Turning Off the Tap

Why Better Design Can Increase Resource Resilience and Reduce Consumption

Presidential Report 2024

CIWM

root
HELPING BRANDS DO MORE WITH LESS

Exec Summary

This years' presidential report explores the role of design in the creation of 'stuff'.

It reveals how the resources and waste sector can influence better choices to stem, and in some instances, stop the flow of waste while protecting our precious resources.

Exec Summary The Problem

The planet is under unprecedented pressure, and we are overwhelmed by waste. We can't continue to use and degrade valuable natural resources in the way we do today.

We need to transform how we use raw materials from todays extractive, linear way to a more responsible one.

Many brands intentionally design products to have a short life or be difficult to fix.

Products often comprise of multiple materials, bound together in a way that cannot be reversed at end of life – designed for single use.

Design can be a powerful tool to reduce impact if harnessed correctly and applied first at business model level, then across systems, processes and products.

BUT WHY ISN'T DESIGN DELIVERING WHAT'S NEEDED?

Exec Summary The Solution

The research has unravelled what it really means to 'design' and how it can be difficult to challenge the design brief.

By double-clicking on the design process, creative industry, stakeholders and regulation impacting design it's clear that designers often don't have the agency required to make change. An organisations commissioning agenda, financial expectations and existing business design can be significant limiting factors.

We need to work with designers alongside a wider set of stakeholders involved in design and development to enable circular design.

To stem the flow we must all reflect on our individual and sector actions that influence growing levels of consumption and own our part of the shared responsibility.

DOING BETTER

WE NEED TO DO MORE THAN INFLUENCE BETTER DESIGN

WE NEED TO ELEVATE CIRCULAR SKILLS, FOCUS REGULATION TO MORE EFFECTIVELY ADDRESS CONSUMPTION

MOST IMPORTANTLY, WE NEED TO DESIGN BUSINESSES RIGHT FROM THE START

Exec Summary Sector Responsibility

Design Sector	• Upskill designers to increase knowledge and credibility • Create and share 3rd party verified resources, i.e. guidelines
Trade / Professional Bodies	• Invest in external expertise, particularly when producing guidance • Stay relevant by looking beyond the sector – work with other bodies to incorporate holistic views
Academia	• Ensure all creative and manufacturing courses are accredited by a relevant professional body • Focus student competitions and awards on circularity
Government	• Focus regulation higher up the waste hierarchy to reduce consumption • Move beyond recycling and create less regulation with better measures
Retail	• Go beyond compliance with existing regulation to futureproof and build resilience • Encourage staff performance metric around circularity to embed behaviour
Media	• Ensure subject matter experts are judging awards • Review and challenge evidence submissions and discount sponsorship and awards entry
Waste Sector	• Develop a feedback loop to brands / manufacturers / designers on key problematic items • Highlight the economic impact of waste disposal on the public sector

Exec Summary – CIWM Recommendations

STRONG LEADERSHIP

- CIWM and CEI become the trusted professional bodies for circularity
- Support collaboration of cross-industry best practice
- Challenge increasing consumption and problematic items

IMPACTFUL REGULATION

- Work with other trade organisations / professional bodies to promote the benefits of circularity – including a green taskforce to take a macro view
- Pose options for regulation to reduce consumption

CIRCULAR SKILLS

- Be the course/accreditation provider of choice for circular skills
- Explore academic course accreditation / support

Foreword

TIM WALKER, CIWM PRESIDENT

Good design has always appealed to me; from the architecture of Ludwig Mies van der Rohe to the iconic shape of the Coke bottle.

In recent years, I feel that functionalism and that "*form follows function*" has been obscured as we, as consumers, have become increasingly divorced from understanding how the items we use actually work, whether that be a toaster, our cars or the packaging in which we buy our food.

Complexity abounds...

Yet we in the resources and waste sector face increasing requirements to "*recycle*" ever greater quantities but at present we appear to have little influence on what's sold to consumers. I tried engaging with the supermarkets while working in Belfast to no effect. As professional wasters, our role in society has been a cross between being a janitor and an alchemist.

Like a dimmer switch, my epiphany regarding the overlap between waste and design flicked to maximum in 2012 with the RSA's Great Recovery project, and was amplified by a question at CIWM's annual conference "is waste a failure of design?"

As an inveterate reader, many books on management thinking have passed through my hands and with this dawning realisation, the more I've read the more I recognised that change in terms of our ways and means of manufacturing items was needed – particularly around issues such as quality and scale.

And it's not just about better design but also about better design within the context of the circular economy and, ultimately, about tackling levels of consumption.

Moving beyond the supply chain, there's a growing awareness amongst consumers of the affect we're having upon our world– but there's also confusion regarding where to turn for reliable advice on the environment and what we should do to change our habits.

Given our [the sector's] appreciation of the materials we're tasked with managing – which presents us with a real metrics of environmental performance, notwithstanding all the grandstanding and pronouncements – could CIWM work with others to develop an Office of Foresight, a "green" OBR to permit parallel consideration of the outworking of legislation and policies?

It's a tall order but in demanding times, its increasingly likely that, to use Margaret Mead's quote "never doubt that a small group of thoughtful, committed, citizens can change the world.

Indeed, it is the only thing that ever has", we [the sector] need to expand our sphere of influence.

Foreword

TRACY SUTTON, DIRECTOR @ROOT

Design is a powerful tool that can reduce and mitigate impact and drive systemic positive change. Design, however, not been taken seriously at times, nor been given the platform it deserves to achieve maximum impact. Many don't understand what it means to 'design'. Others don't recognise the refreshing simplicity that design thinking has over endless contradictory technical reports and regulation that stalls businesses from taking action today.

Since graduating in Sustainable Design, I've benefited from a multi-faceted career covering product and packaging design, technology and engineering and sustainability strategy and implementation for national and global brands.

I've seen the short-termism fails, the poorly thought-out flaws and rightly deserved lawsuits driven by a lack of design thinking in business.

At Root we champion the concept of 'responsible design' with the goal of asking professionals to use their moral compass and ask whether a circular, recyclable or sustainable solution is responsible to launch into market.

My wish is that everyone involved in the design and development process becomes equipped to make better sustainability decisions and that disposable business strategies become culturally and regulatorily undesirable. In the meantime, myself and the Root team will continue helping clients do more, with less.

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A Waste Problem or Resource Opportunity?

The planet is under unprecedented pressure, and we are overwhelmed by waste. Waste managers see the results of overconsumption, disposable design and imperfect service models every day in the millions of tonnes of material the sector handles.

Everything we buy uses up vital resources from the planet, most of which can't be replenished. To date, investment has been focused on simplicity, consistency and managing waste better, but we can't continue to use and degrade valuable natural resources in the way we do today.

WE NEED TO TRANSFORM HOW WE USE RAW MATERIALS FROM TODAYS EXTRACTIVE, LINEAR WAY TO A MORE RESPONSIBLE ONE

What If

Less material was used year on year by businesses to produce products and packaging

Everything we bought was designed with circularity in mind, from brands with circular business models that prioritised servicing and repairs over sales units

Once a product came to the end of it's intended 'life' there were easy options to return, repair, and reuse it to maximise its longevity

WHAT IF WE COULD TURN OFF THE TAP?

Lifecycle Impacts Of Consumption

PRODUCT LIFE + DESIGN

The majority of the things we buy are designed to have a single, or short life.

Products often comprise of multiple materials, bound together in a way that cannot be reversed at end of life.

In the same way ultra-processed food is not good for our health, items made from inseparable materials are not good for the *health* of the planet, especially when delivered at the scale it is today.

The UK waste industry is sophisticated, but it is still rarely economically viable to reprocess "*difficult to recycle*" structures given the large amounts of energy required to extract small quantities of materials.

When goods are so cheap to produce, the investment in developing complex machinery to remanufacture materials with little secondary value is also financially unsustainable.

