



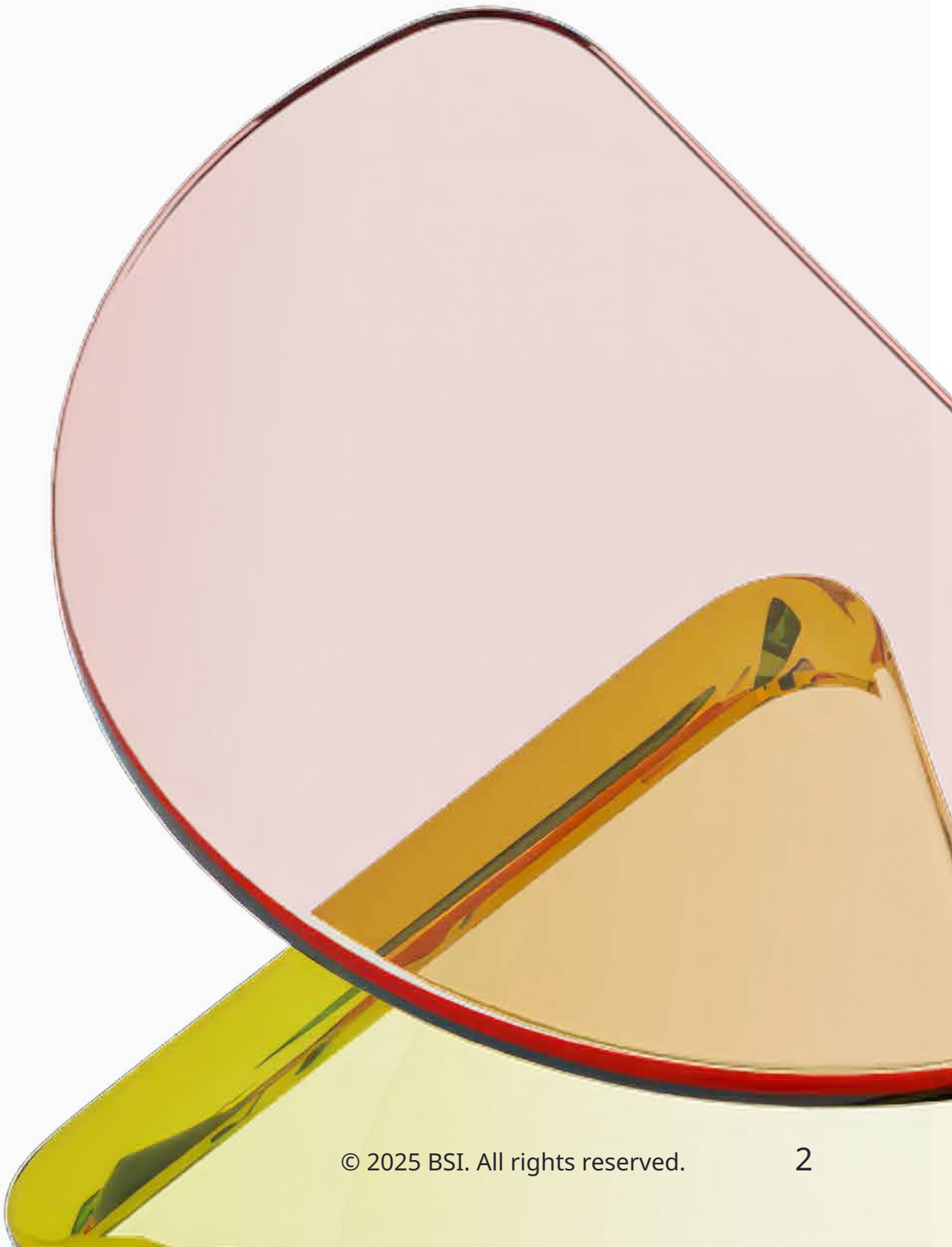
In partnership with



The Tipping Point: Building trust in the circular economy

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BSI Foreword



Susan Taylor Martin
Chief Executive
BSI

Whether it is the clothes we wear, the cars we drive or the technology we use, almost every aspect of modern life puts pressure on the environment and consumes natural resources. For a long time, the prevailing economic model has been to use and discard. It does not have to be that way. The environmental benefits of a reducing, reusing, repairing and recycling are increasingly well understood by consumers and businesses, and a truly circular economy is a realizable aspiration.

BSI is committed to accelerating progress and supporting those organizations eager to lead the transition to a circular economy. In partnership with the Cambridge Institute for Sustainability Leadership (CISL), we have explored the drivers of and obstacles hindering the adoption of circularity. Our study seeks to pinpoint the tipping point at which trust in circular practices is established, enhancing the likelihood of widespread uptake.

Change will not come overnight. What is clear is that barriers to circularity persist worldwide. Companies grapple with ensuring product longevity amid operational complexity and supplier challenges, while striving to balance the costs of investing in new processes or reshaping supply chains. And although consumers display high awareness of the benefits of sustainability, there is still a gap between ambition and action.

Our findings highlight a critical consumer challenge: while most recognize the need to move away from our throw-away culture, they worry this means they will be sacrificing safety, or reliability. For example, 56% say concern about quality is a barrier. These figures underscore that circular products must match or exceed the performance of traditional options, to build trust and nudge behaviour.

Equally, one in three consumers are sceptical of sustainability and environmental claims, creating a significant barrier to adoption. As 59% noted, there is a role here for transparent, credible certification to provide people with that necessary assurance. Ultimately, disrupting the linear economy will require agreement on a common language, with harmonization through standardization central to creating the clarity and coherence that can build trust.

As disruptive trends, from pre-loved fashions to technology take-back schemes, reshape consumption patterns, the norms of disposability are being challenged. Organizations have the chance to demonstrate that sustainability and excellence can coexist, and consumers have the potential to be early adopters, leading the way.

I invite you to examine this report's findings, consider the abundant opportunities it reveals, and join the conversation as we collectively forge a sustainable future rooted in trust and uncompromising quality.

This evidence provides a clear roadmap for organizations to invest in quality measures that bolster consumer confidence and drive sustained adoption of circular products. Collectively, progress is possible.



CISL Foreword



Lindsay Hooper

Chief Executive Officer,
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Leadership

We are at a tipping point. Around the world, economies face converging pressures from resource insecurity and supply chain disruption to geopolitical volatility and climate-driven shocks. Against this backdrop, the shift to a circular economy is not an aspirational ‘save the planet’ goal. It is a strategic necessity.

But circularity will not be delivered through incremental tweaks to linear systems. A true circular economy requires a fundamental market transformation. It demands new business models, new value chains, and the rewiring of financial flows. Capital must shift decisively away from extractive, degenerative activity and towards investments that keep materials in use, regenerate natural systems, and create long-term value.

