green alliance...

Ready steady grow

How the Treasury can mainstream circular business

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Erratum
Following publication, a figure was corrected on page 6 for the number of vehicles removed by a car sharing club, from 24 to 22 private vehicles, as cited in the CoMoUK Annual Car Club Report 2022.

Contents

Summary

“A circular economy helps to fuel economic growth and build business resilience.”

Keeping materials and products in use at their highest value for as long as possible through reuse, repair, remanufacturing and recycling offers solutions to several problems the UK faces.

Over more than a decade, Green Alliance and its business partners have built a substantial body of evidence to highlight the significant advantages of a circular economy. It lowers climate and environmental risks by reducing carbon emissions and cuts impacts on biodiversity, water and air pollution.[1] But it also builds business resilience. By reducing reliance on raw materials, three quarters of which are supplied from abroad, circular business models increase domestic control over material flows and prevent value being lost.[2] This is already a priority in the critical minerals supply chain, which is riddled with geopolitical challenges.[3]

Economy wide studies demonstrate that a more circular economy would lead to growth in the UK, sometimes significant growth. For instance, one found that circular policies could lead to an increase of nearly one per cent of GDP by 2035 while another has suggested it could contribute as much as £82 billion in gross value added by 2030.[4,5] We have found that ambition in this area could support more than 470,000 jobs across the country, particularly in occupations predicted to suffer from high rates

> “The government needs to make the circular economy a cross departmental priority.”

of unemployment by 2035.[6] And around a fifth of these jobs would be additional rather than replacement roles.[7]

To realise all this potential, as the independent net zero review commissioned by government noted in 2023, the government needs to make the circular economy a cross departmental priority and integral to its industrial policy.[8] Given its important tax and spending responsibilities, as well as its role in co-ordinating government policy, the Treasury will be vital in steering this change.

This report describes circular approaches used by ten existing UK companies.[9] All are viable businesses with established market niches. But our interviews with them revealed that, to move these models from the periphery to the mainstream, businesses will need more support from the government, and from the Treasury in particular.

Based on the barriers to circular economy development identified in our survey, our three priority recommendations for further support from the Treasury are:

1. Level the playing field between circular and linear businesses, by ironing out aspects of the tax system which disadvantage circular practices.

2. Provide financial assistance through a dedicated fund to support circular businesses facing high upfront costs, as well as those creating the circular logistics and reverse supply chains necessary to support national markets.

3. Improve understanding of tax impacts to create better policy to meet environmental goals, enable businesses to thrive and satisfy people’s needs.

How is a circular business model different from business as usual?

> **“The way the economy currently operates, the costs of environmental harm are not factored into product prices.”**

The linear economy has a ‘take, make, use and throw’ trajectory. Businesses extract materials and produce goods to sell to consumers who use and eventually discard them, sometimes after a very short life. In these models, value is concentrated in the early stages of the production cycle.

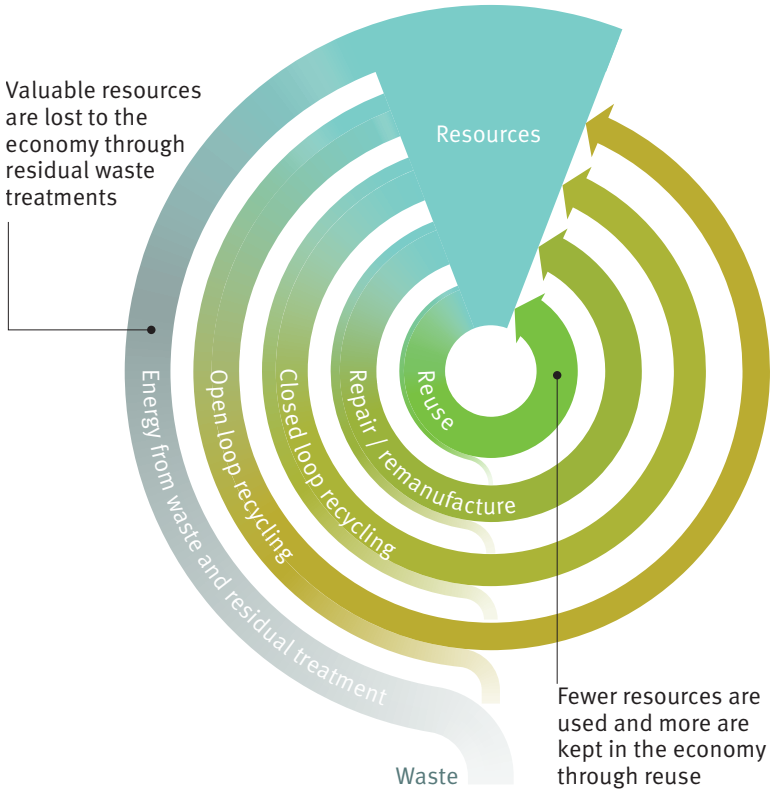
A circular economy alters this picture, keeping materials in circulation for as long as possible and preserving them at their highest value. This reduces raw material consumption and prevents the negative externalities associated with waste.