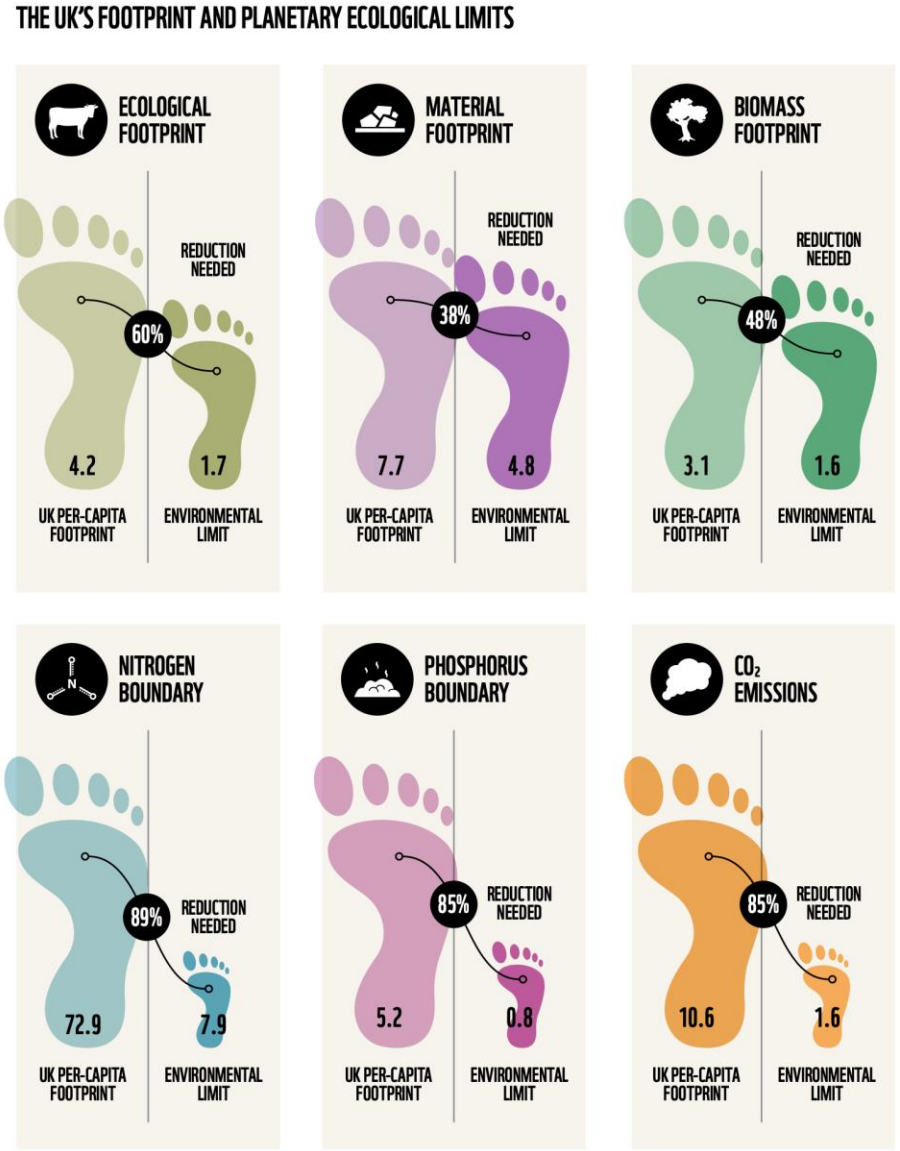


Image WWF

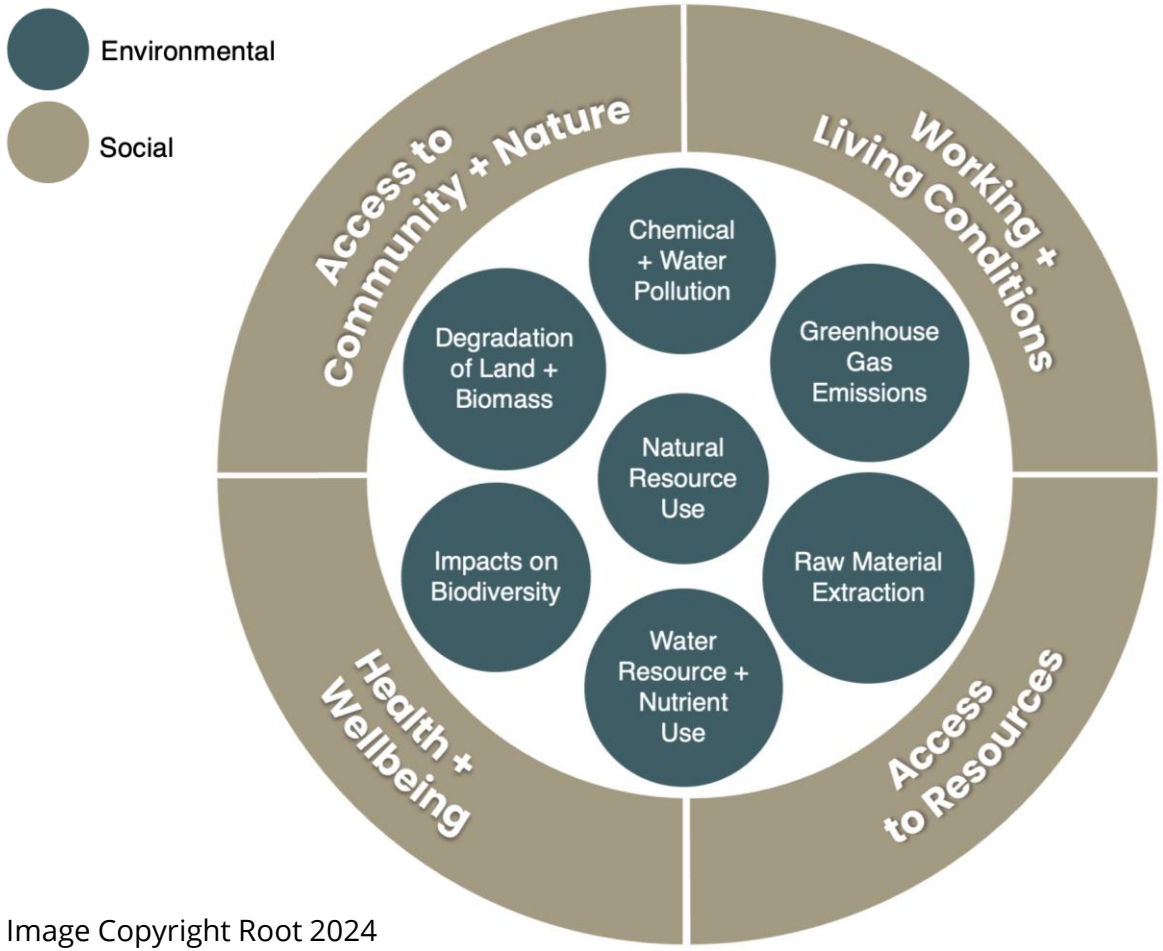
RESOURCE CONSUMPTION

Major economies, such as the UK, have a disproportionately large footprint on the Earth's systems and biodiversity.

On average, people living in high income countries consume over 13 times the quantity of materials per year than those in developing countries. To stay within the planetary limits, according to the WWF we must reduce the UK's environmental footprint by three-quarters, by 2030– a big challenge.

To do this **we need to drastically cut our production and consumption footprint**, including the portion that arises, overseas from products imported for consumption in the UK.

LIFECYCLE IMPACTS OF RESOURCE CONSUMPTION



We also need to consider the environmental, social, and cost impacts our consumption habits have throughout the lifecycle of a product including end of life. Globalisation of trade means that the previously local issue of waste management is now a global one.

Globally, municipal solid waste generation is predicted to grow from 2.1bn tonnes in 2023 to 3.8bn tonnes by 2050. Within the UK, waste from households reached 27,650 thousand tonnes in 2021 of which 44.6% was recycled.

How we use and consume resources not only impacts upon the world in which we live, it also directly and indirectly impacts social and health factors.

We are not living within our planet's ecological limits.

CONSUMPTION HABITS + ECONOMIC RESILIENCE

WE ARE DEGRADING THE WORLD'S NATURAL RESOURCES AT AN ALARMING RATE

Governments including EU and UK are monitoring materials that have high economic and supply chain risk. Pressures on resources will increase as global population, digitisation, country development and the transition to low emission technologies and products increases.

The OECD (Organisation for Economic Co-operation and Development) forecasts that global materials demand will more than double by 2060.

Global competition for resources will become fierce as dependence on critical raw materials may replace dependence on oil.

Why do we Consume?

We consume for a variety of reasons. At a basic level we have physiological and safety needs: food, heat, shelter and security. Over and above these needs is where things have gotten out of hand, driven by the conception of a beautiful dream - the consumer society.

The industrial revolution of the 1700-1800s drove the transition from creating goods by hand in small numbers to using machines that produced at scale. This enabled businesses to sell more products faster.

Many years later came the business and design strategy of 'planned obsolescence' which shortened a product's life to increase repeat sales. 'The Lightbulb Conspiracy' in the 1920s is a great example of this.

PLANNED OBSOLESCENCE

'PRODUCING CONSUMER GOODS THAT RAPIDLY BECOME OBSOLETE AND SO REQUIRE REPLACING, ACHIEVED BY FREQUENT CHANGES IN DESIGN, TERMINATION OF THE SUPPLY OF SPARE PARTS, AND THE USE OF NON-DURABLE MATERIALS.'

Decades later, after the war, the concept of 'Disposable Living' (right) was marketed to be socially desirable and citizens were lured into prioritising convenience, scale and stuff rather than protecting and valuing raw materials.

Business and governments have focused on short-term sales and growth and steered society toward lifestyles and social hierarchies that unnecessarily correlate growth and success with consumption.

We now believe we "need" an incredible amount of stuff to provide comfort, cleanliness, convenience, ritual, play, fun and personal expression. Citizens have become consumers, and our identities, politics, the economy and environment are crucially shaped by what and how we consume.

Image: Life Magazine, 1955

WHAT DO WE SPEND?

Image Copyright Root 2024, Data source: ONS

While ecological and responsible consumption is growing, the UK is still a mass consumer society.

According to the Office of National Statistics average household weekly expenditure in the UK, FYE 2022 was £528.80. An interactive diagram on the ONS website allows you to explore data on spend, which gives fascinating insights into the goods and services we buy.

Repair is also categorised within the expenditure statistics and we spend our money on repairing glasses, cars, audio visual equipment, personal goods, our houses, bikes and household goods.

Interestingly, second hand clothing is not included within the data and yet this is a significant area of growth, with charity shop sales climbing by 147% and second-hand clothing app sales nearly doubling in 2023.

We continue to spend a lot of our money on stuff (or "Pruck" as it's sometimes called in Northern Ireland). Some essential, some not.

A survey by Santander Trade highlighted the main factors influencing purchase, namely price, quality, design, brand and environmental benefits. Design and the environment play an important role in influencing our purchases however there's a tension with other factors including price.

The Power of Design

WHAT IS DESIGN?

Although awareness and application of ecodesign techniques is improving, consideration of how we use resources isn't considered enough during the design process, neither is the full lifecycle of a product.

Before we consider how to do things differently we need to understand the design process and what it means to design things.

Design shapes the world: from the products and services we use each day, to the buildings and places that surround us, and the systems that underpin how we live.

The **design economy** spans diverse sectors from architecture, product design and fashion, to digital design, craft and graphics.

DESIGN IS A POWERFUL TOOL THAT CAN DRIVE REAL IMPACT AT SCALE

According to the EU, more than 80% of the environmental impact of a product is determined at the design stage so it's really important to get design right. Architects Journal cites that architects have "196 times" more power to cut carbon through work than lifestyles alone.

Design also has a big economic impact. It is split into a number of key disciplines which cover the full spectrum of products, services and systems we are surrounded by which form The Design Economy.

In 2019 the design economy contributed £97.4bn in GVA to the UK economy (4.9% of total GVA).
It employs 1.97m people (2020) – one in twenty people in the UK, of which 1.62m were designers.