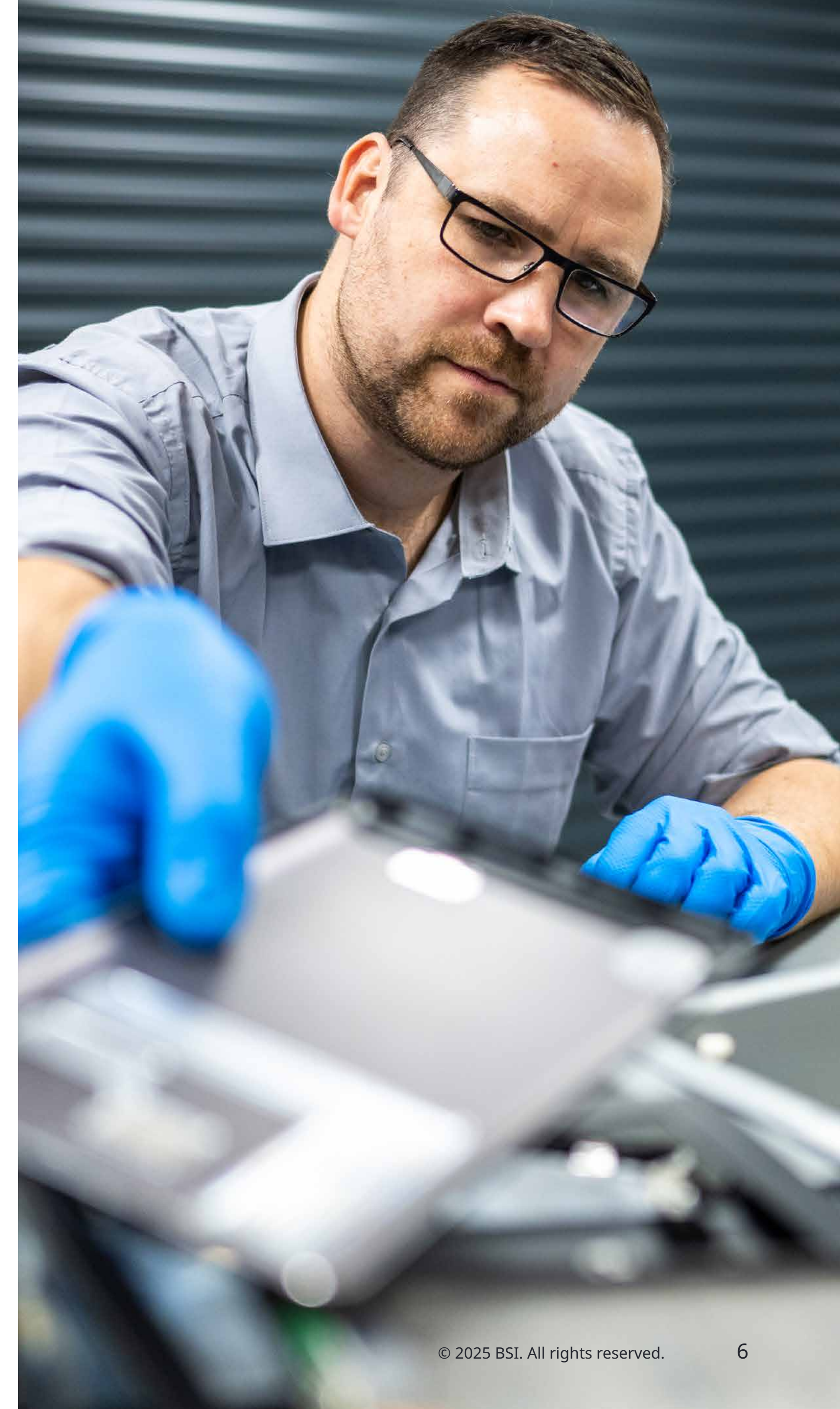
This shift will not happen evenly or slowly. As this report explores, tipping points - moments where change accelerates and becomes self-reinforcing – will be critical. But too often, progress is trapped in isolated ‘hero projects’: celebrated but unscalable, valuable but insufficient. To drive system-wide change, we must move from the margins to the mainstream.

Finance has a catalytic role to play. From product-as-a-service models to repair, leasing and reverse logistics, circular business models challenge traditional ideas of ownership and asset value. They need innovative financing mechanisms to match. This report highlights where those mechanisms are emerging and what it will take to scale them.

Businesses will not invest in redesigning products and operations for durability, reuse or remanufacturing unless they trust that there will be demand, infrastructure and policy stability to support those efforts. Policymakers are unlikely to introduce bold incentives or regulations unless they trust that industry will respond constructively and consumers will adapt. Consumers, in turn, must trust that circular products – whether leased, reused or refurbished – will meet expectations for quality, safety and value. And investors need confidence that circular business models are not just responsible, but commercially viable and resilient over time. Trust is not a soft concept – it is the essential foundation for participation, collaboration and scale.

The economic and strategic benefits are clear. Circularity strengthens industrial competitiveness, reduces dependence on critical imports, and creates high-quality local jobs. These are priorities for any government serious about security, resilience and long-term prosperity.

We are delighted to partner with BSI on this timely and important campaign, recognising BSI's crucial role in building the trust and establishing the standards necessary for a mainstream circular economy. This report offers essential guidance for catalysing tipping points. It sets out the conditions for building trust, aligning incentives and accelerating adoption. For those prepared to act, it offers not only a strategy for transition, but a pathway to lead in the new growth markets that are already beginning to emerge.



Executive summary



Our current dominant economic model operates on a linear trajectory: extract resources, manufacture products, use them – often briefly – and then discard them. Accordingly, global waste generation is on an upward trajectory. The circular economy (CE) represents a systemic shift towards an economy intentionally designed to be restorative and regenerative – and according to our research, 86% of consumers believe it should be a priority for businesses and government.

While the economic and environmental logic of the circular economy is compelling, its widespread adoption hinges on a critical factor: trust. This is because a transition to circular models requires significant shifts, for businesses and consumers. This research sets out to explore the fundamental pillars required to build trust and reach a societal tipping point, whereby sustainability becomes the norm, desired by consumers and appealing as a business model.

Our research identified the following:

- 57% of people are familiar with the circular economy, although this varies by age and country
- Across ten circular behaviours, including recycling and repairing products, most people identified themselves as ‘early majority’ for adoption
- The strongest motivator for adopting circular behaviours was ‘cost savings’ (68% put this in the top three) followed by creating ‘positive environmental impacts’ (67%)
- Consumers expressed significant concerns around adopting circular products, with quality (56%), safety (51%), and reliability (49%) the top areas prompting hesitation
- Circular options are sometimes perceived as being more expensive or less convenient; cost is the most highly ranked barrier (ranked in the top three by 46%), 37% ranked inconvenience as a top three barrier
- 32% cited a lack of trust in environmental claims as a barrier, with 59% believing a recognized label would build their trust
- Evidence can build trust in circular products. When making purchasing decisions, consumer will consider evidence of quality and reliability (56%), safety and hygiene (40%) and sustainability claims (34%)

Key pillars for building consumer trust in circularity

With these, businesses can successfully reach a tipping point and transition to a circular future.

Pillar 1:

Assured performance and quality

Pillar 2:

Transparency and traceability

Pillar 3:

Verification and certification

Pillar 4:

Driving harmonization through standardization

Pillar 5:

Secure and ethical data management

How tipping points work in circularity

Tipping points in circularity often begin with small shifts that gather momentum, thanks to the right combination of economic, technical and environmental factors. These can be driven by regulation, economic pressures or innovation in business models.

For circular products and services to scale and become mainstream, they must reach a tipping point. We set out below the following necessary key conditions:

Product-service level enabling conditions

- Circular value credibility
- Customer appeal
- Accessibility and processing

System-level enabling conditions – five dynamic system drivers

1. Planet
2. Technology
3. Government
4. Finance
5. Citizens



Overcoming the barriers to building trust in circularity

A number of significant barriers to trust hinder the adoption of circular practices:

- Consumer scepticism, primarily driven by concerns about quality, safety and reliability
- Practical hurdles, like convenience or increased cost
- Information gaps, fragmented data, and fear of greenwashing
- Ingrained habits and attitudes
- On the business side, the complexity of transitioning to circular models

Despite these barriers:

- Consumer motivation towards circularity is robust
- Financial incentives show strong potential
- A clear majority believe circularity should be a priority for businesses and governments.
- Each sector faces unique challenges
- Consumers value mechanisms that build trust

Key takeaways

1. Disrupt to drive change
2. Focus on quality above all
3. Validate to reassure
4. Be transparent
5. Money matters
6. Work together

Methodology

- This research has been developed in partnership with Cambridge Institute for Sustainability Leadership
- Research components included:
 - Literature review
 - One-to-one in-depth B2B interviews
 - A multi-market, multi-sector opinion poll

Introduction

The circular economy – a systemic shift



Our current dominant economic model operates on a linear trajectory: extract resources from the earth, manufacture products, use them – often briefly – and then discard them as waste. This linear ‘take-make-waste’ system is increasingly revealing its inherent flaws.¹ Global material consumption has more than tripled since 1970 and continues to rise.²

At the same time, global waste generation is also on an upward trajectory. The World Bank estimates that global municipal solid waste generation will increase by 70% by 2050 if current trends continue.³ According to estimates the global economy is only 8.6% circular.⁴

The circular economy (CE) represents a systemic shift towards an economy that is intentionally designed to be restorative and regenerative. At its core, it means that instead of discarding value after a single use, products, components and materials remain circulating within the economy at their highest possible value for as long as possible. When products reach the end of their service life, the goal is to recover and regenerate embedded materials and resources – effectively ‘closing the loop’ – transforming the traditional line into a continuous circle.