There are several measures and practices that characterise circular models: for example, designing for longevity, systems for reuse or sharing and ‘reverse supply chains’ that collect goods once used for reprocessing, resale or redistribution. They can also involve new ownership models where businesses keep control of a product through its life, giving them greater incentive to maintain its value.

Several of these approaches can be combined in one business. Recycling occupies an important role in a circular economy hierarchy, but reuse and remanufacturing should be prioritised for most items as they maintain more value.

The way the economy currently operates, the costs of environmental harm are not factored into product prices. High quality, long lasting products suitable for a circular economy, that require greater logistics associated with repair, reuse, remanufacturing and recycling, risk being undercut by the speed and convenience of cheap, often poor quality goods designed for a single use or a short lifetime.

Where resource value is kept and lost in a circular economy



Circular businesses in action

“Stimulating new circular business models offers significant prospects to address major economic and environmental challenges together.”

We spoke to ten circular businesses in an attempt to understand their business cases, the barriers to broader adoption of what they do and the incentives others would need to follow suit. In the following pages we profile and summarise their main characteristics.[10]

The overall picture is of fully circular opportunities being taken up by small, highly motivated, innovative businesses passionate about their approach. However there is also scope for larger existing businesses to incorporate more circular approaches (see opposite).

Small circular enterprises new to the market, as well as larger incumbents looking to adapt, are being held back by embedded behaviours and structural challenges that the government has the power to address. And the reason the government should is clear. Stimulating new circular business models offers significant prospects to address major economic and environmental challenges together.

Big businesses can go circular too

For this report, we have largely focused on businesses with entirely circular business models. These tend to be small to medium enterprises, but there is considerable scope for existing linear businesses to incorporate circular methods. Large retailers have begun experimenting, with some promising major changes to come.

The retail chain John Lewis operates several circular initiatives, including furniture rental and circular design training. It aims to have a buy back or take back scheme for all its product categories by 2025.[11]

Selfridges has pledged that 45 per cent of its transactions will be circular by 2030, which would represent a radical increase from one per cent today.[12]

IKEA offers a buy back and resell programme for old furniture, as well as free small spare parts to extend product lifetimes.[13]

And tech companies such as Microsoft, Samsung and Google have partnered with knowledge sharing platforms that help customers repair certain products themselves.[14]

These initiatives are a promising start, but the businesses remain linear at their core. Without intervention and encouragement, few will become as circular as they could be.

To drive a more fundamental shift towards the circular economy, companies need further evidence about which models work, as well as more support and clear signalling from government for change.

Strong public messaging and support for recycling has led to many mainstream businesses boasting products made of recycled materials, but incentives and action to go further and encourage reduction, reuse and repair have been limited.

Leasing or rental

Customers rent a product from a central platform, paying per use or for a set period

> “It is estimated that 80 per cent of household items are used less than once a month.”

Business case 	Products are high quality and made to last This is particularly suitable for products used too infrequently to justify the upfront cost of purchase It is estimated that 80 per cent of household items are used less than once a month, while items such as children’s clothes and toys are used for a shorter amount of time than the products’ lifespans[15] Renting can make high quality products more cost effective for the end user, if they pay a fraction of the total upfront cost in rental fees It optimises the revenue that can be generated from each product as there are multiple customers per item, so income is generated multiple times from a single product
Potential environmental and social benefits 	Sharing products means fewer products are needed, which avoids environmental impacts associated with raw material extraction and production, eg harm to habitats, water and air pollution and greenhouse gas emissions Waste prevention Community-oriented schemes can create local social improvement benefits More people can access and afford to use high quality products
Barriers to adoption 	**For businesses:** the market preference for cheap, poor quality, easily accessible goods; poor circular logistics, eg the need to collect, clean and redistribute items; competition with linear models which have easier access to investment tax relief (eg the Seed Enterprise Investment Scheme)[16] **For consumers:** habit and cultural inertia; concerns around convenience and hygiene[17]

“There’s just not enough patient capital out there, people who are prepared to invest in a business that doesn’t become a unicorn overnight.”

Charlotte Morley, founder, The Little Loop

The Little Loop

A children’s clothing rental platform. Customers pay for monthly or quarterly membership plans, swapping items as frequently as needed

Each garment rented can earn between 120 and 260 per cent of the recommended retail price, which is split between the Little Loop and the garment manufacturers[18]

It can save customers £300 to £999 per year compared to buying the equivalent new garments from the same brands[19]

Since its inception in 2019, the Little Loop says it has saved 120 tonnes of CO_2e and five million litres of water, by avoiding demand for new products[20]

Securing the initial capital for the business to start up was a major challenge, as investors typically prioritise quick wins over models which see returns over time

Competition with big fashion houses is a challenge

Library of Things

Community-oriented rental hubs for household items (eg DIY, cleaning and gardening equipment) in multiple London locations and Brighton

Customers pay per day or per week to borrow items

This is a social enterprise and circular economy platform which partners with local authorities and manufacturers to set up self serve kiosks that house rentable items

