how we organise collections and one approach that is pretty popular in certain countries in Europe, for example Germany, Denmark, Italy and Ireland, is what is called an "allocation system". The allocation system essentially allocates local authority regions or regions of the countries to particular compliance schemes and it allows them to have confidence to invest in particular areas. It also allows them to streamline the collections as well so that they do not need so many lorries on the road.

I think it is a combination of the competitive PCS environment, a lack of investment in hard to reach WEEE—the hoarded WEEE and smaller items, which probably householders are not going to be so compelled to take to the civic amenity sites—and a lack of sufficient collection network. We are very pleased to see that large retailers from next year will be required to take back WEEE at the end of life. This is very common in pretty much all the European countries, but for some reason we did not do it in the UK. I think we are moving in the right direction, but we have to make it easy for people to recycle these products.

Q97 **Alex Sobel:** I think Philip is having some problems with his Zoom. I have literally just arrived back from London and turned my computer on. I understand we have asked question 6A? Has everybody who wants to answer the first part of question 6 answered it and we should move on, or is there somebody else who wants to respond to this question? I am sorry; I literally joined the call 30 seconds ago. Susanne, were you the first one to answer this question?

Susanne Baker: Yes, I was the first one.

Alex Sobel: Do any of the others want to answer? It would help me if one of you wanted to respond to this as well. Martyn or Ugo, is there anything you want to add?

Martyn Allen: I will add by saying that we recognise the important role that local authorities play in helping to recycle e-waste. They are doing a great job in driving those figures up. Our concern is the selling on of those items. Many of the local authorities have selling mechanisms in place and are very inconsistent in their approach, and that raises safety concerns for selling substandard, unsafe products and recalled products as well. I am sure we will go into the safety aspect of the conversation as we go on.

Q98 **Alex Sobel:** Thanks for adding that, and thanks to the Committee staff for bringing me up to speed. Susanne, the Joint Trade Association's involvement on the compliance fee said, "This fee does not incentivise collection of hard-to-reach or expensive recyclable e-waste"—we have heard that in previous sessions—"nor does it promote better product design." Could the compliance fee system be reformed to act as a better incentive and resolve these problems that we have heard from the sector and from producers?

Susanne Baker: I chair a group called the JTA, which is basically a group of trade associations that represent producers of electricals and electronic equipment. For the past five years we have been one of the actors that have put forward a proposal for the compliance fee. In fact, anyone can put forward a proposal. That is then subject to a consultation and scrutiny by DEFRA and what we have to do is design the proposal to be compliant with the guidelines that DEFRA has produced. One of those is that they are based on costs, so we are limited in being able to frame the compliance fee only based on the costs that are being faced by schemes at present. I think it is complicated but it is important. Going back to the previous point around target setting, one benefit of the compliance fee is that the funds can be put to really good use and be invested in activity that schemes themselves are unable to do because of their competitive nature. For example, there was a long discussion in the previous session around brominated flame retardants, and one of the first studies that was funded by the compliance fee was to assess brominated flame retardants in legacy WEEE plastics. That is what has prompted the Environment Agency to revise its guidelines. There are controls now in place to make sure that plastics that are contaminated with those chemicals are being dealt with in the right way and those that are found to be contaminated are being sent to high temperature incineration in sites that are permitted to do that. The Environment Agency has been following this extremely closely even to the point that it was involved in the design of the methodology of the study itself.

There is a lot of investment also in communications and kerbside collections, and other collection points, too. There is some good that can

come out of the compliance fee, but I do not think it will affect design. One of the things that the Government are considering at the moment is the introduction of eco-modulated fees. We have seen in the Industrial Strategy, the Clean Growth Strategy, the 25-year Environment Plan and the Resources and Waste Strategy this commitment from Government that they will try to encourage producers to design better products. The idea behind the eco-modulation is that producers who put on the market good products pay less than the producers of bad products. How you define that is still up for debate and DEFRA is certainly considering what criteria might be used. We think that might be a sensible way to reward good design.

In the initial framing for the criteria, DEFRA is looking at durability, repairability, hazardous substances and recycled content. I think it is definitely coming, but I still believe that some eco-design legislation itself is going to be the most effective means to encourage design change.

Q99 **Alex Sobel:** It is really helpful to know that it is insufficient and we need further reforms. Ugo, do you want to come in on this point as well? Do you have anything to add?