THE DESIGN PROCESS

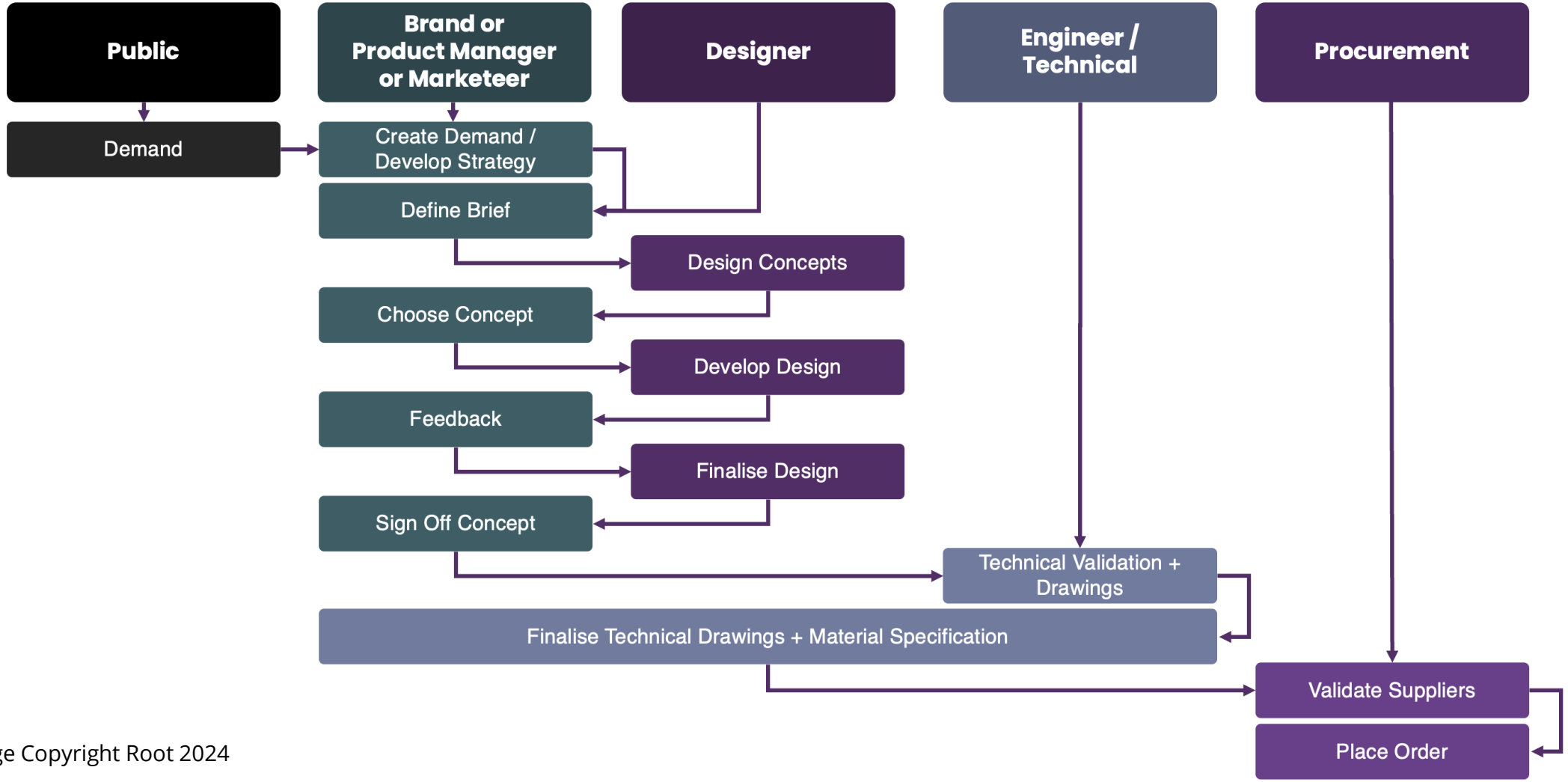
While it sounds simple, the design process is more complex and involves a wider and more diverse selection of influencers and decision makers than we may initially think

Design projects can range from small and incremental to more disruptive.

Design processes comprise of multiple stages that include a blend of creative, commercial, sales, technical and procurement skills.

The evaluation and advocacy of environmental and social factors is managed differently business to business and is often side-lined due to time or cost constraints or expertise gaps within an organisation.

TYPICAL STAGES IN A DESIGN PROCESS



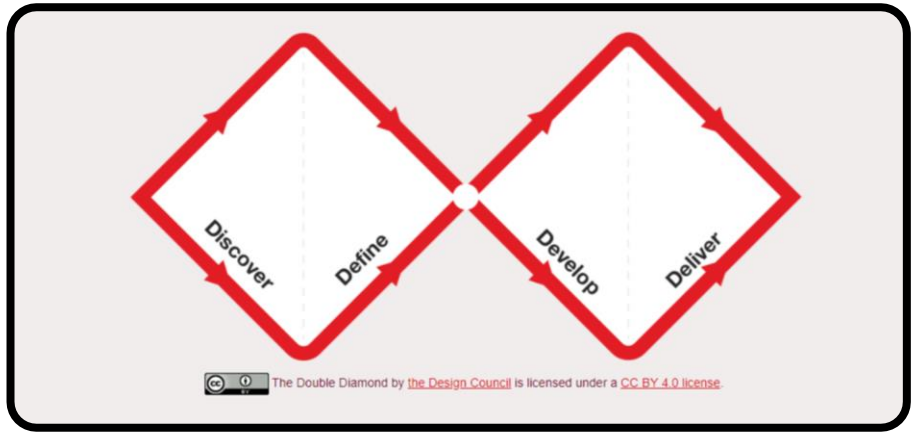
WHY IS THE DESIGN BRIEF SO IMPORTANT?

The Design Brief outlines what needs to be designed and includes critical information such as user needs, unit price, production and technical parameters amongst others including any sustainability requirements.

A brief will be refined with creative and technical inputs with the brand team before sign off. Designers may then use a framework such as the Double Diamond to work through the design and innovation process.

Existing Product Development (EPD) briefs typically involve minor, iterative design changes to existing items. By contrast, New Product Development drive the creation of new products and systems with new structural and infrastructure requirements.

Developing better briefs can enable the design of better products and systems from the outset. For example, is your customer going to consume a product / create waste, or use a service where the asset is owned by the brand who takes responsibility for maintenance, repair and end of life?



COMPONENTS IN A TYPICAL DESIGN BRIEF

Factor	Detail
Need	Scene setting – why is the product being created and what market need does it serve?
Consumer Behaviour + Research Insights	Where, how and why does the user use or consume the item? What access do they need to power to charge an item or wash and clean something to be refilled?
User Persona and Demographic	Who is the target user? What is their budget and what psychological or physical needs does this item need to meet?
Brand Requirements	What structural 3D or graphic assets need to be used? (i.e. shape, logo and colour)
Infrastructure Needs	Does the item need to run down existing manufacturing or filling lines? Does it require a change of parts or significant CAPEX investment?
Consumption Occasion	Is the product for everyday use or a holiday/special occasion such as halloween, religious festivals, or a birthday? Is it used at home or on the go? Is it initial purchase or refill / recharge?
Product Characteristics	What is the product type (gas, solid, serum, foam)
Technical Parameters	What protection is required (shock, cushioning, barrier properties), does it require a certain shelf life or the ability to withstand a number of cleans or uses?
Distribution	What is the split between online, direct to consumer, or B2B?
Sustainability	What priorities need to be met? Low carbon, lightweight, low water or land use etc. This might include legal requirements (depending on the territory) such as caps being tethered to bottles or % recycled content.

LIMITS TO THE DESIGN BRIEF

Many briefs are written by siloed departments within a business, concepts may have limited input from sustainability teams. This can mean that environmental factors can be absent from a brief because no-one has the responsibility to measure or report on sustainability, or if they have, this advocacy has been bolted on to an existing role in the business and the individual may have little or no experience or time to carry out these responsibilities.

Budget and project planning constraints may limit development time and expertise to design and test sustainable, commercially viable, solutions, resulting in sub-standard outcomes and wasted budget.

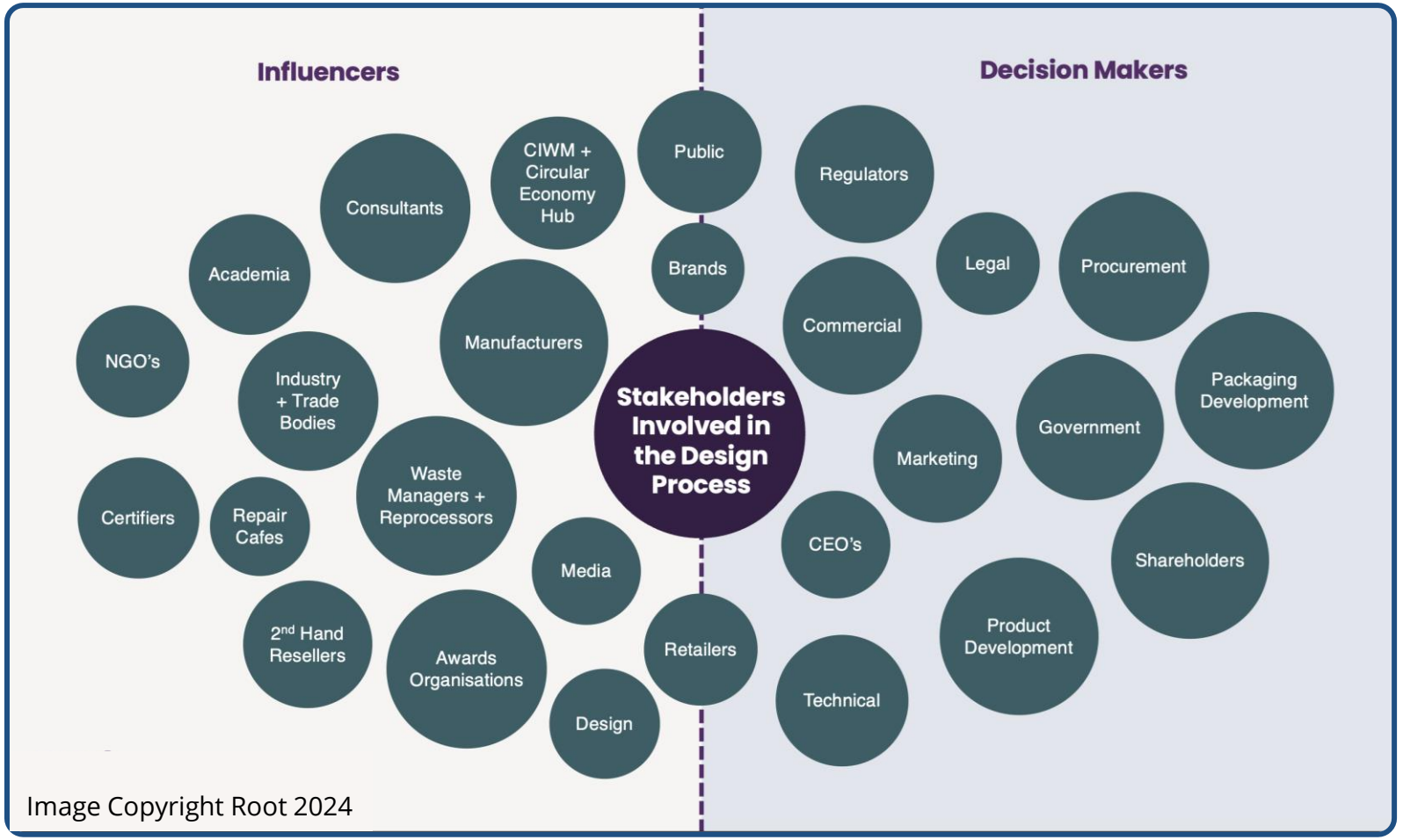
Briefs are slowly improving. Sustainability is becoming a standard parameter, particularly in sectors with regulation that dictates requirements such as the inclusion of recycled content or repairability.