Kiosks are demand led, meaning that local communities vote to have a kiosk in their area, which is funded through the council and local organisations

The demand led approach ensures the model is viable, as ongoing costs are mainly covered by revenue from rentals

In the past four years, Library of Things says it has saved 228 tonnes CO_2e and prevented 110 tonnes of waste

In the same period, the service attracted 49,000 extra visits to a community space, borrowers collectively saved £640,000 and users reported it had led to them adopting wider circular behaviours[21]

Access to affordable spaces to house the libraries

The cost of new parts for repairs, which limits the product life and window for revenue if items break

Product service systems (also known as servitisation)

Companies retain ownership of and responsibility for goods, providing maintenance as a service to users. Currently, they are mostly business to business transactions

> “Products yield profit for longer, generating income throughout their lifespans.”

Business case 	Business models are centred around services, rather than the products Companies can generate revenue without intensifying production Like leasing, products yield profit for longer, generating income throughout their lifespans, rather than once when they are sold Servitisation is often combined with repair and remanufacturing, to further extend product lifetimes and profit opportunities Centralised data collection (eg into consumer behaviour) can lead to efficiency gains and product design improvement Users avoid upfront costs, can distribute payment over time and reduce maintenance costs; for instance, they are protected from unexpected bills and have lower associated staffing costs
Potential environmental and social benefits 	Lower raw material consumption from longer lasting products through repair and maintenance Avoided environmental impacts related to production Waste prevention Improved affordability of high value goods for end users Expansion of high wage, digital jobs in business analysis, monitoring how services are operating
Barriers to adoption 	**For suppliers:** high upfront cost of assets; public procurement does not prioritise servitisation; limited appetite in business-to-consumer markets **For consumers:** budgeting constraints which prioritise capital expenditure over operational expenditure

“There are some operations which are yielding ten to 12 per cent return on sales which, in this industry, is almost unheard of.”

Des Evans, CEO, MAN UK

MAN UK

Manufactures and leases truck and van fleets, as well as providing maintenance, repair and fleet management support

Typical margins of five to six per cent, rising as high as ten per cent in some specific cases, due to the ability to collect and analyse data on vehicle usage and optimise the fleet accordingly[22]

This is more profitable than conventional truck operators, which have a sales return of around three per cent[23]

Improved efficiency from analysing driving practices and tailoring training accordingly

Lower fuel consumption and associated CO_2 emissions, which are ten per cent lower than competitors

Improved road safety[24]

High upfront cost of purchasing the vehicle fleet

Time needed for consumers to introduce new ways of working

ETAP lighting

Manufactures and leases lighting as a service to offices, educational buildings and industry

Profit is made from high quality, long lasting lighting products, leased to consumers on ten to 15 year contracts, covering installation and maintenance costs

By designing circular, easily repairable goods, ETAP minimises additional expenditure required

Innovative lighting design leads to energy savings of up to 80 per cent compared to typical facilities[25]

Lighting systems are often installed during refurbishment, maximising the potential to reuse existing building materials

High upfront costs make initial financing challenging

Competition with cheaper products without circular benefits hinders scale up

Sharing

Companies or not for profit organisations own assets used in the public domain by multiple users. Unlike leasing, there is limited business interaction (eg cleaning, redistributing) between uses

> “Avoiding the need for one product per customer reduces raw material consumption.”

Business case 	As with leasing models, sharing optimises revenue generated per asset, by ensuring they are well used by a large membership base Customers benefit from flexibility by having access to products on an ad hoc basis and can save money compared to ownership, as costs are charged per use
Potential environmental and social benefits 	Avoiding the need for one product per customer reduces raw material consumption Avoided environmental impacts related to production Waste prevention Improved affordability for customers
Barriers to adoption 	**For businesses:** high upfront costs; the need to achieve a certain scale to achieve profitability; disproportionate taxation through VAT **For consumers:** habit and cultural inertia; concerns around convenience and hygiene[26]

“If you had a policy system that said that car clubs are better than the private car, then surely the tax system and any other policy system would reflect that.”

James Taylor, general manager, Zipcar UK

Zipcar

The UK’s largest car sharing club, with over 3,000 cars and vans that members can access as needed

Customers are charged per use, with various membership plans that make prices more cost effective for frequent users[27]

According to the company, members typically save around £300 per month compared to private car ownership[28]

Due to high upfront investment and time needed to build demand, Zipcar remains a low margin business, as scale is important to achieving profitability[29]

For every car club vehicle, 22 private cars can be taken off the road, therefore reducing congestion and air pollution[30]

Zipcar says its large electric fleet saved 82,000kg CO_2e from 2017 to 2021[31]

Cultural preference for car ownership limits uptake, although younger generations are increasingly moving away from this[32]

Lack of local infrastructure, such as join up with public and active travel, that would better facilitate car sharing

There is no distinction in the tax system between private and shared cars, meaning that shared cars are taxed the same as if they were privately owned (eg in terms of congestion charges and fuel duty), despite being more efficiently used overall

Shared electric vehicles which use public charging points are subject to higher VAT rates (20 per cent) than those charged at home (five per cent)[33]

Reusable products

Companies produce and sell items designed to be used multiple times, replacing products where single use is the norm

> “Fifty three per cent of consumers identify reusability as an important factor for environmentally friendly packaging.”