Ugo Vallauri: Yes, I wanted to add that we see two problems from our perspective in the compliance fee as it is managed at the moment. On the one hand, the law requires that the fee is set at a level that encourages compliance by collection. Clearly this is not working. It should be very clear that the fee is not giving that incentive.

The second problem, referring to what Susanne was saying, is that the fund itself, because of the way it is currently managed, represents the views only of the manufacturers. That probably has an impact on how it does not necessarily contribute to assessing projects that could contribute to the whole waste hierarchy. For example, we have seen that there are strong incentives for recycling, but perhaps some of these funds could be more directly aimed at increasing reuse, for instance, a lot more than happens now.

Alex Sobel: I think Philip is back online now, but I am going to hand over to Ian for his questions and then I think Philip will then take over subsequently. Thanks very much for that, and hopefully I will not be called upon again. Ian, over to you.

Q100 **Ian Levy:** Thanks, Alex. A perfect time when you joined the meeting there. It could not have been done better. Ugo, I often get asked what motivated me to become a politician—that is a completely different story, and we could talk all day about it—but if you would not mind, in your own words, what motivated you to start The Restart Project? A bit of a snapshot.

Ugo Vallauri: Thanks for the question. We have been progressively losing our right to tinker and repair the products that we already own and this has happened, in a way, silently. We have not really been fully aware that we were progressively losing all of this. We started Restart with the

intention of bringing repair back into our communities when it was becoming harder and harder to find even commercial options. This country has a wonderful tradition of engineering, and repair was at the heart of the UK but that was not the case anymore. We were losing our skills and true ownership of the things that we own. We started in London running our first community repair event and called them Restart Parties on a summer afternoon in June exactly eight years ago. At the time our wonderful volunteers helped participants to give a second lease of life to things that people thought were going to be lost. I will always remember the person who cycled for six miles to come to our first event carrying a printer on her bike, and went back home happy. We should not underestimate people's frustration for not being fully in control of products that they have bought and it has been lost.

Now we are part of a much bigger global community that is resisting the throwaway economy and trying to promote alternative, better ways. Repair is about—*[Inaudible]*—and care. It links people, it creates value and it is an essential part of being human. Polling in the UK and in Europe and the United States shows that people overwhelmingly want to repair and they want the barriers to repair to be removed. That is a wildly popular agenda that unites people across the whole political spectrum.

Repair jobs that can be created through repair are excellent, but the skills in the future for repair jobs are under serious threat. Looking beyond repair, a repairer's creative problem-solving mentality is crucial to many of the jobs of the future, and that is why, while we started deeply rooted in community activity, we are promoting and aiming for a universal right to repair so that independent repair businesses as well as people in communities can repair something that would otherwise be unnecessary waste.

Q101 **Ian Levy:** Following on from that, our family are farmers. Robert was talking earlier about a gear selector on a tractor and a moisture meter for the grain that he was able to get repaired in the end. We have one of these battery-powered vacuum cleaners you hang on the wall, I will not say the name, but they are very powerful. Last weekend it went off, so I took it apart myself and fiddled with it and every part in there was metal apart from the main gearbox cog, which was plastic. One ran against the other and just ground the plastic away until the main bar on the front of the vacuum cleaner did not turn anymore, so it had to be thrown away. It could not be repaired. To me that was built so that it could not be repaired because it was in almost a sealed unit. What products do you think are generally safe to repair? I tinkered with that and I am sure Robert tinkers as well with some of the stuff that he has on the farm, but are there certain products that you would say should be more specifically allocated to a qualified repairer or is it something that can be done in the home by a bit of an odd-job man?

Ugo Vallauri: We are not advocating that everyone should repair everything themselves if they do not have the skills and experience, and

the volunteers that power all the community repair movement activities, repair cafes and repair parties across the UK and the world are very experienced and talented, and extremely careful about safety. That said, there was a time where everyone was able to at least rewire a plug, and we have lost touch with all of this. It is indeed true that there is increasingly not so much planned obsolescence, in the way that people think that products are designed so that they stop working on the day after the warranty expires, but there are deliberate choices made by manufacturers to make it hard for people to replace a component. It could be glue preventing you from repairing the battery of your smartphone, for example. While most of our events focus on primarily battery-powered devices, it is entirely possible if a person is skilled and experienced and knows what they are doing to repair at these events mains devices. Obviously safety comes first with everyone.