1 [Towards the circular economy Vol. 1: an economic and business rationale for an accelerated transition](#), Ellen MacArthur Foundation, 2013
2 [Global Resources Outlook 2024](#), United Nations Environment Programme, February 2024
3 [What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050](#), World Bank, 2018
4 [The Circularity Gap Report](#), Circle Economy, 2024

Achieving circularity is not merely an adjustment to existing processes. It requires a fundamental rethink of how we design, produce, and consume everything – including buildings, food and packaging. This means integrating considerations of durability, repairability, disassembly, materials choices, and end-of-life pathways from the outset. To do so, businesses need to cultivate new skills, adopt innovative tools, and foster cross-functional collaboration to embed circular thinking deep within their product development and operational strategies – rather than treating it as a peripheral concern or solely about waste management.

A circular transition represents a pathway towards a resilient, sustainable and prosperous future, unlocking significant economic potential – estimated to be worth trillions of dollars globally.⁵ According to our research, the vast majority of consumers (86.3%) believe circularity should be a priority for businesses and government (Figure 1).

The motivations for changing behaviour vary, but *environmental impact* and *cost savings* are key drivers (Figure 2).

5 [Making the \\$4.5 trillion circular economy opportunity a reality](#), World Economic Forum, 2019



Figure 1. Do you think circularity and the circular economy should be a priority for business and government in addressing environmental challenges?

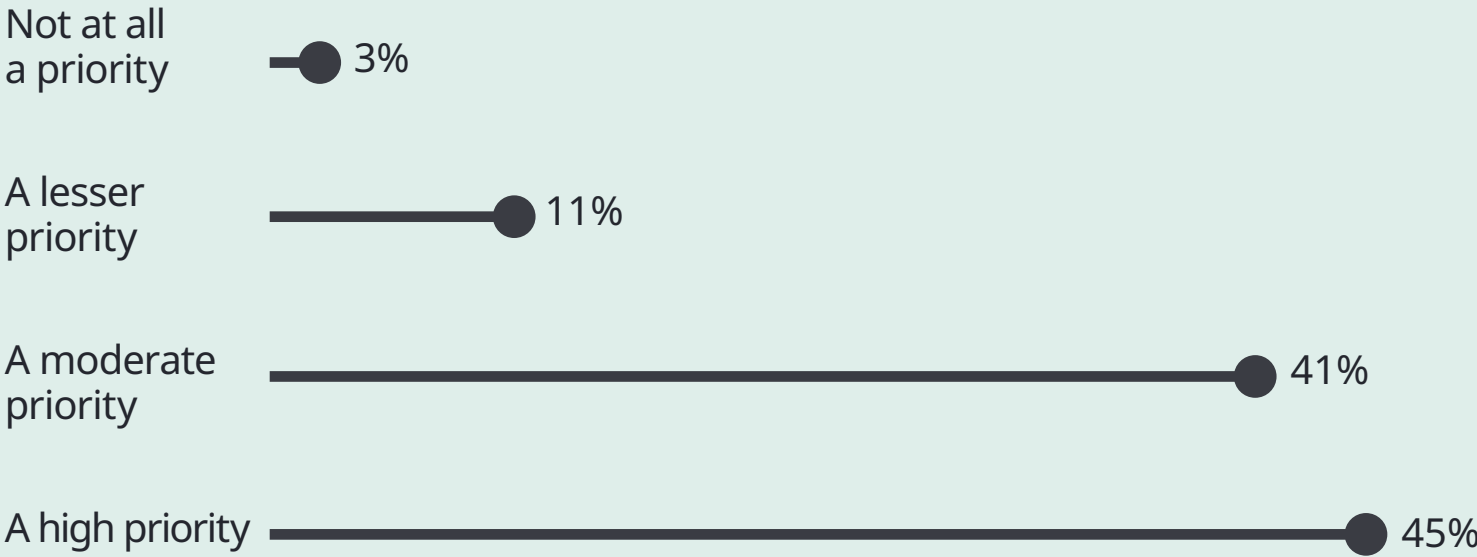


Figure 2. Rank the following based on which would most likely encourage you to adopt circular behaviour

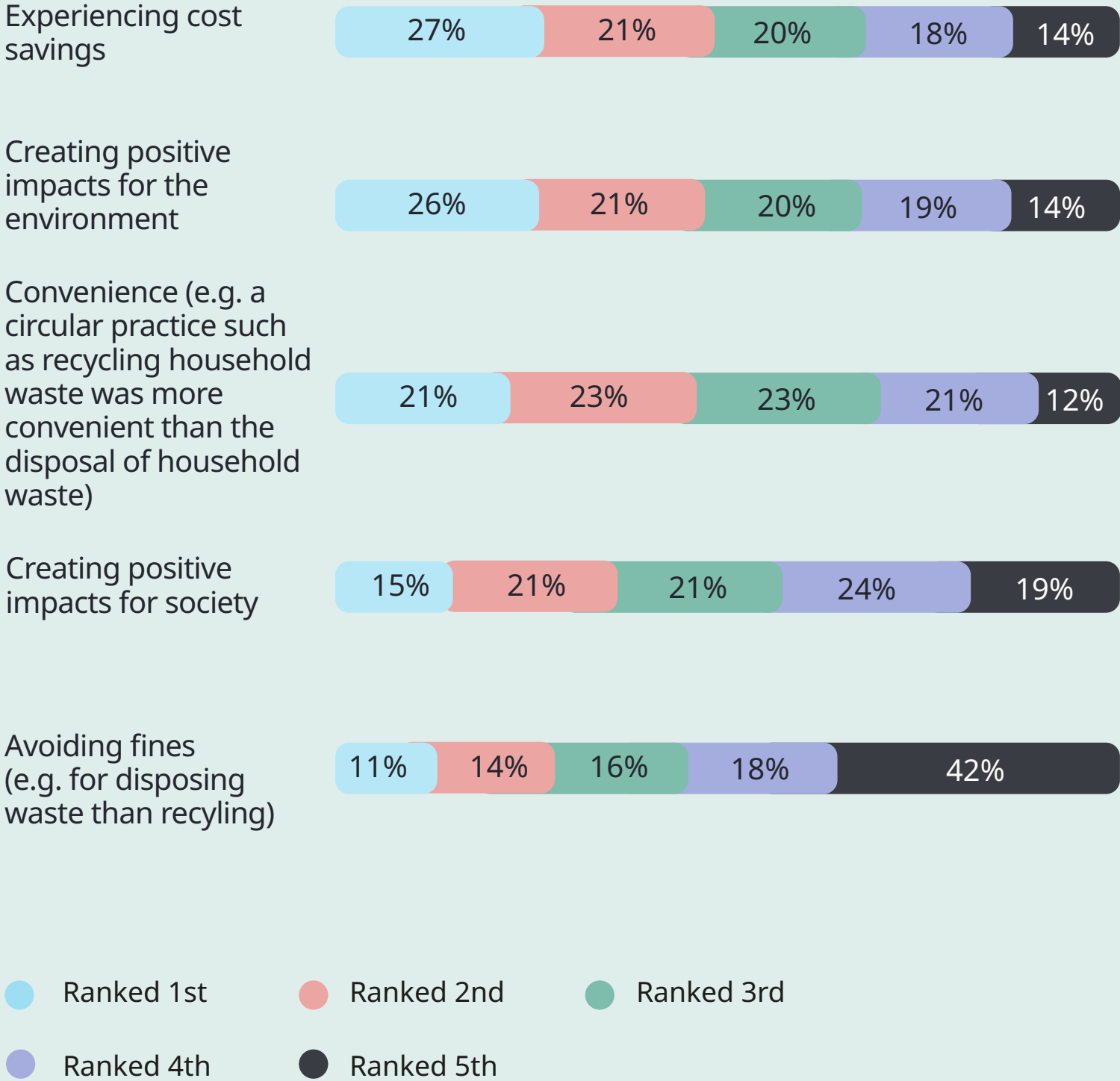


Figure 3. Proportion ranking each behavioural driver in the top three





While the economic and environmental logic of the circular economy is compelling, its successful widespread adoption hinges on a less tangible but equally critical factor: *trust*. This is because a transition to circular models requires significant shifts. Businesses are asked to embrace new operational models and make fundamental changes, which will not necessarily be straightforward. Consumers, in turn, are being asked to engage differently – accept refurbished or remanufactured goods, participate actively in take-back schemes, opt for product-as-a-service models over ownership, and potentially alter long-standing habits. From both sides, this involves perceived risks and uncertainties. Will remanufactured electronics perform as well? Will the same warranties apply? How convenient will it be to find a repair service for leased items? Will returned packaging actually be reused? Without sufficient trust, customer acceptance remains elusive.