Business case 	Higher quality reusable products can have greater profit margins than their disposable equivalents and, for items such as packaging, a production ‘cost’ can become a profitable asset; for example, one study found scaling up reusable food and beverage containers in Europe could save retailers up to €8 billion by 2030, as companies do not have to pay for new packaging for every product[34] Consumer demand is growing for more sustainable products. Fifty three per cent of consumers identify reusability as an important factor for environmentally friendly packaging[35] Reusable products can strengthen customer loyalty[36]
Potential environmental and social benefits 	Optimising reuse rates can lower raw material consumption Reduced environmental impacts related to production Waste prevention[37]
Barriers to adoption 	**For businesses:** poor circular logistics such as for collection, cleaning and redistribution of items; ensuring return rates and levels of reuse that deliver reductions in resource use; critical mass needed to make models viable **For consumers:** concerns around convenience; habit and cultural inertia; high upfront costs

> “Over the last 25 years we have diverted over two billion nappies from landfill…but that figure should be an annual figure or even a monthly figure in terms of where we want to get to.”
>
> **Guy Schanschieff, founder, Bambino Mio**

Bambino Mio

Sells reusable nappies and accompanying accessories

Bambino Mio says its reusable nappies increase business profitability by more than 26 per cent compared to disposables and save families money on a cost per use basis; for instance, a mid range reusable nappy system, from birth to potty, is almost three times cheaper than its disposable equivalent (factoring in the costs of the nappies as well as accessories, water and electricity)[38]

Reusable nappies reduce waste by nearly 900kg during the period a child uses nappies[39]

Reusables reduce the carbon footprint of nappies by over 100kgCO_2e per child[40]

Consumers are put off by high upfront costs, a lack of understanding of what is involved and logistical challenges like cleaning and maintenance

Corplex

Specialises in the circular economy for plastics, including selling reusable products such as flower boxes and pallets

The cost of packaging material is a major business outlay

For Corplex’s customers, buying reusable packaging means materials are reused multiple times, creating cost stability

At 40 uses (the expected lifetime of the reusable version) plastic flower boxes are 66 per cent cheaper than their single use cardboard equivalents[41]

It builds customer loyalty, as a recycling service is offered for packaging no longer suitable for reuse, with the recycled material incorporated into new products

This offers Corplex savings on material prices, which are significant: as of October 2022, over 50 per cent of the cost of the plastic packaging was the cost of materials (including recycled materials)[42]

According to Corplex, after four to six rotations, the carbon impact of reusable plastic flower boxes is lower than their single use cardboard equivalents[43]

By the seventh rotation, other environmental impacts such as ozone depletion, land use and pollution are also reduced[44]

High upfront costs and existing business habits limit broader take up

Established one way logistic systems limit customers’ ability to return boxes

Resale

Companies or charities collect, clean and resell products, sometimes undertaking light repairs. Businesses also provide platforms through which people resell their own goods

> **“A third of consumers wanted to buy second hand to cope with the cost of living crisis.”**

Business case 	Resale models benefit multiple stakeholders Unused assets, whether idle office equipment or unworn clothes, are a source of untapped economic potential for businesses and consumers It is estimated UK businesses have nearly £59 billion of capital tied up in unused assets such as machinery, vehicles, and appliances[45] For consumers, second hand items are often cheaper; a recent survey found a third of consumers wanted to buy second hand to cope with the cost of living crisis[46]
Potential environmental and social benefits 	Reduced raw material consumption from avoided new products Avoided environmental impacts related to production Waste prevention Improved affordability
Barriers to adoption 	**For businesses:** VAT rules mean resold goods are disproportionately taxed; poor circular logistics; planned obsolescence and short lifetimes of poor quality goods make some items unsuitable for reuse[47] **For consumers:** habit and cultural inertia; stigma associated with second hand items; greater effort compared to buying new

> “We can create value for the local authority and local communities in different ways, both economic, social and environmental.”
>
> Sarah Ottaway, sustainability and social value lead, SUEZ

Ramco

Values large unused assets in businesses (eg office equipment and machinery) and resells them on the secondary market

Finding buyers for unused assets generates revenue shared with the owners

Turnover increased by 41 per cent in 2022, following an increase in demand for second hand products[48]

In 2022, Ramco says around 17,000 items were saved from landfill[49]

Lack of awareness of the possibility amongst asset holders; business inertia

SUEZ Reuse Network

Thirty shops at household waste recycling centres across the UK divert and resell useable items from the waste stream

By selling on items that would otherwise have been recycled or sent to landfill or incineration, SUEZ captures the higher financial value of products compared to the recycled materials

For instance, SUEZ says selling a typical wooden chair for reuse increased value by 700 per cent, compared to recycling

Each shopper saved an average of £141 per item (compared to the price of similar items at major retailers), ranging from £6 for small media items to £247 for furniture[50]

In 2021, SUEZ calculated the network diverted 418,000 items from waste[51]

It works with communities to provide local jobs and reduce local authorities’ landfill costs

The Renew Hub in Manchester says it makes £220,000 available each year for community and voluntary projects[52]

A lack of market data on reused and reusable items prevents the network refining its business model[53]

SUEZ estimates that UK household waste recycling centres miss 35,500 reusable items every day, but lack of local data hinders action to redirect them for reuse[54]

Repair

Companies repair or upgrade products for a charge

“The repair sector has potential to generate sales revenues in excess of £63 million a year by 2028.”