Ian Levy: Absolutely. I think Martyn wanted to come in there.

Martyn Allen: I was just going to build on what you were saying, to draw the line in terms of risk. Replacing a battery in a smoke detector—I had to go that only the other day; it started bleeping so I replaced it—is quite easy to do. You used to be able to replace batteries in phones, but you can no longer do that, so you either go to the manufacturer or take it to a third-party provider who may be able to do it cheaper and more efficiently and quickly.

The other extreme is: would you feel comfortable or confident in repairing a tumble-dryer or a fridge-freezer? We see in the news white goods fires for unknown reasons on a daily basis. Electricity poses a fire risk in the home year on year, so it is where you draw the line in terms of risk. Yes, replacing a plastic part should be achievable and should not ultimately result in a product having to be destroyed, but when we get into electrical safety, that is a very different matter. For me, the conversation is all around safety and Ugo made that point quite nicely.

Q102 **Ian Levy:** Susanne, maybe you might be able to help me a little bit with this one. As we leave the Covid pandemic period we are obviously going to be entering a period of quite high unemployment. Bearing in mind what Ugo and Martyn have said, do you think that we could use the facilities in schools, colleges and night schools perhaps to bring in lessons to encourage people to get a basic understanding? Martyn talked about changing a plug. This is something with my kids I have made a point of showing them how to do, but I think some of those skills get a little bit lost as well. What do the panel think? Susanne, maybe you want to go first. What do you think about the ability to train people up so they can do some basic repairs?

Susanne Baker: Yes, it is an interesting point. We are lacking in the UK in skills across a whole range of fields. From techUK's perspective, digital skills is a massive issue and we would love to see more training on that. Engineering skills goes in the same bucket. One of the things that Material Focus is planning to do is to test a schools' programme with the

charity Global Action Plan, so I think that should definitely be something that is considered as part of that trial with schools.

Q103 **Ian Levy:** Do any of the other panel want to come in on that as well?

Martyn Allen: For me it would be a case of not just the skills to do the job; it is what parts are you going to use. We see if you google anything that you go to one of the online marketplaces, whether it is eBay or Amazon. If you google an iPhone battery, there will be hundreds of replacements available to you. Almost all of them will not be approved by the brand themselves, but you can install them. Some of them will come with instructions on how to replace it, so it is control of the online marketplace that is really fundamental to this issue as well. It is not just the skills of the person; it is the quality and safety of the components that are available. I am sure people buy them because they are cheaper than those that are available from the manufacturer, but the online marketplace is certainly an area to explore.

Ugo Vallauri: This is a brilliant point. I would like to mention the three pillars of a true right to repair that we would like to happen in legislation in the UK, as well as the rest of the world. They are, first, access to affordable spare parts for all products to everyone exactly so that Martyn's point is taken care of, because often people are not able to choose and even access the part from the manufacturers themselves. That often happens, so this is an opportunity to change that by requiring in legislation that all manufacturers provide for the whole lifetime of a product access to spare parts for everyone.

The second thing that ensures safe repairs can be done by everyone is access to the official repair manuals, so that products can be repaired using the best knowledge available, which will obviously be the one provided by the manufacturer.

The third point that is a crucial pillar is that products should be designed to be repairable to begin with. Martyn gave the example of smartphones in the past with batteries that could be swapped. There was the choice to make products smaller, and some manufacturers are making products that are marginally thicker but with perfectly user-replaceable batteries. This can change, but there are insufficient incentives unless we require all manufacturers to follow minimum standards.

Q104 **Ian Levy:** Yes. I think your point about the repair manual, even if it was online, would be fantastic. Susanne?

Susanne Baker: Under the eco-design regulations that were discussed in the last session, with some of the resource efficiency measures that were brought in for the first suite of products being considered in that package, we saw the introduction of requirements for manufacturers to hold spare parts for seven to 10 years, to provide repair information to professional repairers, and to ensure that products can be repaired using

commonly available tools. We are starting to see legislation being brought in that addresses many of the points that Ugo mentioned there.