More briefs now also include accessibility - designing for diverse requirements for a wider, more inclusive customer set.

WHO IS A DESIGNER?

Before we inspire and influence design practitioners, we need to uncover the multitude of stakeholders actually involved in the design and development process.

The phrase ‘Designers’ actually encapsulates a much wider range of informed, independent and bias (or siloed thinking) decision makers and influencers than just designers, alone.



INFLUENCER OR DECISION MAKER?

ONE KEY LEARNING IS THAT DESIGN PROFESSIONALS TEND TO BE INFLUENCERS, RATHER THAN TRUE DECISION MAKERS IN LARGER ORGANISATIONS

Different stakeholder roles can be more directional in the process than others:

- Finance can sign off funding for tooling that must be written-off over several years, which could lock in the way an item is produced (particularly for Original Equipment Manufacture – OEM products)
- Procurement budgets may dictate material choices
- Marketing may choose finishes such as glitter or fastenings
- Legal must ensure minimum compliance levels so that a solution can be launched into market and not attract fines or reputational damage

Influencers and decision makers have different objectives and needs, therefore support and guidance needs to be tailored.

Many designers, however, lack knowledge about sustainability. According to a recent survey conducted by the Design Council:

66% OF DESIGNERS HAVE DESIGNED FOR ENVIRONMENTAL IMPACT IN THE LAST 12 MONTHS

ONLY 46% OF DESIGNERS ARE PROFICIENT OR EXPERT AND ONLY HALF THINK THEIR EDUCATION PROVIDED THEM WITH SUFFICIENT DESIGN FOR PLANET SKILLS

71% OF DESIGNERS SAY THEY THINK DEMAND WILL GROW - BUT ONLY 43% FEEL THEY HAVE THE CAPABILITY TO MEET THIS

Designing Better Businesses

If we want to inform and influence the design of a product, we need to focus on those who are developing the design brief. Impact is defined from conception of the business model, not just the product, as the business model defines the briefs that fall from it.

Until recently businesses generally operated in a linear manner that discounts the value of resources. In the last 5-10years, we have seen the slow integration of circular economy principles into business, however in most cases this still allows business to profit from single-use or throw away products.

Social media and influencer sales are driving a new market of young consumers to buy one-off, novelty purchases of on-trend low quality, short-life products at very low prices, targeted at those who have little or no awareness of the mountains of waste they are creating.

This trend-driven approach is at odds with circular economy thinking.

BUSINESSES SHOULD BE DESIGNING FOR LONGEVITY AND INCORPORATING REPAIR AND REFURBISHMENT INTO A CIRCULAR BUSINESS MODEL

FEEDBACK FROM THE PROJECT STEERING GROUP AND INTERVIEWEES HIGHLIGHTED THAT BUSINESSES AREN'T LIKELY TO CHANGE UNLESS

- **Regulation drives it**
- **Customers request it**
- **It makes commercial sense**

TACKLING THESE BLOCKERS IS ESSENTIAL TO DRIVE CHANGE

GOVERNMENT HAS THE OPPORTUNITY TO SEND A CLEAR MESSAGE ABOUT CONSUMPTION REDUCTION AND DEVELOP POLICY THAT ENCOURAGES BUSINESSES TO SHIFT TOWARD USING LESS RESOURCES, MORE RESPONSIBLY

BARRIERS TO BETTER BUSINESS

Reducing the volume of material used requires a fundamental shift in the way that most businesses operate and society consumes.

The IPCC estimates that public/consumer action could save 5% of 'demand side' carbon.

Our personal actions towards circularity can make a difference. The sustainable lifestyles survey (2020, UK and US) reported the below consumer statistics:

- 55% think that making lifestyle changes for climate change will improve their quality of life
- 88% would like brands to help them lead a sustainable lifestyle
- 57% were prepared to 'waste less'
- 50% were prepared to 'avoid plastics'

However, there can be a value-action gap where the difference between beliefs and actual behaviours can lead to a customer being concerned about the environment but not actually behaving/purchasing in a green way.

This disconnect is also prevalent in businesses. In a recent survey of procurement leaders, 40% of respondents admitted that they do not consider sustainability when making procurement decisions - half acknowledged that sustainability either remains an afterthought or is completely disregarded in their business decisions.

Retrofitting circular loops within linear businesses is very difficult. One example is the recent reusable tableware mandate for dine in Quick Service Restaurants (QSR) in countries such as France. This has required significant investment in dishwashing and in-store collection infrastructure as well as communications to encourage customer behavioural shifts and supply chain investment.

These additional, unplanned, operational and asset costs can be more difficult for businesses to 'bolt on' compared to if they are designed in from the start (particularly if take-up by customers isn't high after the initial novelty of change).

OTHER BARRIERS TO BETTER BUSINESS

Customer preference and behaviour
- Customer preference can drive production of 'stuff'
- Poorly policed greenwash is driving mis-informed consumer choices
- Value- Action Gap'

Limited, Often Complex Guidance
- Supporting guidelines (if available) are often complex and difficult to understand and translate to real applications

Limits of the design brief
- Briefs can lack consideration of how the product fits within the society and the wider system, in practice, i.e. recyclable vs recycled in practice

Design differentiation = end of life issues
- There can be tension between marketeers desire for differentiation and the barriers this may present for both recyclability and the necessary scaling up of reusable or refillable products

Supply Chain – scaling and availability of 'new' infrastructure
- There is a lack of supporting infrastructure within some sectors, particularly where business models are new in traditional linear operations
- A time lag between larger companies pushing forward solutions and supply chain supporting can also influence solutions coming to market

Profitability and CAPEX vs OPEX decisions
- Cost can influences material choice (short-term thinking) as well as design for alternate business models, particularly where finance may need to be raised for supporting infrastructure
- Businesses need to be financially viable and this can present a challenge for invest to save options which require up-front financing

Lack of Knowledge Across Stakeholders
- Particularly across circularity, regulation and end of life options
- Sustainability can have different meanings (and focusses) for different businesses

Bridging the Gap

How do we overcome the limits to the current system and bridge the gap in understanding?

There are already a large number of tools and guidance available across different disciplines, usually written from one perspective without referencing whole system considerations.

Understanding how decisions made during the design process influence whether an item is repairable, reusable or recyclable at end of life is important to reduce environmental impacts.

The Great Recovery project (2012-16) looked at the challenges of waste and opportunities of a circular economy through the lens of design. It demonstrated that showcasing the benefits of the circular economy and connecting designers with waste managers, material scientists, logistic managers and others in the supply chain could encourage changes in behaviour.

The project outputs highlighted wider barriers that slow the pace of change, and how connectivity between decision makers in the design and development process can catalyse system change.

Change, however, can be slow and takes time to embed, particularly when faced with the wider systemic barriers highlighted in this report. Key decision makers within the design and development process need to be included within the conversation to catalyse whole system change.

TOOLS AND GUIDANCE FOR CIRCULAR DESIGN

Alongside reducing carbon or water, recyclability is a common business priority. For example, Design for Recyclability guidelines have been available for a number of years for many product types and were developed to be used in the design process, however they tend to be targeted towards technical and engineering roles. They also sustain designers *designing for recycling*, rather than considering reuse or repair – they can take the opportunity for innovation out of designers' hands and making the *decision for disposability* for them.

There are some great design resources available for designing for a circular economy from the Ellen MacArthur Foundation and other organisations, however these often sit in the hands of those with great passion and intent but with limited influence.

Design for Recyclability Guidelines

Published in February 2024, the Confederation of Paper Industries (CPI) Design for Recyclability Guidelines provide clear advice on how to reduce contamination and promote resource efficient recycling through product design. Design recommendations are provided on plastic content, coatings and barriers, inks and varnishes, adhesives, fillers and binders as well as speciality products such as gift wrap.

The guidelines set necessary context around why the use of certain materials can make paper and board packaging difficult to recycle.

The Higg Index

An apparel and footwear industry self-assessment standard to rate environmental and social sustainability throughout the supply chain. Developed by a coalition of brands, retailers, and manufacturers it is now the industry's most widely used standardised measurement framework. 24,000+ global organisations use Higg Index tools, which cover waste, water use, carbon emissions, labour conditions, and provides a deep well of data that can be used to identify pain points and develop sustainability strategies.

LIFELONG LEARNING

The Design Council provides a large number of resources for students and educators. The RSA also has a focus on design for the environment which is featured prominently within the briefs for its Student Design Awards. Some design students, however, are leaving university without a clear understanding of the importance of designing for the environment as there is a lack of consistency in approach and application throughout design courses.

Professionals may also be facing a gap in knowledge unless they have access to Continuing Professional Development.

They will be losing out on current information about the benefits and best practice of incorporating circularity into design. Stakeholders in non-design professions may be wholly reliant on information and advice from their Professional Body.

There is a skills gap.

Design Council

RSA

THE RSA STUDENT DESIGN AWARDS IS THE WORLD'S LONGEST-RUNNING DESIGN COMPETITION, CELEBRATING 100 YEARS OF RECOGNISING INNOVATIVE IDEAS THIS YEAR.

Young designers from across the globe can apply their skills and creativity to design briefs that focus on the most pressing and environmental challenges. Briefs can be incorporated across Design curricula but also in subjects ranging from computer science, engineering, geography, social science, media studies and more.