Business case	Repair gives products a new lease of life, providing businesses with additional profit opportunities, often with higher margins than making new products The repair sector has potential, if supported, to generate sales revenues in excess of £63 million a year by 2028[55] Consumers sometimes save money through repair, for instance by extending the lifetime of their existing possessions or by buying refurbished products at lower cost If products were designed with repairability in mind and spare parts were widely available and affordable, these benefits would increase
Potential environmental and social benefits	Avoiding the need to buy new means lower raw material consumption Avoided environmental impacts related to production Waste prevention Improved affordability Community benefits are derived from item sharing and repurposing networks Skilled jobs in repair
Barriers to adoption	**For businesses:** VAT rules mean they are taxed disproportionately; difficulty sourcing affordable spare parts; designs that can make repair difficult; a lack of priority given to repair through procurement policies and standards [56,57,58] **For consumers:** habit and cultural inertia; trust in refurbished items; concerns around convenience and high costs

“The business case is clear from an economic point of view in that you’re fundamentally turning waste into profit.”

Richard Kenny, group sustainability director, Techbuyer

Techbuyer

Buys, decommissions, refurbishes and then sells used business IT equipment and servers

Techbuyer had a turnover growth of 24 per cent in 2022, much higher than the average electronics manufacturer, which typically sees growth of one to two per cent per year [59,60]

According to internal figures provided by the company, consumers save 50 to 70 per cent compared to the original recommended retail price, if the equipment bought is over two years old

If products are less than two years old, savings might be ten to 20 per cent, but on the oldest items buyers can save as much as 80 per cent[61]

Techbuyer says it diverted over one million kilogrammes of ewaste from landfill in 2022, preserving critical raw minerals such as cobalt, tantalum and strontium, which are common in computer servers[62]

Public procurement policy typically blocks the use of refurbished equipment and, even though some of these blocks have been removed, lobbying against using refurbished products by large manufacturers is common

Public attitudes to using refurbished IT equipment rather than new also limit broader uptake

The wider economic impacts of circular business

> **“Multiple studies suggest a more circular economy will lead to growth, sometimes to a significant degree.”**

Multiple studies suggest a more circular economy will lead to growth, sometimes to a significant degree. For instance, WRAP, the Waste and Resources Action Programme, estimates switching to the circular economy could boost the UK’s gross value added by £82 billion by 2030, while research by Cambridge Econometrics, a global economics consultancy, suggests it will lead to a one per cent increase in GDP by 2035.[63,64]

Studies into the circular economy’s wider economic impact often predict that growth will come from additional consumer spending power or the expansion of higher paid jobs.[65]

However, increased spending power risks the ‘rebound effect’, where resource consumption actually increases rather than falls if money saved by consumers is then spent on more goods.[66] This can be avoided by driving spending into the services sector and implementing strong circular policies that deliver improved efficiencies and lower resource use across the economy.[67]

A larger circular economy will also create more jobs than a wasteful linear economy. For instance, for every thousand tonnes of material, there are two jobs in recycling versus 0.1 jobs in waste treatment and disposal.[68] In total, 472,000 jobs could be created across the country by 2035.[69] Jobs in repair and remanufacturing often offer highly skilled opportunities and our research has shown that more circular economy jobs will be created in areas suffering from higher levels of unemployment, including the East Midlands and Wales.[70]

This growth would mean that industries involved in raw material extraction and manufacturers and retailers of single use primary products or low quality goods would lose

out on sales. However, there is scope for many of these businesses to make the transition to circular models with limited changes in infrastructure.[71] And the increase in circular retailers, such as local repair shops, could bring a welcome boost to local high streets.

> “The structure of the UK economy means it is well positioned to gain from the circular economy.”

The structure of the UK economy, with low levels of extractive industries and primary manufacturing, means it is well positioned to gain from the circular economy. But countries that are net exporters of raw materials, single use items or cheap, poor quality goods are more likely to lose out. As the UK advances its circular economy, it should offer its knowledge, skills and assistance to increase the viability of these business practices elsewhere.

In future work, Green Alliance will be analysing the wider economic impacts of a switch to the circular economy and how to ensure the transition is fair.