Ugo Vallauri: I would add that unfortunately this legislation will not automatically be adopted by the UK and we still do not know whether the UK will adopt something similar. This covers only an initial set of products, so while it is encouraging—it has been a global first and a crucial precedent for the right to repair to gain traction worldwide—there is a third problem, which is who can access repair manuals as well as spare parts. That is why we are campaigning for a universal right to repair, so that it is not just professional repairers but everyone. That could increase everyone's safety by not using third-party, and not necessarily as accurate, sources of information. I will give you one example that is very relevant. About three years ago, we ran one of our Restart Parties at Portcullis House and we took approximately two hours to take apart a blender from Helen Hayes MP. Had we been able to access the official manufacturer's repair manual, it would have taken us five minutes. If you think about this and the global aspect of what this means, it is an increase of the cost of repair at a professional level, but for everyone a lot of time wasted and opportunities that we are not taking maximum advantage of.

Ian Levy: On a lighter note, when I took that vacuum cleaner apart, I found out what the problem was, but even if I had been able to get the part, I could not have put it back together.

Chair: Thank you very much, Ian. I think that takes us nicely on to the whole issue of intellectual property rights, which I think Nadia Whittome is going to cover in her questions.

Q105 **Nadia Whittome:** I have a few questions, firstly for Susanne and then a couple of follow-ups. Research shows that consumers want products to be more durable. In your understanding, are electronics producers taking action to make their products more durable and more reliable, or are you finding that they are inherently reluctant to promote initiatives if this means that their sales might be reduced?

Susanne Baker: It is a good question. What we have seen for products like smartphones, for example, is that the whole life of a smartphone has extended slightly in the last decade, partly because of design changes. A lot of the initial failures of smartphones were because of water or dust ingress. Some of the concerns that Ugo mentioned around the units being sealed have been introduced to really look at and to try to improve the durability of the product. There is a little bit of a trade-off. You can design for durability, but that has impacted design for repairability in turn.

The other really interesting trend that we are starting to see—it goes to some of the discussions that we heard this morning around leasing models—is that some quite large manufacturers, for example HPE, have said that they are going to move entirely to a product as a service model by 2022, so all their products and services will be available as a service

rather than buying it directly. We know that that in itself will be a strong incentive for product durability, because the product remains within the control of the manufacturer throughout the entire life cycle.

There have been some moves and I think we can see some more to come. Over the last three years, manufacturers, NGOs and industry experts have been working on a whole suite of new standards that will basically set out a methodology for measuring durability of a product. We also have standards for repairability, upgradeability and ability to remanufacture. For the first time we will have methodologies to assess these characteristics in products. In turn, once these are all complete, we can start to see them being much more embedded into future eco-design regulation.

Q106 **Nadia Whittome:** That is really helpful. Thank you, Susanne. That brings me on to the next question for Ugo about big tech companies. To what extent do you find that these companies have been supportive or obstructive when it comes to the right to repair?

Ugo Vallauri: Industry clearly feels—*[Inaudible]*—by all the three pillars: products to be repairable; access to repair recommendation; and access to spare parts. They have fought tooth and nail every step of the way. Teams of lobbyists in the United States, for example, go from state to state with a message of fear, uncertainty and doubt, trying to prevent state legislation being passed. Similar arguments happened in Europe. We know that in the US people have been threatened with localised job losses. Lawmakers have been threatened with localised job losses in case right to repair legislation would happen. In Europe, they tried the death-by-a-thousand-cuts strategy in relation to regulation. There are big companies with pioneering projects in this area, but they are not at the heart of the business strategy. They are really at the heart of what they are working on. Industry, unfortunately, is also using the Covid crisis at the moment as an opportunity to attempt to delay and block all forms of progressive regulation, even in relation to pollution and recycling, let alone the right to repair. We are also seeing a growing threat that comes from the role that software can play in all of this, so how software can further limit a product's repairability depending on some software locks applied.

Q107 **Nadia Whittome:** Thank you, Ugo. This is primarily for Susanne, but if the other witnesses have anything to say on this, feel free to chip in. On intellectual property rights, how do you think tech companies could maintain their intellectual property rights while at the same time making repair more accessible for consumers?

Susanne Baker: I can point to some developments that we have seen recently where manufacturers have tried to do just that, so for example, Samsung now offers a service where you can book a repairer to come to your home at a convenient time. They are increasingly using things like the internet of things so that they can remotely diagnose problems with mobiles and smartphones. We are seeing more manufacturers, and I

suppose the other kind of important point in the chain for things like smartphones is the telecom providers as well, so with people like Vodafone, you can pop into their store and get things repaired. We are seeing more innovation in the ability to offer repair. Sony has a repair facility in Wales with a commitment to repair and return products within 48 hours, which is quite astonishing. We are seeing manufacturers responding to some of the barriers that others have mentioned around repair.