Conversely, building and maintaining trust in circular offerings could yield substantial benefits, facilitating essential collaboration across the value chain, fostering increased consumer adoption, encouraging repeat engagement, and building customer loyalty. A reputation for trustworthy circularity could also enhance brand image and provide a powerful point of differentiation in a crowded marketplace.

Building trust is complex, involving multiple dimensions and numerous actors. For example, a consumer considering leasing a solar panel needs to trust not only the supplier, but also the technology itself and, potentially, that government will maintain consistent supportive policies. Therefore, building trust demands a holistic strategy that identifies and addresses potential confidence gaps across the entire network, encompassing regulators, suppliers, technology performance, data security, and partners throughout the value chain. A breakdown in trust at any single point can potentially undermine everything.

This research sets out to explore the fundamental pillars required to build and maintain trust and reach a societal tipping point, whereby sustainability becomes the norm, desired by consumers and appealing as a business model. It aims to provide businesses with actionable insights on how to unlock the vast opportunities of circularity and accelerate the shift towards a truly regenerative economy. As the urgency to transition towards circularity intensifies, this exploration is needed now more than ever.

Chapter one

Building trust in the circular economy



Knowledge of the circular economy

Overall, most respondents were familiar in some form with the circular economy, declining slightly amongst the oldest age cohort (in the 65+ age group, half reported being ‘not at all familiar’ with the CE, compared to just 14% of those aged 18–24). This highlights generational variations in awareness and education regarding this topic.

At national levels, India was the most familiar (44% were ‘very familiar’ and only 7% were ‘not at all familiar’), perhaps linked to pre-existing cultural and economic practices. Indeed, The Ellen MacArthur Foundation has suggested that India’s ingrained circular mindset can be used as a model for other developing nations.⁶ In China, a mere 3% were ‘not at all familiar’ and 45% were ‘moderately familiar’. However, there was a marked contrast with Japan, where 52% reported being ‘not at all familiar’ with the term.

6 *Circular economy in India*, Ellen MacArthur Foundation, 2016.



Figure 4: Familiarity with the concept of circularity and the circular economy

	Total	Australia	China	Germany	India	Japan	Netherlands	UK	US
Not at all / slightly	57%	71%	23%	57%	31%	79%	63%	64%	64%
Moderately / very	43%	29%	77%	43%	69%	21%	37%	36%	36%

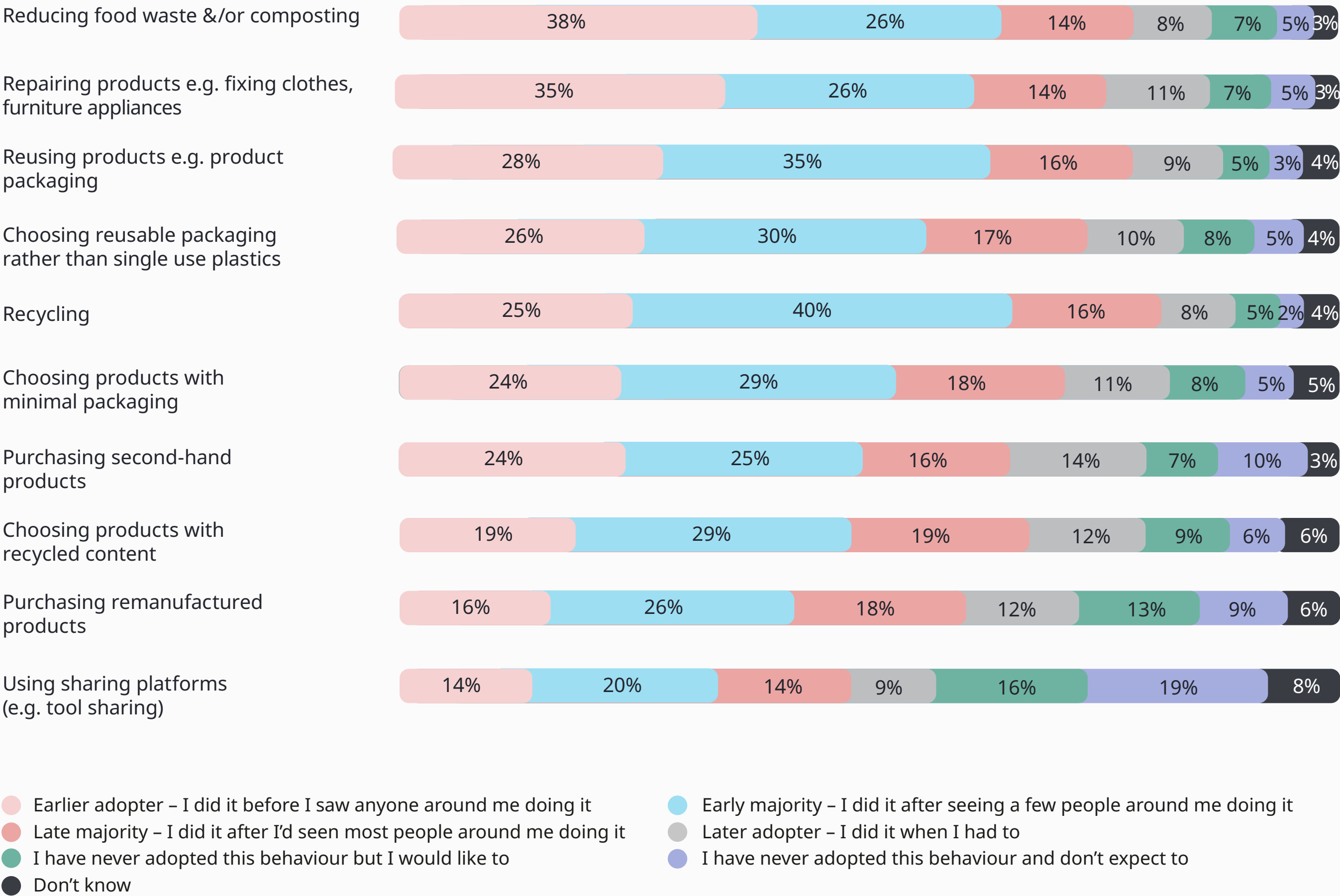
Figure 5: Familiarity with the concept of circularity and the circular economy

	Total	18-24	25-34	35-44	45-54	55-64	65+	Male	Female
Not at all / slightly	57%	45%	42%	43%	55%	68%	82%	52%	61%
Moderately / very	43%	55%	58%	57%	45%	32%	18%	48%	39%

When participants were asked about the prioritization of circularity by business and government, most said it should be a ‘moderate/high’ priority, suggesting an awareness of its importance, but arguably with limited urgency. Notably, 63% of respondents in India selected ‘high priority’, compared to 45% across all regions. This may be influenced by greater familiarity and understanding among participants in India, suggesting greater awareness of circularity may lead to more perceived importance of circular economy initiatives.

The research sought to assess the stage at which participants adopted various circular economy principles. Across the behaviours surveyed, the majority identified themselves as in the ‘early majority’ category. Two behaviours stood out. For ‘repairing products’ (e.g. clothes, furniture, and appliances) instead of buying new, 35% identified themselves as ‘early adopters’. For food waste and/or composting, 38% selected this. This may suggest some behaviours are easier to access or adopt, with differing levels of effort and motivation – while others are at a later stage in a consumer’s circularity journey.

Figure 6: At what point did you adopt each of the following?



Motivations for circular behaviour

The strongest motivator was reported as ‘cost savings’, with 27% ranking this as their top priority. The second-highest motivator was creating ‘positive environmental impacts’ – selected first by 26% of respondents. In contrast, 15% ranked creating positive impacts for society top.