How the Treasury can help

> **“The Treasury has a particular role to play, given its unique powers and economic oversight.”**

While the businesses we spoke to are largely successful, several had encountered significant obstructions to viability. Those barriers will be preventing the more widespread adoption of lucrative circular business models by others. But with government support this untapped economic potential could be realised.

While cross governmental action is needed, the Treasury has a particular role to play, given its unique powers and economic oversight. In our research, three specific areas were identified where action by the Treasury could make a difference.

Level the playing field

At a minimum, the Treasury should level the playing field between circular and linear business models by addressing those parts of the tax system that actively discourage greater circularity, such as:

- **Change VAT**
  VAT creates several perversities that discourage efficient business practices. To encourage repair and make it more affordable (as prices are skewed by high labour costs), it should be zero rated, prioritising high impact, frequently wasted products like electronics. This should include zero VAT on spare parts and labour.[72] VAT on public electric vehicle charging should be charged at five per cent, the same as private charging, and refurbishing buildings should be zero rated, the same as new build.

- **Give leasing businesses access to tax relief**
  Tax relief for new businesses, such as the Seed Enterprise Investment Scheme (SEIS), should be more accessible to leasing businesses. Currently, they are often ineligible if their gross assets, such as rented vehicles or clothing, reach £200,000.[73]

> “The government provides limited support to grow a more efficient circular economy.”

In time, the ‘take, make, use, throw’ linear business models that inflict avoidable environmental harm and waste valuable economic assets should be addressed by tax reforms that ensure these impacts are factored in, and that ‘bads’ like pollution are taxed, rather than ‘goods’ like labour. An interim approach, in advance of reform, could go beyond levelling the field between linear and circular businesses, and introduce a positive bias towards circular models, assisting them to grow their market share.

Provide financial assistance

The government provides limited support to grow a more efficient circular economy that designs out waste, with funding in this area overwhelmingly focused on treating the waste arising from the current linear economy instead. Innovation funds have not resulted in the widespread growth of viable businesses.[74] A dedicated £800 million fund to redress the balance would help support and kickstart circular businesses.[75] This should include helping those businesses that face high upfront costs as they start up or transition, as well as those creating infrastructure for circular logistics and reverse supply chains to support national markets. Having a fund of this size would provide the backbone of a new pact between the public and private sector, with the public support matched by expectations on businesses to be more resource efficient. In time, the circular economy should be brought into the remit of the UK Infrastructure Bank.

Understand the impacts of tax

The environmental impact of the tax system is poorly understood. The government does not routinely gather evidence on the impact of tax measures on behaviour. It has not even assessed whether environmentally targeted tax reliefs, eg those that support energy saving and clean technologies, lead to their intended social and economic outcomes.[76] The Public Accounts Committee was critical of the Treasury’s approach in a 2021 report, noting officials “could not explain clearly to us how the tax system is used in achieving the government’s environmental goals”. As the report noted, this was particularly surprising as the

> “Any approach to driving widespread change requires clear understanding of how policies will affect people’s behaviour.”

Treasury’s own commissioned Dasgupta review into the economics of biodiversity showed that “all our fiscal measures have an environmental impact in so far as they either encourage or disincentivise different behaviours.”[77]

Any approach to driving widespread change requires clear understanding of how policies will affect people’s behaviour. For circular business models, cultural inertia was identified as a barrier to almost every business we spoke to. Consumers are accustomed to a linear economy where they have total ownership of products, goods only travel in one direction and new is viewed as more reliable and desirable than repaired or second hand.

Policy makers often assume consumers are primarily motivated by cost, but this oversimplifies the multiple drivers behind the decisions people make. Policy ideas should be tested with the public and affected businesses at an early stage. Public concerns around convenience, trust and fairness should be addressed early on, to ensure a receptive customer base.[78]

It is known that information-only approaches fail to alter ingrained habits. To sustain behaviour change, the Treasury should prioritise policies that remove the structural barriers limiting the ability of individuals and businesses to change.[79]

Endnotes

1 Climate Disclosure Project, 2021, *Transparency to transformation: a chain reaction*

2 Although the proportion of the UK's material footprint met through domestic extraction has increased slightly since 2015, as of 2018 (the latest year for which data is available), only 27 per cent of the materials extracted to meet final demand in the UK were sourced domestically. See: www.ons.gov.uk/economy/environmentalaccounts/articles/materialfootprintintheuk/2018

3 For example, geopolitical tensions over which countries extract and produce the critical raw materials, such as rare earth elements used in wind turbines, creates risks for companies investing in the green transition. See: Green Alliance, 2021, *Critical point: securing the raw materials needed for the UK's green transition*

4 Cambridge Econometrics, 2022, *Defra: economic analysis of policy pathways for increasing resource productivity*

5 WRAP, 2022, *Levelling up through a circular economy*

6 Green Alliance, 2021a, *Levelling up through circular economy jobs*

7 Based on previous analysis of circular economy jobs by Green Alliance and WRAP, which showed that, if ambition were increased in 2015, the UK could benefit with 517,000 jobs in the circular economy by 2030, 102,000 of which would have been net jobs. See: Green Alliance and WRAP, 2015, *Employment and the circular economy: job creation in a more resource efficient Britain*

8 Rt Hon Chris Skidmore MP, 2023, *Mission zero: independent review of net zero*

9 Although the headquarters of one of the companies, ETAP Lighting, is not in the UK, it operates in the UK.

10 Some businesses we spoke to were able to share more about their individual finances than others. In instances where companies shared commercially sensitive information, we were unable to independently verify statistics, so have indicated where details have come solely from the company.