Q108 **Nadia Whittome:** Thanks, Susanne. Lastly for Ugo—but as always if anyone else wants to chip in, please do—I know that Apple is trying to make its products more sustainable and offers repairs in its own Apple repair centre. Why is it a problem if companies reserve the right to do their own repairs and do not make their products generally repairable?

Ugo Vallauri: Let's not forget that Apple has made over 2 billion iPhones from the beginning of the iPhone product line. Even if you add its authorised repair centres, it simply cannot repair all of them. For example, imagine being somewhere in rural Scotland or Wales. It will take quite a bit of time to get your phone sent and received back. What it also does by providing its current services is basically putting us at risk of creating a monopoly. I will give you a specific example. If you look at its website, the only repairs that it lists are screens and batteries. For all other repairs, it quotes the cost of half the price of a brand new device, in case you have to have the repair done. Additionally, it is putting in software locks that are already prohibiting non-authorised repair businesses from performing some of the same repairs. We have seen a lot of progress on some of the low-hanging fruit through sustainability initiatives, data centres, the use of recycled aluminium in some of their products, and waste and assembly facilities, but the big elephant in the room is the overall carbon and material footprint in manufacturing.

There are very long-term goals in all of this, but they are all linked to this delusion that it will control and close all of the gaps around repair, and ultimately it is under severe pressure from their shareholders. Apple clearly sees controlling a repair as an opportunity to make money from services and promote consumption of new devices in primary markets. Some of the issues that were raised earlier by Martyn around the type of unofficial spare parts on the market are partly due to what happens at the moment where non-authorised Apple repairers do not have access to the same diagnostics and the same parts. Sure, in the United States, there is now an independent repair programme, but this is risking causing a full monopoly based on the price that Apple gives for access to all these parts.

We are in a situation where potentially having to replace a microphone in a phone would, according to the manufacturer, require replacing the whole phone and paying for half the original price. I do not think this is in the interests of consumers and the planet.

Susanne Baker: I want to mention a possible policy incoherence that is worth flagging. At the moment legislation requires manufacturers to conduct risk assessments for a product for all of its use for all of its life. There is a Product Liability Directive that essentially gives recourse to consumers if anything goes wrong. Equally, if anything does go wrong—if there is a component, for example, that is found later to be not safe—there is a parallel debate about how you get those products back and about how you can have an effective product recall system.

If I go back to the Product Liability Directive, the Commission reviewed the directive in 2018 and its own review said: "It needs to be looked at in the context of a more sustainable economy in which products are refurbished, patched and reused. Who will be the manufacturer of such products, eg in the case of repair, reuse and refurbishment?" At the moment, when manufacturers have liability for the product for its entire life, you are always going to have a situation where they are going to be protective of that product to minimise safety risks. I think it would be well worth looking at if we want to encourage a circular economy in the UK too.

Q109 **Chair:** That point, Susanne, feeds back into the point being made about having a leasing model, with products as a service, because the manufacturer would retain responsibility. You mentioned HPE. It would be very helpful if you could write to the Committee with some examples of British companies that are going down this route, in particular the innovative companies as well as the established ones.

Susanne Baker: I would be happy to.

Chair: Thank you very much, Nadia. Claudia Webbe has some questions on safety.

Q110 **Claudia Webbe:** Thank you, Philip; indeed, I do. Maybe this question would be for Martyn. Can you outline your safety concerns about the current system of e-waste management in the UK?

Martyn Allen: It is two sides, really. The local authorities, as we mentioned before, are doing a great job in driving up recycling numbers. We carried out some work last year using freedom of information and spoke to all the local authorities that are carrying out the reselling of electrical products, and it was about 24 that are into that sort of process, trying to proactively sell e-waste and get it back into the communities, which is an admirable thing. However, there were only four of them that had any sort of system in place for checking safety—that is even basic electrical safety checks, and even as far as to check whether a product had been subject to a product recall. They were facilitating putting recalled products back into the community, which is not a great thing to do. We firmly believe that if they are going to get into that market, it is an admirable thing to do, but there needs to be lots of transparency and consistency, and best-practice guidance needs to be developed.

We engaged with the Local Government Association and it was not forthcoming in getting involved to develop best practice. We would like to help give them a nudge to engage and develop that guidance for local authorities, as well as providing guidance for consumers so that they know what they can and cannot recycle in their particular area, and also understand what happens to their items once they have disposed of them, or think that they have handed them over to the site.