Circular Economy has been a key feature in previous years briefs including application of the approach to diverse from decommissioning steel platforms to applying storage, delivery and dispensing of tablet medication.

HOW CAN WE GET VALUE OUT OF EXISTING RESOURCES?

SIGNPOSTING

Design stakeholders throughout the supply chain need pointing toward existing resources. Visibility of resources needs to be better and access to guidance and training should be up to date with regulation and technical progress.

DESIGNED RIGHT

Resources should be tailored to different sectors and stakeholder needs. A technical specialist may require guidance which is very detailed, a marketeer may find a succinct checklist easier to adopt and a creative could benefit from visual examples of successful implementation from a comparable brand or business.

PROCESS

Processes within business need to ensure that guidelines become a mandatory part of any design or development process.

GOVERNANCE

There should be a senior sign off on a product or be responsible for repercussions should a decision be made to go against the guidelines as this may hold reputational, compliance, or commercial repercussions.

EXPERTISE

Some argue there are too many guideline documents. In the instance of a global design roll out, teams can lack the expertise required to rationally consider multiple market regulations or technical mandates.

They don't feel comfortable interpreting risk and as a result, create a tailored set of guidelines that are suited to their business. It's important to upskill or provide external support to regulatory teams who are dealing with an increasing tsunami of regulation and need help to understand risk and operational impacts.

The Design Council's mission is designing for the planet. Their dedicated platform provides a wealth of tools, case studies and advice for designers.

Central to designing for the planet is how to design for circularity, address the climate crisis and make designs regenerative - not extractive.

DESIGNING FOR REPAIR

Repair is an important part of keeping products in use for longer. A 2022 poll highlighted that more than half of the population has repaired something in the past year.

Many design approaches also consider design for repair, particularly for high value items or long-term assets. The Institute for Structural Engineers for example, provides guidance on how engineers can design for longevity (including repair), improving circularity. Business model approaches to the purchase (or leasing) of high value assets can also incorporate maintenance and repair to keep the asset in use for longer.

MANY BRANDS INTENTIONALLY DESIGN PRODUCTS TO BE DIFFICULT TO FIX, BUT RECENT REGULATIONS IN THE EU AND UK ARE LOOKING TO CHANGE THIS AND ENSURE CONSUMERS HAVE A RIGHT TO REPAIR.

RIGHT TO REPAIR REGULATIONS

The UK Government introduced new Ecodesign and Labelling requirements in June 2021 for specified electrical products - the Ecodesign for Energy-Related Products and Energy Information Regulations 2021.

The Regulations aim to increase producer responsibility, reduce energy usage and electrical waste, and enable consumers to identify the most energy efficient products on the market. Following the UK leaving the EU, the UK chose to mirror requirements in equivalent EU regulations.

The 'right to repair' provides professional repairers with access to spare parts and technical information.

DESIGNING FOR REPAIR

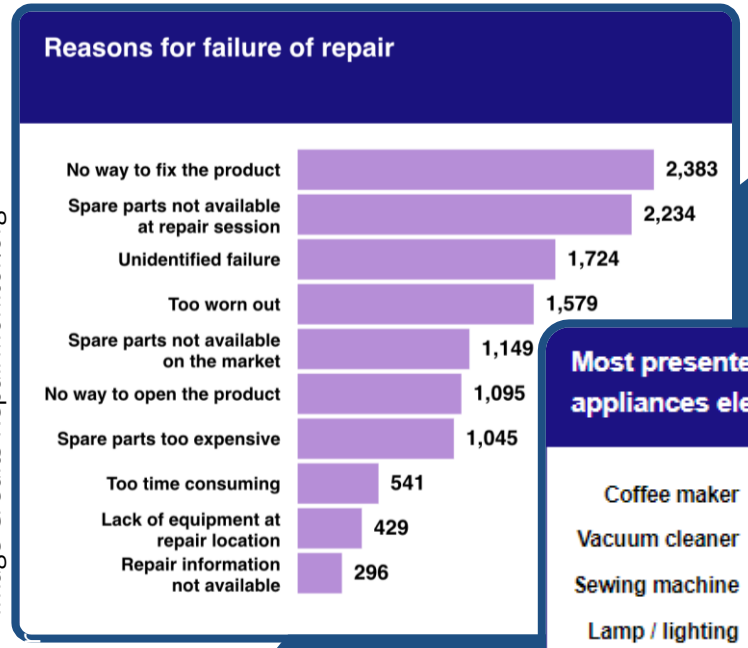
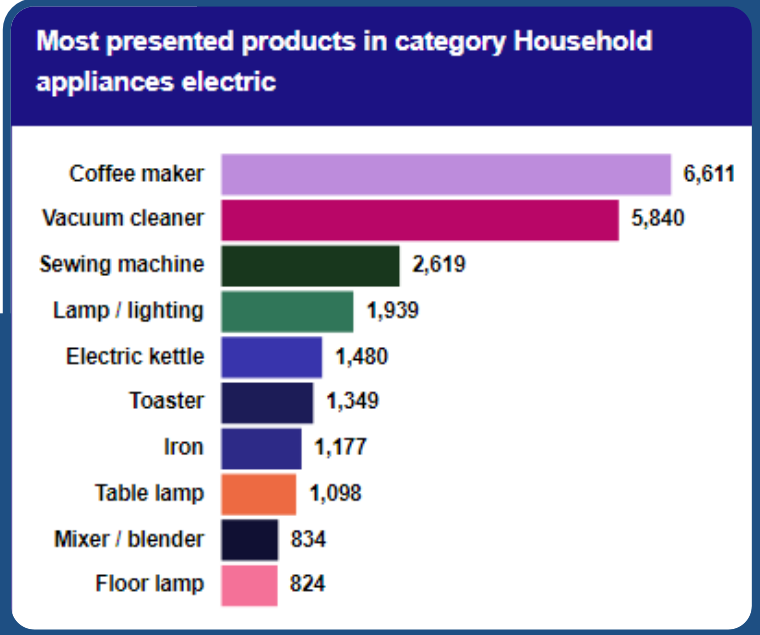


Image Credits RepairMonitor.org



The ever-growing repair movement means that householders now have access to a wealth of information, repair events and can access a dedicated repair facility to learn how to fix their item.

Repair Cafes worldwide keep track of repair data that includes product type, brand, problem and whether it can be fixed. Data is recorded via their RepairMonitor platform and exported to a dashboard which provides (visual) answers to the sustainability and repairability of the items in our daily lives.

REPAIR MONITOR HIGHLIGHTS THE MOST COMMON BRANDS IN NEED OF REPAIR AND THE MOST COMMON DESIGN FAULTS.

Although brands keep and monitor data on common issues for items that are under warranty, working with repair cafés to understand design faults could drive future design improvements and feed into the potential industrialisation for repair and refurbishment of new products (item take-back and refurbishment business models).

In France, the repairability index was rolled out to show consumers how repairable some electrical items are.

For legacy items there will always be the need for organisations like Repair café and IFIXIT, who provide thousands of step-by-step repair manuals for home use.

REGULATION AND POLICY

Regulation is a very important tool to drive action by providing investment certainty to support sectors to pivot (i.e. landfill tax).

It can also raise the environmental bar. Regulation will always deliver slow incremental change unless supported by policy with a longer-term, strategic, macro view.

Problems with Policy

- Often not holistic or nuanced in approach – competition or tension between departments and themes mean it can be fragmented
- Primary focus to date has been on recycling, not circularity: single use and not reuse. Greater focus is needed at the top of the waste hierarchy on consumption reduction rather than "back-engineering" existing regulations
- Taxes may not stem the flow of consumption and in some cases make consumption permissible via payment (e.g. latte levy which spurred an increase in drinking arising from the rebound effect)
- It is politically driven, particularly when linked to GDP and can be reactive, short-term and diluted to facilitate passing
- Different countries can take different approaches in the same region - a challenge for compliance and consistency of approach for global brands
- Penalties often don't outweigh cost of compliance and alongside a lack of enforcement can mean that businesses choose not to comply
- Products are sold across global borders, but money raised from regulations do not benefit those communities impacted by pollution and waste

KEY REGULATION IMPACTING DESIGN

Regulation around product design for sustainability is increasing, which should lead to tangible future changes. UK government has outlined a number of different policy areas where action will be taken to maximise resources and minimise waste including designing out waste through product policy.

Other themes in the UK and Europe include:

ECODESIGN

In the Environment Act 2021, UK Government obtained powers to be able to implement mandatory eco-design, extended producer responsibility (EPR) schemes and require environmental information be provided for consumers, or product passports for use throughout value chains.

The UK also has Eco-design for Energy Consuming Products regulations and in the EU the Ecodesign for Sustainable Products Regulation will place ecodesign at the heart of product development. Standards such as the ISO standard for Incorporating Ecodesign Into Environmental Management Systems are also available to support implementation.

REDUCE, REUSE, RECYCLE

The Single Use Plastics Directive (SUPD) and the implementation of EPR schemes with modulated fee systems are driving a reduction in materials use and consumption.

Regulations are being designed to facilitate behaviour change, for example the Netherlands is taking a step change approach to reducing single use packaging consumption. The first phase of the regulations required the hospitality sector to offer customers the option of having reusables alongside single use when they ordered their food for 'eat-in'.

The second phase progresses to a mandatory requirement to use reusables for eat-in dining. This phasing has allowed many Quick Service Restaurants (QSRs) to 'test' approaches for reusables prior to investing more heavily in the associated infrastructure required to collect, clean and store additional items. It also brings the customer on a behavioural change journey.

The UK Plastics Tax (tax on manufactured or imported plastic packaging containing less than 30% recycled content) and EU's Plastics Own Resource (national contribution, based on the amount of non-recycled plastic packaging waste) are driving the design of easier to recycle packaging containing recycled content.