11 John Lewis Partnership PLC, 2022, *Ethics & sustainability progress report 2020/21*

12 Selfridges & Co, 2022, *Project earth report 2022*

13 IKEA, 'Circular hub', www.ikea.com

14 *Mashable*, 14 January 2023, 'Five tech companies that make it (sort of) easy to repair your own devices'

15 Library of Things, 'Why Library of Things?', www.libraryofthings.org.uk

16 Companies with leasing models are often unable to access the Seed Enterprise Investment Scheme (SEIS) or the Enterprise Investment Scheme (EIS) because the schemes exempt companies with over £200,000 in gross assets. Leasing models often need to be asset heavy to become viable, so an uneven playing field is created between circular and linear businesses.

17 Green Alliance, 2018, *By popular demand: what people want from a resource efficient economy*

18 This was an internal figure provided by The Little Loop. The 260 per cent increase is based on an £18 Kite t-shit which was rented out to five children, for 700 days, earning a total of £47.

19 This was an internal company figure provided by The Little Loop. The average annual spend of each customer is £288, who accesses around £600 worth of clothing each year. The £999 saving derived from a customer, 'Jenny', who spent £253 and rented 52 items over the course of the year, worth £1,252.

20 The Little Loop revealed their impact so far via Instagram on Earth Day 2023. Through over 20,000 rentals, they say they have saved 120 tonnes of CO_2e, over five million litres of water and the production and waste of almost 3,500kg of clothing. See: https://www.instagram.com/p/CrVgC9NssAN/?igshid=NTc4MTIwNjQ2YQ==

21 Library of Things, 2023, *22/23 impact report*

22 D Evans, 2020, *The road to zero emissions: the future of trucks, transport and automotive industry supply chains*

23 MotorTransport, 'Motor transport top 100 2022', mototransport.co.uk

24 D Evans, 2020, op cit

25 ETAP Lighting, January 2021, 'ETAP lighting international commits fully to circular economy'

26 Green Alliance, 2018, op cit

27 Zipcar, 'What are car clubs?', www.zipcar.com

28 Ibid

29 Global Database, 'Zipcar (UK) Limited', uk.globaldatabase.com

30 Como UK, 2022, *Car club annual report 2021*

31 Zipcar, 2021, *The road to electrification: Zipcar sustainability report*

32 Centre for Research into Energy Demand Solutions (CREDS), 2019, *Shifting the focus: energy demand in a net zero carbon UK*

33 *FleetNews*, 30 March 2022, 'No VAT cut for EV drivers using public charge points'34 Circular Economy Portugal, 2021, *Making the business case for packaging reuse systems*

35 Global Web Index, 2019, *Sustainable packaging unwrapped*

36 World Economic Forum, 2021, *Future of reusable consumption models: platform for shaping the future of consumption;* Upstream, 'Reuse vs single use: economics', upstreamsolutions.org

37 These benefits are only realised if products are recirculated enough times to offset the impacts of manufacturing which, for reusable products, are typically greater. The production and transport of heavier materials is more intensive, so recirculation is necessary to ensure that environmental impact does not increase. For instance, 'bags for life', introduced following the carrier bag levy, initially led to as much as a 440 per cent increase of plastic on the market, due to costs not being high enough to dissuade continued purchases. See: Co op, 2021, *Bag to rights: the impact of the carrier bag levy in England, 5 years on*. Elsewhere, reusable glass typically needs to be reused two to three times to have a lower impact than single use packaging, but this can be as high as 25 times for larger products. See: Reloop Platform and Zero Waste Europe, 2020, *Reuseable vs single use packaging: a review of environmental impacts*

38 Figure on profitability provided by Bambino Mio. Mid range reusable nappy systems, from birth to potty, cost £500 including the costs of electricity, water and accessories. Using mid range disposables would cost £1,300 from birth to potty. See BBC Radio 4, *Sliced bread* 'Reusable nappies'

39 Nappy Alliance, 'Reusable nappy schemes', nappyalliance.co.uk

40 Defra, 2023, *Life cycle analysis of nappies/absorbent hygiene products 2021/23 – EV0493*

41 Corplex, 'Life cycle analysis', corplex.com/lca-life-cycle-analysis/

42 L van der Shalk, 9 November 2022, 'Circular packaging: good for the planet and for business', *Business Green*

43 The LCA Centre, 2022, *A comparative case study to establish the breakeven point between specific reuse and single use transport packaging for cut flowers*

44 Ibid

45 Ramco (UK) Ltd, 24 October 2022, 'UK businesses have almost £59 billion worth of assets sitting idle'

46 Virgin O2 news release, 22 May 2022, 'Virgin Media O2 reveals stigma of buying used goods is now a thing of the past'

47 In most instances, VAT is still charged on resold products, meaning that the same item is subject to taxation multiple times. Where goods have been lightly repaired, there is higher implicit taxation from VAT associated with the additional material or equipment required.