Q111 **Claudia Webbe:** Thank you. I don't know if anybody else wants to come in on that, but I have a further question to that. You have highlighted the problem of electronics being resold after they have been deposited at household waste and recycling centres without safety checks. What changes would you like to see to prevent this happening? That one is probably still with Martyn.

Martyn Allen: To develop a transparent process to deliver consistency across all local authorities. At the moment that just does not exist. We believe that there needs to be guidance that all local authorities can lead, understand and implement in their processes. It is a consistent system to get recycled products back into the community that have been safety checked, and certainly if they have been recalled they need to be taken out of circulation and handed back to the manufacturer. We have tried to engage with the Local Government Association and it has not been so forthcoming. Any help that the Committee can give to help that on its way would be greatly appreciated.

Q112 **Claudia Webbe:** I think that is a good point. Perhaps this Committee could write to the Local Government Association and raise this as an issue. I also wonder, in terms of the management of those household waste and recycling centres, whether or not the regional waste authorities are organisations that we ought to raise this issue with as well, because they are obviously managing those recycling centres with local authorities. I do not know what your engagement with those bodies has been.

Martyn Allen: Primarily it has been with the LGA, but we have been looking at regional engagement as well, because it has been difficult to engage with the LGA. I should make the point that recycling centres do a great job in preventing consumers from just getting rid of or selling their unwanted items on online marketplaces. Again, it is in everybody's interests to have a centralised system that could control recycling of e-waste, rather than just allowing consumers to do their own thing and sell them through online marketplaces. We see time and time again second-hand products being sold that are unsafe and subject to a product recall. That has to change.

Claudia Webbe: Philip, that ends my questions, but just with a reference that perhaps this Committee seeks that evidence from the Local Government Association and, indeed, the waste authorities that manage some of these household waste and recycling centres with local authorities.

Chair: Thank you, Claudia. I see Ugo indicating, but perhaps Shailesh could bring Ugo in on his questions, which are a good follow up.

Q113 **Mr Vara:** Certainly. Thank you very much, Chairman. Continuing with on the theme of safety, but narrowing it down to the actual suppliers, what we have at the moment is increasingly that spare parts are available on Amazon and other online marketplaces. Clearly there is a safety issue here with non-authorised parts. What would you suggest can be done to regulate the actual supply in the first place from these sources that are selling to the public? Perhaps Martyn could answer first and then Ugo could come in afterwards.

Martyn Allen: Yes. Time and time again we see things that are deemed to be substandard, or counterfeit, or even on recall, on online marketplaces, and increasingly so in particular during the current situation where until recently all the shops have been closed and almost all of our retail has been done online. We believe that the sale and control of electrical products ought to be included in the Online Harms Bill. The marketplaces see themselves as outside of the product safety regulatory system. They do not consider themselves to be retailers; they are just facilitators of that trade. That needs to end. They need to be brought into that process and be accountable for some of the products that they are allowing to be sold by their third-party sellers. They have been taking money from consumers for many, many years. Very, very profitable businesses are continuing to grow, but they need to be brought into the product regulatory system. One step towards doing that is having them on an extension in the Online Harms Bill that is being gone through at the moment to include the sale of electrical products as well.

Q114 **Mr Vara:** Would the suppliers not come back to you and say they are supplying online spare parts, as we have discussed, but they are also supplying furniture and a whole lot of other items, so they could not possibly be responsible for regulation for every single item that Amazon or other marketplaces supply? I am just being devil's advocate here in terms of what they are likely to say. Coming back to the specifics of the subject that we are discussing, is there anything else that you might be able to do, perhaps even at the level before Amazon gets its products to sell them?

Martyn Allen: To give an example that we tested ourselves, we were able to set ourselves up as a seller of electrical products called Dangerous Electrical without any question whatsoever. We were able to purport to be selling a recalled item with a serial number and model number that was on a large manufacturer's website without any trouble whatsoever. That is the current situation. We would like to see that those type of products are not even allowed to be sold, so that again, those online marketplaces have to put measures in place to request model and serial numbers, and even put up a pop-up alert if you add a Hotpoint tumble dryer that we have seen in the press for all the wrong reasons. There are no alert mechanisms in place, and that could be done quite quickly. Another one is using algorithms or image recognition, which they use for

other systems, like knives, weapons, and so on. You could do that for some of the recalled items by putting choice words and having that as a filter. We see plugs that are clearly substandard. You do not need to be a genius to see that a plug is undersize or it has no fuse. That could be picked up by technology quite easily without the consumer having to buy those products and then be forced to have an unsafe item in their house. Technology is the winner here and online marketplaces need to make better use of it.