EU - ECODESIGN FOR SUSTAINABLE PRODUCTS REGULATION

Ecodesign for Sustainable Products Regulation (ESPR) is the cornerstone of the European Commission's approach to more sustainable and circular products. It is expected to enter into force Summer 2024. ESPR will apply to all products placed on the EU market. It will enable the setting of performance and information requirements for almost all categories of physical goods including:

- product durability, reusability, upgradability and reparability
- presence of substances that inhibit circularity
- remanufacturing and recycling
- carbon and environmental footprints
- information requirements, including a Digital Product Passport

The new "*Digital Product Passport*" will provide information about products' environmental sustainability. This information will be easily accessible by scanning a data carrier and it will include attributes such as the durability and reparability, the recycled content or the availability of spare parts of a product. It should help consumers and businesses make informed choices when purchasing products, facilitate repairs and recycling and improve transparency about products' life cycle impacts on the environment.

CONSUMPTION REDUCTION TO SUPPORT EMISSION REDUCTION

In 2022 Sweden became the first country to take the significant step of including consumption-based emissions within its climate targets. This made it the first country in the world to target the carbon footprint of imported goods. Hopes are that it will catalyse action on reducing consumption in general as well as emission reduction

To create more impactful regulation, Government needs to take a longer-term macro-view as they do with the economy and climate change such as The Climate Change Committee (CCC), or internationally the Australasian Joint Ore Reserves Committee ('the JORC Committee') .

If a similar independent body were created for resources, which sourced its membership from UK professional bodies and other experts with a focus on the environment and business it could provide longer term, holistic advice on resources that wasn't tied up by departmental and organisational siloes but considered systems. It could have systems-thinking and circularity at its heart and help to provide advice to Government on how to protect resources for generations to come. Regulation based on long-term systemic thinking could support consumption reduction and a design economy that facilitates a circular transition.

SHARED ACCOUNTABILITY TO DRIVE BETTER DESIGN

Global brands tend to send specific guidance to designers as part of their brief. This direction can mandate construction, material type and decoration.

Some creatives feel strongly that the infusion of sustainability factors into a product is ultimately driven by the vision and specific ambitions of the brand setting the brief. If there is no public commitment, there is no accountability and short cuts in the process can easily drive good intention out of a product's design.

Industry/Trade associations, Professional bodies and media organisations are consulted for unbiased guidance on best practice and regulation. This can be hard to deliver because the broad membership can mean that differing opinions need to be represented which, in turn can drive a bias or narrow view of what best practice is.

For example, a manufacturer of a single use flexible plastics pack may highlight how the pack is recyclable, even though recyclability may rely on limited takeback schemes and not translate to 'in practice and at scale' due to the many layers of composite material within the packaging.

Professional bodies have a responsibility to showcase best practice and to highlight where their members should aim for. One way of doing this is via industry awards. IOM3 for example as part of its Sustainable Future Awards showcases best practice and has a range of experts including academics and industry leads to evaluate the awards submissions. Critically, the entrants must provide evidence and explain how the value chain has been involved in the project.

These bodies are beginning to accept that they need to break out of their four walls and seek external views and technical support from other sectors and specialists – a clear opportunity for the Resources and Waste Sector to influence on circularity and highlight the challenges of end of life.

They may also be the only place professionals are going for Career Professional Development (CPD) so content and training provided must be progressive.

What Needs to Change?

The good news is that change is happening and there are already examples of businesses that are adapting, revolutionizing or redesigning their operating models to be more circular.

WE NEED TO AMPLIFY THESE POCKETS OF GOOD PRACTICE TO ENCOURAGE OTHERS TO FOLLOW SUIT

Circularity is good for business and circular solutions and business models can have a number of benefits including:

- ✓ Less strain on natural resources and critical raw materials
- ✓ Resource resilience – focusses on 'local' solutions
- ✓ Lower CO2eq
- ✓ Reputation elevation
- ✓ Customer retention and commercial longevity via models of refill and repair
- ✓ Regulatory futureproofing
- ✓ Revenue generation

BETTER REGULATION DRIVES BETTER BUSINESS

Regulatory certainty can provide the confidence businesses need to invest in new solutions, which can drive scale and commercial viability. It can also help to bring up the compliance baseline so that all businesses are compelled to make changes.

We are seeing policy progress in the UK in areas like packaging, but Europe leads the way with regulation focused on repair, transitions from single use to reuse/refill and green washing.

Chemicals and critical raw materials are also in focus to support supply chain circularity.

DESIGN FOR RECYCLING GUIDELINES CAN MAINTAIN DISPOSABILITY AND MAKE SHORT-LIFE ITEMS A BIT BETTER

While a valuable resource, they can't change the business model or promote broader, more systemic approaches.

More progressive regulation is needed, and a focus on consumption reduction is starting to catalyse businesses to use less and consider different business models.

Without additional mandates for reuse, refill or repair businesses will be slow to move beyond recyclability and won't have the regulatory assurance to invest in new business models.

WHAT CHANGES ARE HAPPENING NOW?

Working Together

Collaboration throughout the value chain is improving slowly and more common in leading businesses. Technical and sustainability teams are providing input in early concept stages which benefits marketers and designers, helping them stay grounded in technical reality.

Businesses are recognising that for more challenging solutions and systems such as reuse and repair, other teams like commercial, need to be part of creating the design brief.

Progressive innovation or large-scale change projects are increasingly combining internal cross-functional teams with external supply chain stakeholders for pilots and feedback rounds. In addition, more real product or system users (i.e. bar staff using a dispenser) are getting brought in to critically evaluate design concepts.

Businesses are also supporting academia in initiatives such as the five Interdisciplinary research centres which have been funded to look at circularity across textiles, construction, chemical and metal industries.

The Incentive – Resource Resilience

Businesses like Faerch are increasingly investing downstream to secure access to material sources. They recognise it's vital to maintain access to the raw materials needed to produce product.

Reassurance and Evidence

Improving processes and systems upstream is also key to reassure leaders that circularity can drive growth.

DESIGNERS ALSO NEED SIMPLE GUIDANCE AND INSPIRATION TO PROVE THAT CIRCULARITY CAN UNLOCK REAL INNOVATION

CASE STUDIES

Recycled, Reusable Cups

Circular&Co use waste materials to make products which are recyclable. They have developed reusable coffee cups which are available direct to consumer and work with major brands including in the quick service restaurant sector to develop returnable cups designed specifically for deposit return schemes.

A commercial setting requires the economics of the offering to stack up and needs the product to match and exceed existing single use comparators.

For returnables there are a number of operational and transaction focused elements that need to be considered alongside recyclability including:

- Number of wash cycles
- Digital tracking
- Operational functionality (i.e. non-stick stacking)

Image Credit Circular&Co

Moving in Circles – Bikes

Image Credit Brompton

Bikes traditionally last a long time if they are looked after and the resale market has been strong for many years. Due to their modular design, owners have been able to adapt and personalise their bike for decades with handles, seats and accessories that meet their body type and lifestyle.

More recently the shift to a product as a service model has taken hold. Cities now have cycle hire schemes and infrastructure that meets the needs of commuters and visitors. Transport for London first introduced a widespread cycle hire scheme in 2010 latterly other companies have entered the market, with brands such as Lime making e-bikes available since 2018. These schemes have made cycling more accessible to millions of people and the robust manufacture and regular maintenance ensures strength and durability.

Brompton Bikes

Folding bike manufacturers such as Brompton have also entered the hire market, providing complementary services to product sales. They've produced over a million bikes since founding in 1975. As well as making their bikes as sustainable as possible, finding new ways to extend bike life, providing how to guides and repair services and focusing on supply chain materials, they also provide 85 Brompton bike hire docks. Brompton bike hire provides three types of shared ownership– subscription, bike hire docks, and bike hire fleets (for company employees). In 2023 their bike-sharing services helped avoid 208 tonnes of carbon emissions.

Building Circular Habits for Kids - Toys

MORE THAN A QUARTER OF UK PARENTS ADMIT TO DISCARDING TOYS IN PERFECT WORKING ORDER

British Heart Foundation 2019

Although toys are a good example of where we do pass on items to family and friends there still remains significant opportunities to consume less and focus on durability to stimulate longevity.

LEGO bricks are designed to be durable and handed down from generation to generation to inspire endless play and creativity. Although the majority of owners pass their bricks on, the Replay scheme has been set up where owners that don't know what to do with their bricks at end of life can return them back to LEGO for donation to schools and charities.

Toys are also an area where the creative design process is an integral part of stimulating use, although the element of surprise has led to trends such as 'unboxing', amplified by social media which has increased environmental impact and decreased the value of the item after the fact.

The British Toy and Hobby Association has developed a guide for circular toy design which provides useful prompts for toy designers to consider market and product design approaches. It also focuses on material choices and choosing the right material with full product life cycle in mind.

Using Planning Policy to Drive the Circular Economy

The London Plan Guidance Circular Economy Statements puts circular economy principles at the heart of designing new buildings, requiring buildings that can more easily be dismantled and adapted over their lifetime.

It treats building materials as resources and defines a clear hierarchy, prioritising the retention of existing structures above demolition.
Several local authorities in London are now incorporating the requirements into their own planning guidance and cascading the principles to smaller developments.

The City of London are due to adopt their Planning for Sustainability SPD (Supplementary Planning Document) in Autumn 2024, which contains requirements for circular economy.

Planning policy is helping to drive innovation in the built environment with materials databases and passports allowing the tracking of materials during development, and platforms providing the opportunity for excess materials exchange during demolition.

GETTING LANGUAGE RIGHT

ISO standard ISO 59004:2024 provides a focus on vocabulary, principles and guidance for implementation of the circular economy.

It advocates for a circular economy model, emphasising the sustainable management and renewal of natural resources. It's the latest of a family of standards specifically designed to foster a shift towards a circular economy and will be helpful to organisations that are familiar with the use of ISO standards in sustainability.

Explaining the concepts of a circular economy and how they apply to business is an important first step in better business design.