Figure 7: Proportion each impact is ranked as a top three factor that would encourage adoption of circular behaviour

Total	Australia	China	Germany	India	Japan	Netherlands	UK	US
Creating positive impacts for the environment								
67%	67%	71%	72%	71%	67%	60%	64%	64%
Experiencing cost savings								
68%	74%	59%	76%	53%	72%	70%	71%	70%
Convenience								
67%	69%	64%	63%	69%	70%	67%	71%	67%
Creating positive impacts for society								
57%	54%	64%	56%	63%	55%	57%	53%	56%
Avoiding fines								
40%	36%	42%	34%	44%	36%	45%	40%	43%

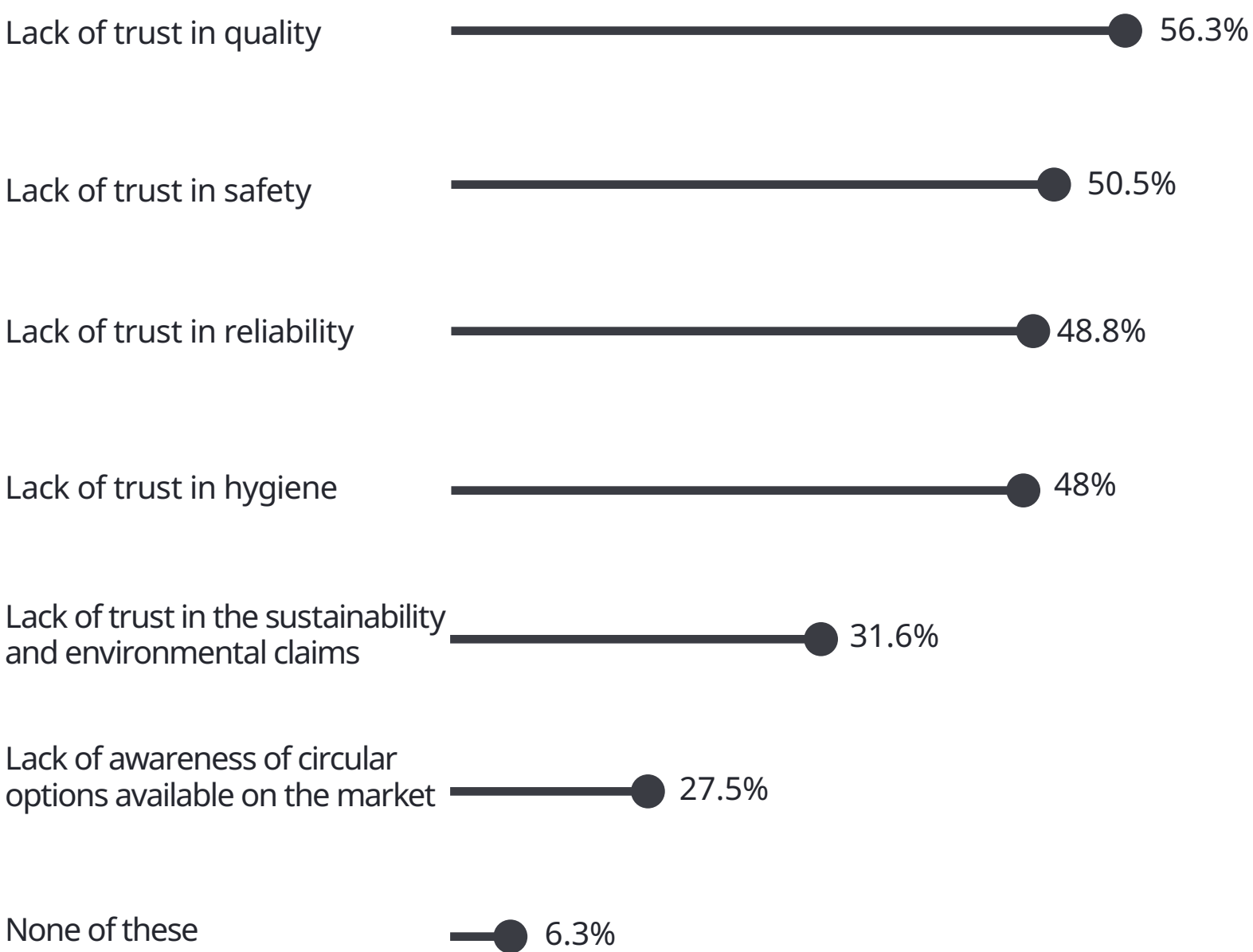
1.1. Identifying the barriers: why trust falters

Consumer scepticism and ingrained habits

Our research highlights significant consumer concerns around adopting circular products, with quality (56%), safety (51%), and reliability (49%) the top three areas that lead to hesitation. In some cases – particularly with personal items such as clothing – hygiene (48%) concerns can be a barrier. Furthermore, the ingrained habits of linear consumption – buy new, use briefly, discard easily – create significant inertia.



Figure 8. Which of the following might prevent you from considering buying or using circular products?

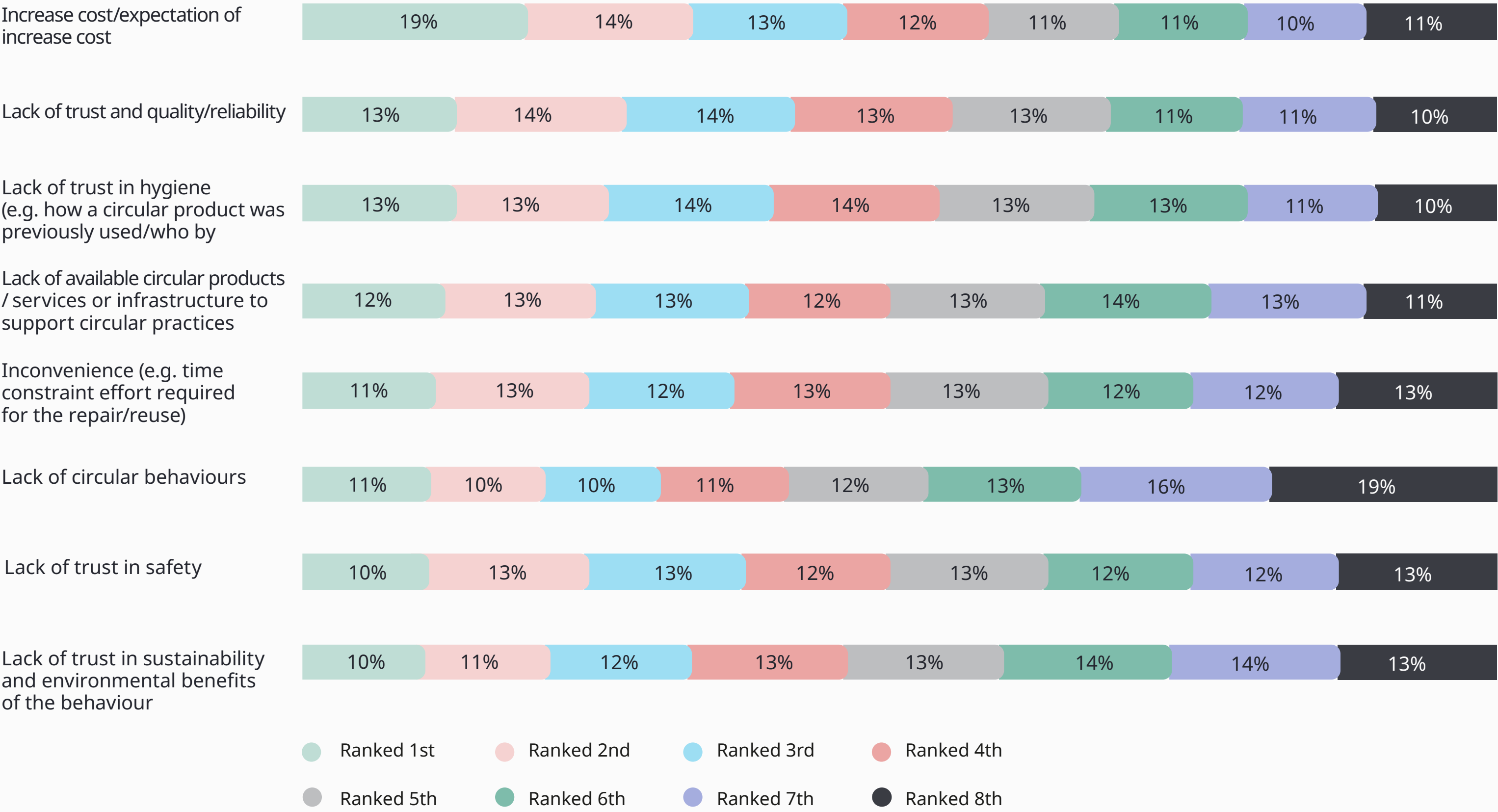


Cost and convenience

Circular options are sometimes perceived as being more expensive or less convenient. Indeed, increased cost – or the expectation of it – is the most highly ranked barrier (ranked in the top three by 46%). For many businesses, increased costs (at least initially) are the result of the significant, upfront investment to set up efficient reverse logistics systems for collecting used products, establish repair networks, and develop markets for secondary materials.