Q115 **Mr Vara:** Right. Ugo, please, over to you.

Ugo Vallauri: Yes. I wanted to add to this point, because Martyn is absolutely right that unsafe parts or products should not be sold or resold. We should, however, be careful to avoid cases where potential reuse of refurbished spare parts or products, for example, could fall under this as well. People should be able to know when they are buying a part whether it is a genuine part from the manufacturer or a compatible part, or if it is refurbished, meaning that it uses previously used components. It is also a matter of making repair affordable. We should avoid a situation where a manufacturer has full control over the supply chain and setting prices for spare parts, which might make the difference between a product being theoretically repairable and actually being repaired. At the same time, in the previous session it was mentioned that the best thing to do with a product is to reuse before we recycle, so at times when a full product is no longer reusable, but some of the parts could be. Let's keep that in mind in finding transparent and open ways to take care of this.

Q116 **Mr Vara:** I see that Susanne wanted to come in. Before I go to Susanne, I will ask a second question and suggest that Susanne picks that one up as well as the first one, for the simple reason that I think we have about five minutes left, and I know that there is one other question. Susanne, could you come in on the second one and the first one as well? How would you suggest that moves towards a circular economy be made compatible with strict health and safety measures for electrical and electronic equipment? That is another issue in terms of circular economy. If I go over to Susanne first, and then perhaps Martyn could take it as well, but very briefly, please, because I know somebody else wants to come in.

Susanne Baker: Yes, I will be very quick. First on the point around the cost of spare parts, there was a report published this week by the Commission to inform its thinking for eco-design for smartphones and laptops. What it found was that the biggest differentiator for the cost of repair was the cost of labour. It goes back to the points that Libby and others said in the previous session: if we could introduce VAT cuts for labour, we could make repair much more affordable. In terms of making repair safe, we would like to see a level playing field in the level of safety that is required of repairers as well as manufacturers. Why would repair operations have weaker standards than the standards that manufacturers have to work towards? We are looking for a more regulated repair

industry, which might address some of the trust issues that were mentioned by Libby in her report.

Q117 **Mr Vara:** Okay. Martyn, do you want to come back quickly before I hand over to Philip again for the last question? You do not have to come back if it has been covered.

Martyn Allen: I would agree with Susanne that we need a regulated system for repairers. At the moment it is the wild west in many cases. There are certain jobs that need lower-level skills, but there are certain complex examples that we mentioned at the very start that need special skills. We need to find a way of having an extended process where things can be repaired, but the people carrying out those repairs need to be competent for the task in hand, and also have accessible access to the components so that the repairs are done safely.

Chair: Thank you, Shailesh. Thank you for keeping that commendably concise. Our last set of questions are from Jerome Mayhew, and I think just a quick word from Duncan Baker after Jerome.

Q118 **Jerome Mayhew:** I am going to be quick, because we are running very short of time. The new Environment Bill enables the Government to introduce an extended producer responsibility system that charges differently depending on the impact of different products. We are kicking off with one for packaging. What would you like to see included in the design of any future EPR or EEE? I shall point that towards Susanne to begin with and then perhaps Ugo might want to come in.

Susanne Baker: Earlier I mentioned some of the criteria that were being considered for eco-modulation for EEE. What we would really push for is for the criteria to be internationally aligned. We risk a situation where different countries pick different criteria, and you will be pulling the manufacturer in all sorts of different directions. International alignment on those criteria is absolutely vital. We would also like to see stronger incentives and some recognition for those manufacturers who are deploying circular economy business models, because that is not reflected at all in the current WEEE system. We are thinking through options, but we think more can be done there too.

Q119 **Jerome Mayhew:** Ugo, do you have a quick comment on that?