Transitioning to alternative business models – Textiles and Fashion

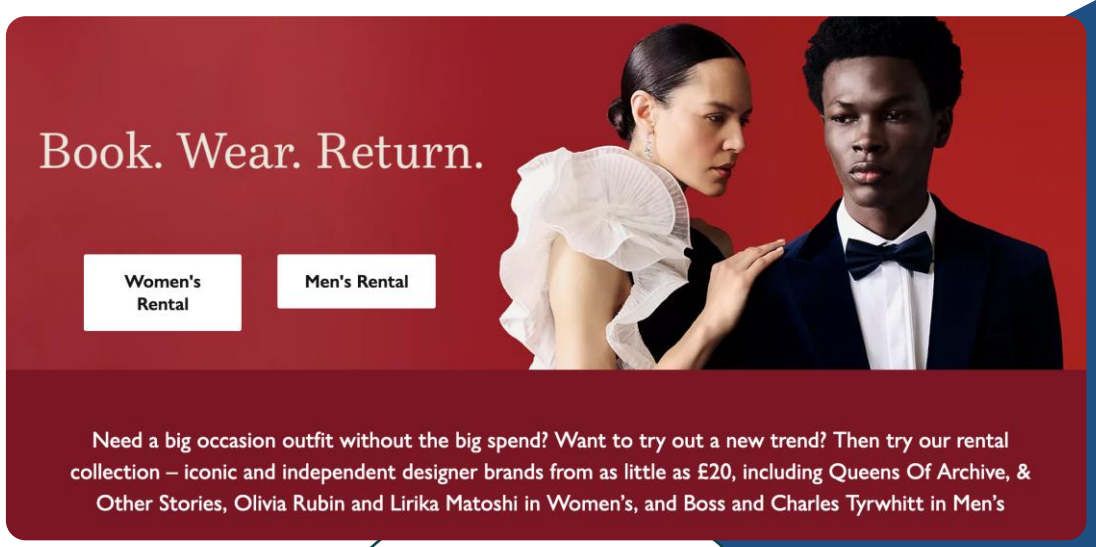


Image Credit John Lewis

It's estimated that of the 3.1kg of textile waste each Briton produces every year, only 0.3kg is recycled and 0.4 kg is reused. This lack of reuse and recycling also extends to home textiles. A WRAP study found that on average, every UK household has around 57 items of home textiles – typically including ten towels, eight cushion covers, seven pillows and six bed sheets – but around 21% are unused, in storage, for the past year.

Fashion is undergoing a visible shift; new circular models are being tested. Whereas previously we may have rented items of clothing for special occasions the rental market is expanding and evolving. Organisations like Loanhood specialise in independent brands and also allow users to rent their own clothes. Qookeee services the baby market, with a subscription-based model approach. We're also seeing major brands push second hand and incorporate rental within their business models.

SELFRIDGES&Co RENTAL

Image Credit Selfridges&Co

Reuse in Retail

Ebay has been continuing to promote pre-loved fashion with its links to the TV series Love Island, it's also sponsoring a circular innovators fund, has launched a pre-loved wedding hub and has invested in digital ID tracking.

At the designer end of fashion Selfridges and John Lewis have developed rental offerings which are well advertised and work well for one off events.

Brands have also moved into the shared business model space with Rab offering clothing and equipment rental and Patagonia offering advice on repair alongside providing a repair service.

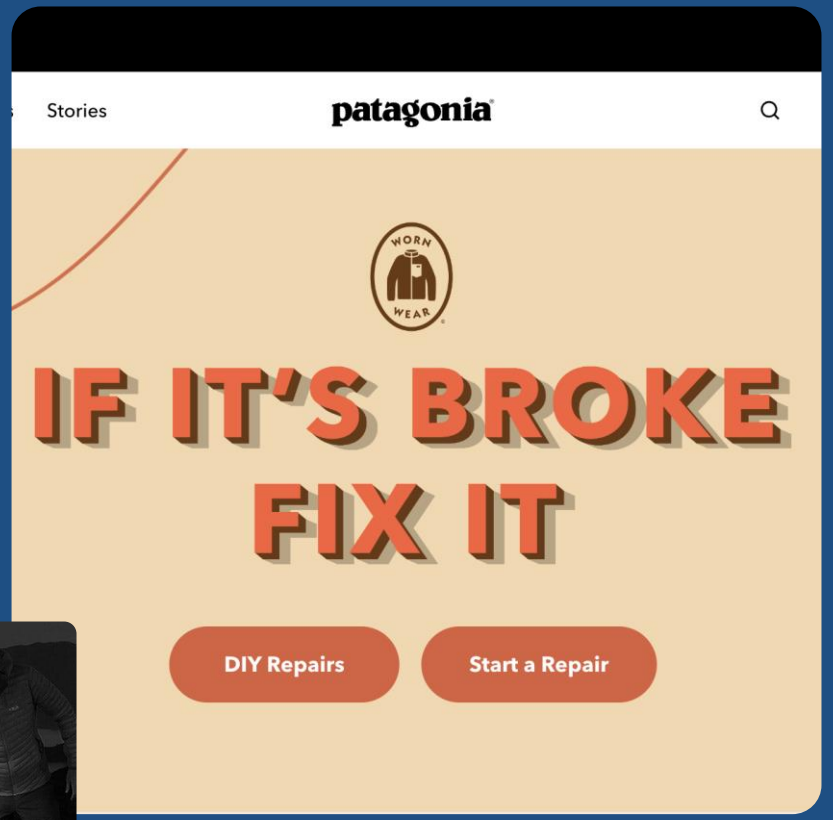


Image Credit Patagonia

Image Credit Rab

It's good to see Governments recognise the impacts of fast fashion with France introducing a 'Fast Fashion' bill which includes a ban on advertising for the cheapest textiles, and an environmental charge on low-cost items.

Materials are also under focus. There's increasing competition for recycled PET from plastic bottles with more brands using this material stream for their clothing (swimwear is an example). New materials are also being tested such as leather made from wasted fruit (Fruitleather Rotterdam) or Seaweed which is being used by materials science (and fashion) company Pangaia.

There are a huge number of design innovations happening in this space, but what's increasingly clear is that we need to reduce our consumption full stop and adopt a slow fashion approach – buying less, using what we already have or freeing our wardrobes of all those items that we keep 'just in case'.

Circular Business, Circular Office - Furniture

Around a third of our lives are spent at work, whether that's at home or office environment. To embed circularity, it's just as important to reflect on the physical workspace as it is the businesses operating model. Organisations need to 'walk the walk' as much as 'talking the talk' and the focus is increasingly on understanding and reducing scope 3 carbon emissions which include goods and services.

There are a number of circular opportunities connected with assets that can be embraced within organisations, but these often need buy-in from several different roles including procurement and finance. Switching from purchasing assets to leasing them can require a shift in budget lines from capital to revenue, procuring more innovative solutions may also require a different approach such as utilising an output specification or co-design, focusing on longevity, durability and/or modularity may require additional upfront costs to incorporate service and maintenance packages or even a sharing agreement.

Change needs to be championed and can take several years before new approaches are trialed and accepted.

Crown Workplace

This company have been delivering sustainable workplace solutions for over a decade and have optimised their approach to deliver financial, environmental and social outcomes for furniture, IT and equipment.

Their Renew Centre is a state-of-the-art facility which is dedicated to remanufacturing, refurbishing and repairing desks, chairs and other office furniture. Designers are encouraged to visit to gain insight into how good design can help to support extended life and refurbishment.
As well as working with their clients to remanufacture assets they also extend the lifespan of existing furniture assets.

Between 2014 and 2019 they remanufactured over 30,000 desks, chairs and other office furniture. They are also an authorised refurbishment partner for furniture brand Herman Miller, demonstrating a shared value around circularity and keeping furniture in use for longer.

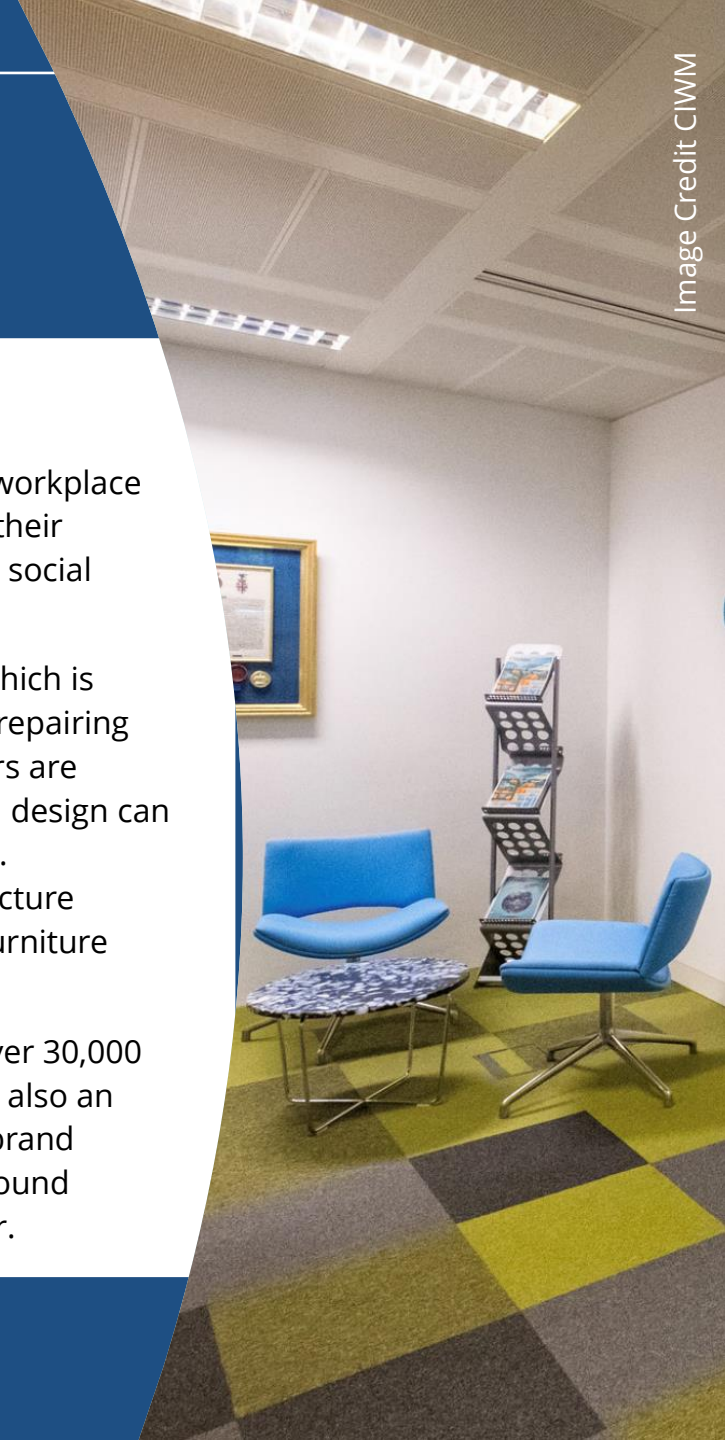


Image Credit CIWM

HOW ARE WE SUPPORTING THE NEXT GENERATION OF DESIGNERS?