The lack of adequate infrastructure for collection, sorting, cleaning, repair, and redistribution in many regions (12%, as data shows) presents a practical barrier to convenient participation. Inconvenience was another notable barrier reported in the survey (11%).

Figure 9. Which of the following would most likely prevent you from behaving in a circular way





Information gaps and greenwashing

Without full data on product lifecycles, material composition, repairability, and genuine end-of-life fates, consumers may struggle to make informed decisions and verify claims. This opacity creates fertile ground for greenwashing or greenhushing⁷ (underreporting or withholding information about environmental efforts).

Indeed, a lack of trust in the sustainability and environmental claims was cited by 32% of respondents as a factor that potentially prevented purchases. However, 59% of consumers believe a recognized label that supports a sustainability and environmental claim (labels similar to Fairtrade, B-Corp or BSI Kitemark™ were mentioned) would build their trust in circular products' credentials.

32% said a lack of trust in sustainability and environmental claims might prevent them making circular purchases

⁷ *Greenhushing: Exploring the Silent Side of Sustainability*, NetZeroNow.org, accessed May 2025

Business model and supply chain complexity

Transitioning to a circular model often requires fundamental changes to operations, including product design, supply chain management, and revenue models.⁸ Managing reverse flow of products and materials also adds logistical complexity. Internal resistance to change, lack of skills, technological limitations, or difficulty accessing finance can also inhibit progress. Additionally, circular systems often depend on close collaboration between multiple organizations along the value chain.

59% said a recognized label to validate sustainability claims would build trust in circular products' credential

⁸ Rosário, A. T., Lopes, P., & Rosário, F. S. (2024). *Sustainability and the Circular Economy Business Development*. *Sustainability*, 16(14), 6092. <https://doi.org/10.3390/su16146092>. <https://www.mdpi.com/2071-1050/16/14/6092>

Barriers and Incentives – sector specific

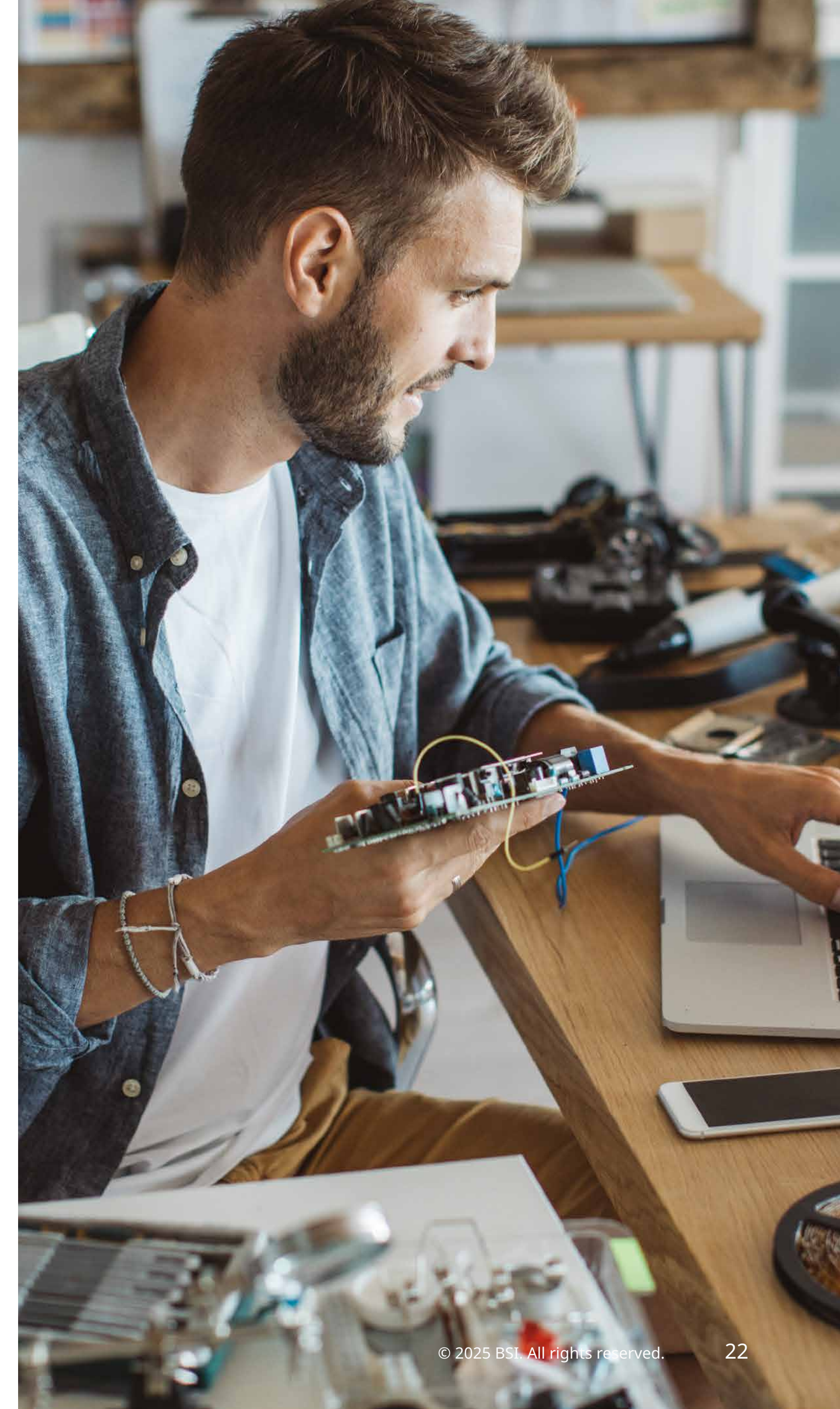
Clothing

29% of participants said they would expect to pay 50% less for clothing that is secondhand, refurbished or made from recyclable materials, and 68% said they'd expect to spend less. The results may indicate reduced clothing consumption and/or a shift towards second-hand fashion, which has become a trend in some countries and age groups, and a potential turning away from 'fast fashion', due to its often-publicized negative implications.



Technology

Those aged 18 to 24 were more willing to pay more for second-hand and refurbished consumer technology goods (24%) than those above age 55 (10%). Four fifths (80%) of those aged 65+ believed refurbished technology should cost less. While this could relate to many things – ingrained behaviour, gains in the value of some discontinued yet in-demand products, attitudes to sustainability, or economic factors – it could reflect generational differences of perception and/or trust in the quality of second-hand goods.



Built environment

Public sentiment towards sustainable housing development practices explored preferences over retrofitting, demolition or new construction of existing assets. Differences between the nature of the built environment across markets clearly played a role, with 72% of German respondents strongly calling for increased refurbishment of existing assets, likely linked to Germany’s strong policies encouraging refurbishment and retrofitting. By contrast, this fell to 51% for Japan.⁹



9 University of Nottingham. (2016). *Retrofitting the UK's housing stock for carbon neutrality will require significant investment, says new study*. <https://www.nottingham.ac.uk/news/retrofitting-uk-housing-stock-for-carbon-neutrality-will-require-significant-investment-says-new-study>

Healthcare

A third of respondents overall agreed they would trust repurposed medical equipment as much as new equipment, indicating caution, but also that education and safety protocols may be needed. Just 22% ‘strongly agreed’ the sector should prioritize practices to reduce waste and promote use of recycled materials, although this rose to 80% agreed or strongly agreed in China. China and India scored 75% and 74% respectively for prioritizing CE practices in the healthcare sector, whereas the US scored 52%, highlighting scepticism regarding safety of reused medical devices in those regions.



Food

The majority (66%) agreed the food sector should prioritise circular practices, such as composting and reducing food waste – even if this would increase consumer costs. A similar proportion (63%) agreed with prioritizing use of recycled and recyclable packaging, indicating a level of consumer awareness of the environmental burdens of single-use plastics and food waste. Regional disparities saw 12% of Australian participants disagree that the sector should prioritize circular practices.