Ugo Vallauri: Yes. While obviously the design regulations that Libby was referring to are at the heart of pushing for products that are longer lasting and durable, EPR with modulated—*[Inaudible]*—fees can contribute to show when people are purchasing a product whether a product is more or less repairable, for example. We think that ease of repairability, as well as the ease of disassembly of a product, should be part of this, and that modulation should be sufficiently wide as to—*[Inaudible.]*

An extra point comes from the experience of France, which is now moving towards having 5% of the EPR contributing to a fund that can

reduce the cost of product repair. It is a very interesting approach. Susanne earlier mentioned that the vast part of repair costs has to do with labour costs. It would depend on the parts, but certainly a reduction via either a VAT reduction, or specific tax breaks, could help. Let us not forget that many small-scale, independent repairers might be below the VAT threshold, so it does not necessarily contribute to everyone.

Q120 **Jerome Mayhew:** Yes. I am going to pick up on the incentives and leave modulated fees for my colleague Mr Baker. It is really whether you like carrots or sticks. Do you believe that a system of incentives is the most effective way to drive improvements in product design? Should we be getting the big stick out and relying on regulations that would require designs for circularity? Ugo, you start.

Ugo Vallauri: Experience shows that the market does not seem to come with sufficiently ambitious steps forward. As an example, I could mention the voluntary agreements that exist in Europe, for example for game consoles, imaging, and printer manufacturers, which have not really been particularly ambitious. Availability of regulations that set minimum standards—

Q121 **Jerome Mayhew:** Sorry, Ugo, for interrupting. Is that not a question of the size of the incentive, not the concept of incentives working?

Ugo Vallauri: The problem is there will always be some manufacturers that choose shortcuts if they can. They might not be the ones represented by techUK, but there might be others that try to enter a market with substandard products. Regulations' role is to prevent the lowest-performing products from even being on the market. Additional incentives, for example, a repairability score index, as France has just adopted, can help to point consumers towards more repairable products.

Q122 **Jerome Mayhew:** Martyn, do you have anything to add on that?

Martyn Allen: I was just going to make the point before that as more and more products become internet enabled, it is not just necessarily the product itself that needs to be considered in this conversation, but the longevity of the software that supports the operation of those products. That is another part as more products become connectable.

Q123 **Jerome Mayhew:** Susanne, the final word on this question.

Susanne Baker: I wanted to add in something that has not been mentioned so far, and that is the role of public procurement. DEFRA is currently reviewing its sustainable ICT strategy to help to guide the Government's own purchasing of ICT. In Europe they are currently reviewing their green public procurement criteria, for example for laptops. In the US they have a system called EPEAT, which basically ranks a whole range of electronics on a gold, silver or bronze scaling, depending on its ability to meet a whole host of sustainability criteria. We could do more of that in the UK.

Q124 **Jerome Mayhew:** Ugo, you have just a quick mention, if you would.

Ugo Vallauri: Yes, just a quick follow-up to Martyn's point. Software is indeed a huge problem going forward for all kinds of connected devices, which is becoming every device. DCMS has an interesting proposed law to require manufacturers selling to the UK market to make very clear what is the minimal amount of support for software and security updates. We would like to make sure that that is extended to all products, including smartphones, which are the de facto connected product to begin with.

Jerome Mayhew: Great. Lovely. Thank you very much. I am going to hand straight over to Mr Baker.

Q125 **Duncan Baker:** Thank you. I would rather use the big stick that Mr Mayhew mentioned, because I think time is of the essence here and things do not necessarily get expediated with an incentive. Industry seems to always find a way to work around stipulations rather than having regulations. As the final question to Susanne, how important will it be to harmonise modulated fees across different countries, and how would you like to see the UK approach this, remembering that, of course, we will no longer be part of the European Union?

Susanne Baker: Yes. I think it is a really good and important question. If modulated fees are going to have any impact on the design of electronics they have to be harmonised internationally. We would recommend DEFRA puts off making a decision until the European Commission publishes its guidelines for member states in December. Equally, we are also very supportive of continuing to align with Europe on eco-design standards.

Chair: Thank you, Duncan, for that quick question. I think it was Ugo who mentioned the new French scale of repairability introduced recently. It would be very helpful if you have information about that that you could provide to the Committee. If not, I am sure our Clerks can dig it out. That concludes our second panel today. I would like to thank our witnesses, Susanne, Martyn, and Ugo, very much for your inciteful contributions, to apologise to the Committee and our witnesses for yet another technical failure of my broadband provider, and to thank Alex Sobel, in particular, for picking up the baton on the run, as it were. Thank you, colleagues, for an excellent session, and to Nick Davies and the other Clerks who helped to put together the briefing for this session.