48 Ramco (UK) Ltd, 28 March 2023, 'Reuse expert welcomes growth in circular economy'

49 Ramco (UK) Ltd, 2023, *2022 impact report*

50 SUEZ, 2023, *Reuse: seizing the opportunity*

51 SUEZ, 2022, *Putting reuse at the heart of your household waste recycling centre*

52 Recycle for Greater Manchester, 'Recycle for Greater Manchester community fund', recycleforgreatermanchester.com

53 For example, local authority household waste recycling centres are not required to report reuse figures, limiting the data available on the size of the opportunity that goes missing.

54 SUEZ, 2023, op cit

55 Ibid

56 VAT is charged at a standard rate for repairs which, when combined with higher labour costs, discourages repair.

57 European Parliament briefing, 2022, *Right to repair*

58 Public procurement policies have historically contained blockers that prevent repaired or refurbished assets from being used (eg due to accreditation technicalities). While some of these have been reformed, low levels of due diligence in procurement mean repaired products are not prioritised, leaving the government vulnerable to lobbying from large manufacturers.

59 Techbuyer, 2023, *2022 sustainability report*

60 NYU Stern School of Business, 'Historical (compounded annual) growth rates by sector', stern.nyu.edu

61 This was an internal figure provided by Techbuyer, based on analysis of their sales.

62 Manufacturers do not publish the exact materials that make up their devices, so the exact amount of critical raw minerals saved cannot be estimated but is likely to be significant.

63 WRAP, 2022, op cit

64 Cambridge Econometrics, 2022, op cit

65 Assumptions about the increase in spending power in particular could derive from increased resource efficiency that makes products cheaper.

66 For instance, some macroeconomic models project that, even if there is a decoupling between resource extraction and economic growth, raw material consumption will still increase overall. See United Nations Environment Programme and International Resource Panel, 2017, *Resource efficiency: potential and economic implications*

67 For instance, material taxes and a resource reduction target can be implemented to drive down raw material consumption.

68 United Nations Environment Programme and International Resource Panel, 2017, *Assessing global resource use: a systems approach to resource efficiency and pollution reduction*

69 Green Alliance, 2021a, op cit. Our previous research suggested that around a fifth of the jobs in a circular economy would be net jobs. See: Green Alliance and WRAP, 2015, op cit

70 Ibid

71 The Loop reusable packaging trial, for instance, found packaging companies only needed a few changes to existing infrastructure when switching to reusable products. See: Tesco, 2022, *Use. Reuse. Repeat. Sharing learnings on reusable packaging*

72 The Environmental Audit Committee has already called for reduced VAT on repairs of electrical and electronic equipment. See: House of Commons Environmental Audit Committee, 2020, *Electronic waste and the circular economy*

73 HM Revenue and Customs, 'Apply to use the Seed Enterprise Investment Scheme to raise money for your company'

74 Green Alliance, 2019, *Building a circular economy*

75 There are multiple reasons we believe £800 million is an appropriate amount as a dedicated fund to kick start the circular economy in the UK. Wales already has a Circular Economy Fund, which has invested or promised to invest more than £16.5 million worth of public money into grants for businesses looking to deliver circular economy solutions (the first £6.5 million Circular Economy Fund was administered by WRAP Cymru between 2019-2022, and there is a new £10 million fund for 2023-2025). The rest of the UK is playing catch up with Wales, which has a much higher recycling rate than other areas and has promised to reduce resource use to within planetary boundaries. An £800 million UK fund, relative to population, is roughly twice what Wales has already offered and is commensurate with the growing urgency of the situation. As an investment, it could help generate 100-fold returns for the economy as it represents one per cent of the expected gross value added to be derived from the circular economy (£82 billion by 2030. See: WRAP, 2022, op cit). And, according to the Climate Change Committee's balanced net zero pathway, eight out of the total 338 megatonnes of carbon reduction needed by 2035 will be coming from resource efficiency. The circular economy should be allocated a proportional amount of the capital investment expected for decarbonisation, in line with its contribution to carbon savings. As the total cumulative investment for net zero is expected to be nearing £630 billion by 2035, it can be argued that resource efficiency should receive £16.7 billion worth of investment in this period. As with other sectors, you would expect this to largely come from the private sector, but an £800 million fund from government would act as a starter fund to leverage in greater private investment scaling up over time. In this case, the fund would represent five per cent of total investment for resource efficiency (See Climate Change Committee, 2020, *Sixth carbon budget).*

76 House of Commons Public Accounts Committee, 2020, *Management of tax reliefs*

77 Ibid

78 Green Alliance, 2021b, *The green light for change*

79 Centre for Climate Change and Social Transformations, 2022, *Net zero living*

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