Sustainability factors are being embedded into an increasing number of university courses with subject benchmark statements which drive the specific elements to be taught. There is also a wealth of information developed by Trade and Professional bodies and charities to enrich curricula and provide relevant, applied information.

Engineers without borders UK provides a 'Reimagined Degree Map' which supports engineering departments to navigate the decisions that are urgently required to prepare students for 21st-century challenges. It highlights both why sustainability should be embedded in engineering education and how to do it. The Engineering Professors Council also provides a 'Sustainability Toolkit' to help engineering educators incorporate sustainability into education. Both initiatives are supported by the Royal Academy of Engineering .

Progressive briefs like Sustainable Product Design Ba (Hons) course (right) from Falmouth University are increasingly pushing students to think in systems, not in products.

2nd year students were asked to design a product that lasted 100 years as part of the Circular Economy module. The key emphasis was on Right to Repair principles and some students engaged Jonathan Chapman's concept of Emotionally Durable Design to enable emotional longevity. Supported by Bang Creations the students came up with some excellent durable product solutions including **Kug** by Mia Bartram and **Balance** by Eva Hill.

KUG

'THE ULTIMATE SINGLE CUP ECO KETTLE FOR YOUR NEXT BREW.'

Current kettle designs do not take into account the right to repair. When the kettle malfunctions, consumers face frustrating decisions as manufacturers intentionally plan built in obsolescence to encourage users to discard the broken appliance and purchase new ones. Furthermore, existing kettles can waste electricity if more water is boiled than needed.

Balance

'CRAFTED TO LAST, LOVED FOR GENERATIONS.'

After deciding to redesign kitchen scales, I considered the common use of electronic scales in households, which rely on batteries for power. This prompted me to reflect on the energy waste and environmental impact of disposing of so many batteries in landfills and the inability to easily repair and recycle once broken. Why contribute to landfill waste when we could opt for traditional balancing scales, effectively reducing our environmental footprint?

THE 100 YEAR PRODUCT LIFE SPAN WAS REALLY A PROVOCATION FOR THE STUDENTS TO CRITICALLY THINK ABOUT LONGEVITY FROM A MAINTENANCE AND REPAIR PERSPECTIVE, BUT ALSO CONSIDER HOW A PRODUCT MIGHT EVOLVE TO MEET THE NEEDS OF MULTIPLE OWNERS DURING ITS LIFETIME

Simon Andrews, Course Leader, Sustainable Product Design (Ba Hons), Falmouth University

Collective Responsibility

CROSS-SECTOR RECOMMENDATIONS

We have a collective responsibility to use less and reduce impact and need to work more systemically than the silos we operate in today.

All sectors can all play a positive role by sharing this responsibility. We've identified a number of ways in which different actors can do more.

SECTOR RESPONSIBILITY

Design Sector	• Upskill designers to increase knowledge and credibility • Create and share 3rd party verified resources, i.e. guidelines
Trade / Professional Bodies	• Invest in external expertise, particularly when producing guidance • Stay relevant by looking beyond the sector – work with other bodies to incorporate holistic views
Academia	• Ensure all creative and manufacturing courses are accredited by a relevant professional body • Focus student competitions and awards on circularity
Government	• Focus regulation higher up the waste hierarchy to reduce consumption • Move beyond recycling and create less regulation with better measures
Retail	• Go beyond compliance with existing regulation to futureproof and build resilience • Encourage staff performance metric around circularity to embed behaviour
Media	• Ensure subject matter experts are judging awards • Review and challenge evidence submissions and discount sponsorship and awards entry
Waste Sector	• Develop a feedback loop to brands / manufacturers / designers on key problematic items • Highlight the economic impact of waste disposal on the public sector

What Can the Resources and Waste Sector Do?

TAKING A MACRO VIEW

Design shapes the world. If businesses, products and services are designed more responsibly, they have the power to drive positive environmental and social change. With the support of the resources and waste sector better design can increase resource resilience and reduce consumption.

However, from the research conducted we know that many design professionals don't have the agency required to influence the design brief at the right level or are not given the opportunity to drive forward more responsible design. An organisations commissioning agenda, financial expectations and existing business design can be significant limiting factors.

The resources and waste sector and the design sector sit at opposite ends of the lifecycle and currently have limited interaction, limiting the opportunity for change. Taking a step back from the status quo, greater engagement between these sectors - across departments, organisations and supply chain could considerably improve circularity.

This report highlights that a multi-pronged approach is needed across multiple sectors – in addition to the upskilling of designers, CIWM can drive more progress by working more widely across both the supply-chain and with other professional bodies to create an environmental taskforce to review and screen emergent Government policy and legislation.

Our recommendations also centre on how CIWM and the wider sector can use its agency and knowledge of the waste management and circularity to influence others to make more informed decisions using better data.

> ***"NEITHER THE HEALTH OF NATURAL SYSTEMS, NOR AN AWARENESS OF THEIR DELICACY, COMPLEXITY, AND INTERCONNECTEDNESS, HAVE BEEN PART OF THE INDUSTRIAL DESIGN AGENDA"***

McDonough and Braungart
Cradle to Cradle: Remaking the Way We Make Things

DOING THINGS DIFFERENTLY

This report provides an opportunity to work in new ways with other sectors and to provide support to a wider set of decision makers within business and government.

To do this we also need to learn how to do things differently, such as using commercial language, providing design inspiration, and showcasing successful, profitable circular products and business models.

The recommendations outlined also build on previous presidential reports covering green skills, end of waste and showcasing the sector, continuing to provide CIWM with opportunities to influence and lead in circularity and promote the power of design.

THE BIG OPPORTUNITY: WHAT CAN THE RESOURCES AND WASTE SECTOR DO?

The resource + waste sector should continue to reposition itself from being seen as the stakeholders at the end of the supply chain who clear up waste to the champions of resource resilience: custodians who collect and protect vital raw materials, feed the supply chain and help to increase the security of resources used within the UK economy.

The acquisition of the Circular Economy Institute (CEI) by CIWM provides even greater potential for resource and engaged circularity professionals to champion circular design and all the opportunities it brings. The recommendations overleaf showcase how this agenda can support greater circularity through strong leadership, impactful regulation and circular skills development.

STRONG LEADERSHIP

CIWM is at the heart of the Circular economy and has an important leadership role to play in embedding circularity within the resources and waste sector and beyond, this could include:

1

CIWM and CEI become the trusted professional bodies for circularity

Build on the acquisition of the Circular Economy Institute to lead the way in circular economy

Consider developing / sponsoring / accrediting awards to foster trust and highlight great examples of circularity

Highlight case study examples of circular system design and demonstrate the economic value of rethinking design in languages that businesses understand

2

Support collaboration by facilitating cross industry best practice

Understand who the sector needs to work with within the supply chain across design, manufacturing, logistics

Develop an alliance of professional bodies throughout the supply chain, to embed circularity in design and all other stages in the manufacturing process, by working with organisations such as the Design Council and RSA

3

Challenge increasing consumption and problematic items

Call out single use and push back on planned obsolescence – Incorporate this into the terms of reference of the Design Strategic Expert Group (SEG)

Reach out to trade organisations and brands highlighting problematic items e.g. disposable vapes.

Review the sectors own contribution e.g. leaflets and exhibition giveaways

IMPACTFUL REGULATION

1

Work with other trade organisations / professional bodies to promote the benefits of circularity

Encourage Government to consider long-term approaches to environmental responsibility (including design for circularity) which takes a macroscopic view. This could include setting up a green taskforce

2

Pose options for regulation to stem the flow

Work closely with Government to provide evidence on consumption reduction and showcase regulatory mechanisms that could support waste prevention

Continue to work on end of waste criteria for materials

Highlight where there are regulatory barriers such as competition law – that block scale for reuse/refill systems or widescale takeback of products where collaboration is critical to drive commercial success

CIRCULAR SKILLS

CIWM has an important role to play raising awareness of the environmental impacts of consumption but must also emphasise the societal/business cost that accompanies our disposable lifestyles.

1

Be the course / accreditation provider of choice for circular skills

Work with other professional bodies to design circular economy courses that will be relevant to their membership

Promote learning and development opportunities including signposting new regulations that drive circularity and will be beneficial to waste reduction

2

Explore academic course accreditation / support

Consider whether one award body covering design + systems thinking, circular economy and end of life or waste management could accredit academic courses

Signpost case studies/curricula updates for accredited courses

Work with universities and the national curriculum body to embed circular design and highlight the role of the resources and waste sector

It All Comes Back to Design

The recommendations in this report have been identified during the unravelling of what it really means to 'design' as we double-clicked on the design process, creative industry, stakeholders and regulation impacting design.

We also clarified that design can be a powerful tool to reduce impact if harnessed correctly and applied first at business model level, then across systems, processes and products.

To stem the flow we must all reflect on our individual and sector actions that influence growing levels of consumption and own our part of the shared responsibility.

WE NEED TO DO MORE THAN INFLUENCE BETTER DESIGN.

WE NEED TO ELEVATE CIRCULAR SKILLS, FOCUS REGULATION TO MORE EFFECTIVELY ADDRESS CONSUMPTION AND HAVE A CLEAR VISION.

MOST IMPORTANTLY, WE NEED TO DESIGN BUSINESSES RIGHT FROM THE START.

Authors

TRACY SUTTON
Founder + Director
A regular speaker at international conferences, advisory board member and respected commentator in national and trade media. Tracy is a highly respected industry expert at the forefront of sustainable design who has dedicated her career to reducing the global impacts of packaging since graduating in 2002.

SARAHJANE WIDDOWSON
Global Waste Management + Policy Lead
An experienced environmental consultant that has worked in the waste and recycling industry for over 20 years. She is well connected within the industry and has held positions on a number of advisory groups and boards. She is a trustee for the international waste management charity WasteAid.

HANNAH WORTHINGTON
Impact + Policy Lead
A strong believer in stakeholder-led strategies, Hannah is driven to maximise positive impact and inclusivity through her work.
She takes mandatory policy and reporting requirements and weaves them into long-term strategic positioning for packaging portfolios.

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HELPING BRANDS DO MORE WITH LESS