1.2. Building and evidencing trust

When it comes to building trust in circular products, 59% of respondents selected that a recognized label which supported sustainability and environment claims would do so. Additionally, 49% selected the need for evidence – such as independently verified certification – and 43% selected ‘evidence-based studies’ to be trust-building factors.

A significant barrier was the ‘lack of trust in quality’ of the product, selected by 56% across all ages and regions (again, age appears to play a factor. For those aged 25 to 65+, 58% selected quality as a primary barrier. However, only 43% shared this concern aged 18 to 24. Likewise 56% (average) cite quality and reliability as their top consideration when buying circular products.

When considering circular products like clothing, technology, food, and household appliances, evidence of quality/reliability is deemed the most important factor by a significant margin (ranging from 54% for food and clothing to 58% for technology and household appliances).



1.3. Key pillars for building trust in circularity

In this section, we examine the challenges and requirements surrounding five key pillars of consumer trust upon which businesses can successfully reach a tipping point and transition to a circular future.



Pillar 1: Assured performance and quality

The assurance of performance is vital for building trust, because it directly confronts potential customers' scepticism about quality and longevity. The conventional perception that 'used', 'refurbished' or 'recycled' equates to 'inferior' is a significant barrier. Therefore, a demonstration that circularity does not necessitate a compromise on functionality, durability or user experience is key. For circular products and services to gain widespread acceptance, they must meet or exceed customer expectations regarding their performance, durability, reliability and overall quality.

This relies on several key interventions. It begins with designing for durability and longevity from the outset – creating products built to last and withstand wear and tear. For remanufactured and refurbished goods, rigorous quality control processes are essential for ensuring they meet strict performance standards (including when recycled materials are being used). Comprehensive warranties, comparable to those for new items, provides a strong signal of confidence. Providing accessible and effective repair services allows products to be maintained.



Successfully delivering on performance and quality criteria will be instrumental in shifting market perceptions, enabling businesses to reframe the narrative to circular being a smart, sustainable, and valuable choice – perhaps even offering superior longevity.

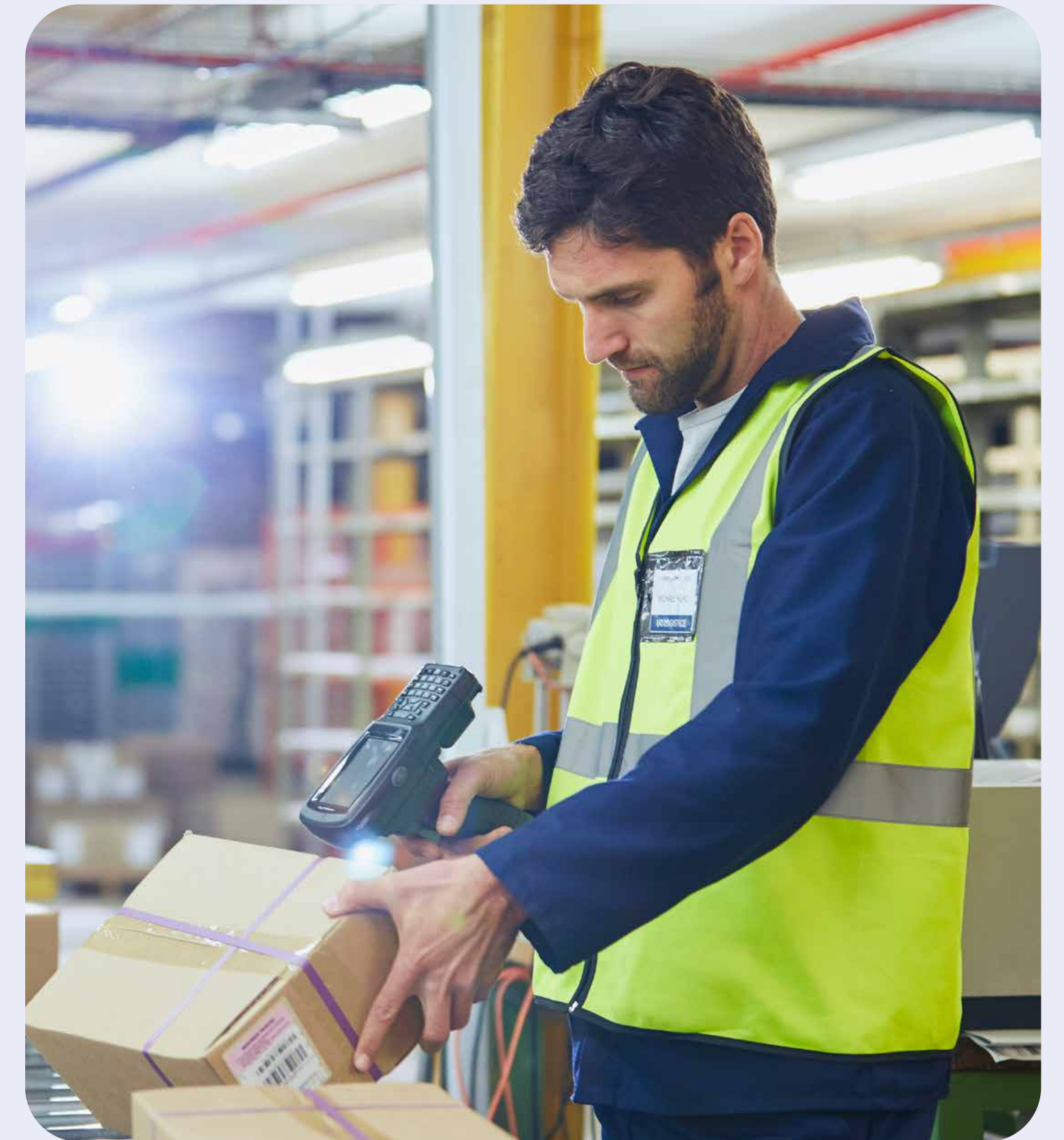
Pillar 2: Transparency and traceability

Transparency means providing clear, comprehensive, and easily accessible information about a product's entire lifecycle – ideally from the origin of its raw materials through manufacturing, use, repair, and eventual end-of-life handling. Traceability is the mechanism that enables this level of transparency.

Progress has been made to improve both. Digital Product Passports (DPPs) – envisioned as digital records containing detailed lifecycle information – are likely to be a key tool. Blockchain technology offers a way to track materials and transactions securely along the supply chain and prevent data tampering. Regulatory initiatives, such as the EU's push for greater transparency on chemicals in products via the database for information on Substances of Concern (SCIP), also drive this pillar forward.

However, in a global economy, effective traceability often spans complex value chains involving numerous actors across different jurisdictions. To provide a complete picture, systems must be interoperable, relying upon agreed standards and protocols. Without such harmonization, data remains fragmented in silos.¹⁰ There is also the concern of data governance, which could impinge on trust levels.¹¹

These issues point to the opportunity for industry-wide collaboration on common standards, potentially leveraging shared platforms, to build a truly transparent and trustworthy circular ecosystem.



¹⁰ *Supply chain traceability and transparency for a global circular economy*, Barrie, J, 2023

¹¹ *Pillars for building trust: Prioritize transparency and privacy*, Deloitte, 2023

Pillar 3: Verification and certification

While transparency provides information, verification offers assurance of its credibility that circular claims, products, or processes meet specific, pre-defined criteria and standards. This validation is valued by consumers, with 59% stating that a recognised label would build their trust in sustainability claims, and 49% valuing evidence supported by independently verified certification.

Consumers may understandably question whether a remanufactured engine or a refurbished laptop is truly 'as good as new'. A visible, recognised and trusted certification mark could answer that, confirming quality and performance based on objective assessment against established benchmarks, for example confirming the percentage of recycled content or the biodegradability of packaging.

Verification is critical for reducing scepticism, particularly among non-expert audiences (e.g. consumers) who may lack the technical capacity to evaluate complex circularity claims. In our survey, lack of trust in sustainability claims was a barrier for 32% of consumers. Mechanisms can include established third-party certifications – such as the [BSI Kitemark™ for Remanufacturing](#),¹² which assures consumers that remanufactured goods meet standards equivalent or superior to new products.⁷ Validated [Environmental Product Declarations \(EPDs\)](#) also contribute to verifiable circularity.

The power of verification lies in its ability to translate the complex realities of circular processes into easily understandable signals for the market. If done well, this becomes an essential component for building market confidence.



12 [BSI Kitemark for Remanufacturing](#), BSI, accessed May 2025



Pillar 4: Driving harmonization through standardization

While individual companies can build trust through their own actions, scaling the circular economy requires a common language and agreed rules of engagement. Harmonization through standardization can build trust by creating clarity, consistency, and comparability across a market.¹³ It also provides the common architecture required for verification bodies, regulators, investors, and businesses to operate with shared understanding and expectations.

The ISO 59000 series provides internationally recognised circular economy standards offering a way to demonstrate real commitment. At the corporate reporting level, standardization examples include the European Sustainability Reporting Standards (ESRS)¹⁴ or potential future standards from the International Sustainability Standards Board (ISSB),¹⁵ which promotes consistent disclosure. Furthermore, there are industry-specific protocols, such as the GS1 Global Traceability Standard,¹⁶ PR3's standard for reusable packaging, and RESET standards for buildings and interiors.¹⁷

¹³ *Harmonizing Metrics to Measure Circularity: A Call to Action*, World Economic Forum, 2024

¹⁴ *European sustainability reporting standards – first set*, European Commission, 2023

¹⁵ *IFRS Sustainability Disclosure Standards (ISSB Standards) and accompanying guidance*, ISSB, 2023

¹⁶ *GS1 Global Traceability Standard release 2.0*, GS1, 2017

¹⁷ RESET is a set of standards and assessment tools and services focused around data quality and data transparency with the purpose of helping built environments become healthier and more sustainable

Pillar 5: Secure and ethical data management

The circular economy is increasingly data-driven. Traceability systems, DPPs and Product-as-a-Service models rely on usage monitoring, while platforms that manage take-back and refurbishment depend upon collection, storage and sharing of data about products, materials, and sometimes users. The growing reliance on data to enable sophisticated circularity models – tracking materials through complex chains, remote monitoring of product performance, and the understanding of usage patterns for service models – creates a parallel and inseparable need for robust ‘data trust’ infrastructure. Otherwise, concerns about potential data breaches, misuse of personal information, or excessive surveillance, could become significant barriers to adoption.

Building confidence in a circular offering becomes intrinsically linked to building confidence in the handling of associated data. Consequently, demonstration of a strong commitment to data protection and privacy, and compliance with data privacy regulations, is essential. This suggests an emerging need for potentially further new standards, verification methods and assurance services focused specifically on the trustworthiness of the data ecosystems that underpin the circular economy.



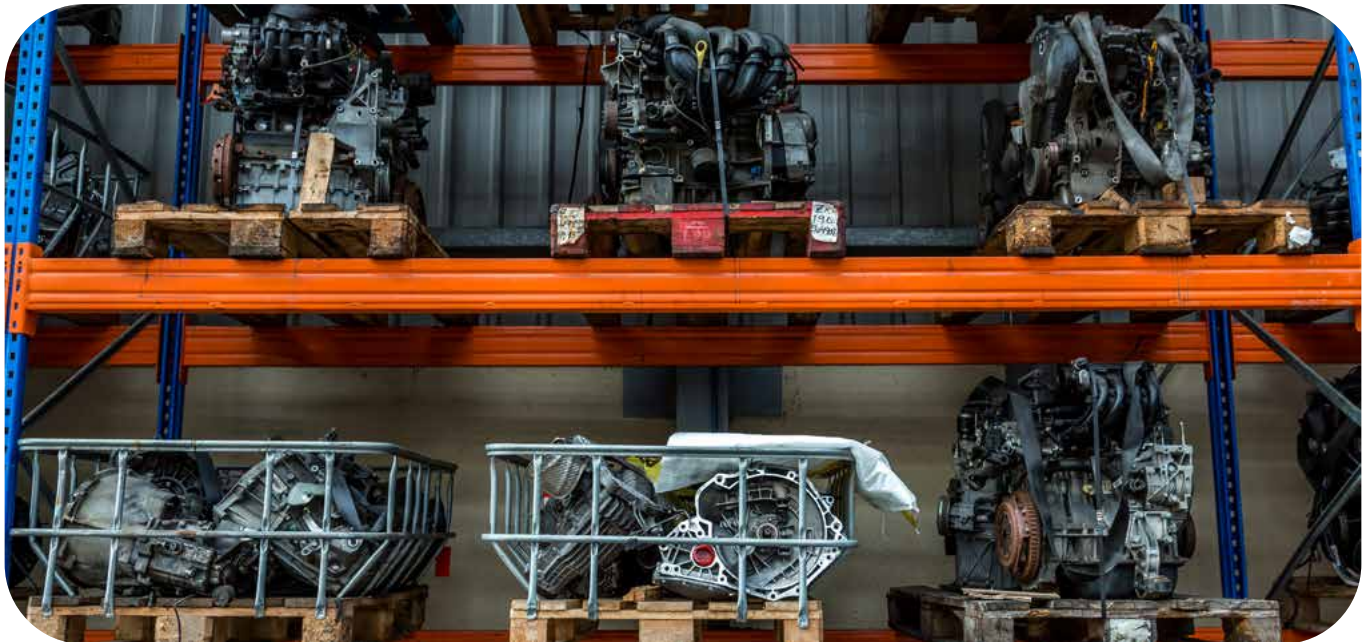
As we have seen, building a trusted circular future is multifaceted with a range of challenges to overcome. Businesses must embed circularity in design, invest in transparency and verification, communicate honestly, guarantee performance, manage data ethically, and embrace standardisation. Those that do, have the potential to unlock a wealth of opportunities.

Chapter two

How tipping points work in circularity



Tipping points in circularity often begin with small shifts that gather momentum, thanks to the right combination of economic, technical and environmental factors. These can be driven by regulation, economic pressures or innovation in business models, as these example show.



Remanufacturing in the automotive sector

Remanufacturing provides a clear example of how circular practices can grow from niche applications to become strategic priorities. This practice dates back to the early 20th century, initially within military contexts and later in the automotive industry as a response to material scarcity.

Volvo was one of the early adopters. In 1945¹⁸, the company’s engineers began experimenting with ways to reuse worn-out components, laying the groundwork for a fully developed remanufacturing business. Today, Volvo operates a 27,000m² facility in Flen, Sweden, offering approximately 40 different exchange parts. After use, worn-out products – referred to as ‘cores’ – are collected from dealers across Europe and Asia and returned to Flen. Crucially, all products are updated to the latest technical specifications and software.

While the original motivation was economic, today Volvo describes it as a “win-win-win” for customers, company and planet. It is a resilient model that improves resource security and reduces environmental impact. Customers benefit from up to 30% lower total cost of ownership, improved uptime and reliable performance. The environmental impact is significant, with up to 85% of material preserved and energy use cut by 80%.¹⁹ A recycling rate of approximately 90% is achieved for old truck engines.

Several factors have been key here: designing products for durability and ease of disassembly, developing reverse logistics systems, investing in advanced remanufacturing technologies, and providing customers with clear incentives, such as lower costs and environmental benefits.

18 [Sustainability heritage](#), Volvo Cars, accessed May 2025

19 [Why circular truck parts are a sustainable choice](#), Mårtensson, H., Volvo Trucks, 2023

Battery recycling and emerging circular models

Rapid growth in electric vehicle (EV) adoption, alongside rising demand for critical raw materials and increasing regulatory pressure, is encouraging significant investment in battery recovery, second-life applications and materials recycling.

Audi is among those leading efforts on this. The company is adopting a circular approach spanning design, production, usage, and end-of-life management. One of the latest initiatives is battery passports, in collaboration with industry and policy partners, which provide a standardized digital record containing data about a battery's composition, manufacturing details, use history, and recycling potential. These records are intended to improve transparency and traceability, as well as enhance recovery of valuable materials. From 2027, battery passports will be mandatory for all new EV batteries placed on the European market.²⁰

The Global Battery Alliance (GBA),²¹ of which Audi is a member, has taken this concept forward by launching pilot projects to demonstrate the feasibility and implementation of battery passports.

20 [Regulation \(EU\) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, EU, accessed May 2025](#)

21 [The Global Battery Alliance, GBA, accessed May 2025](#)

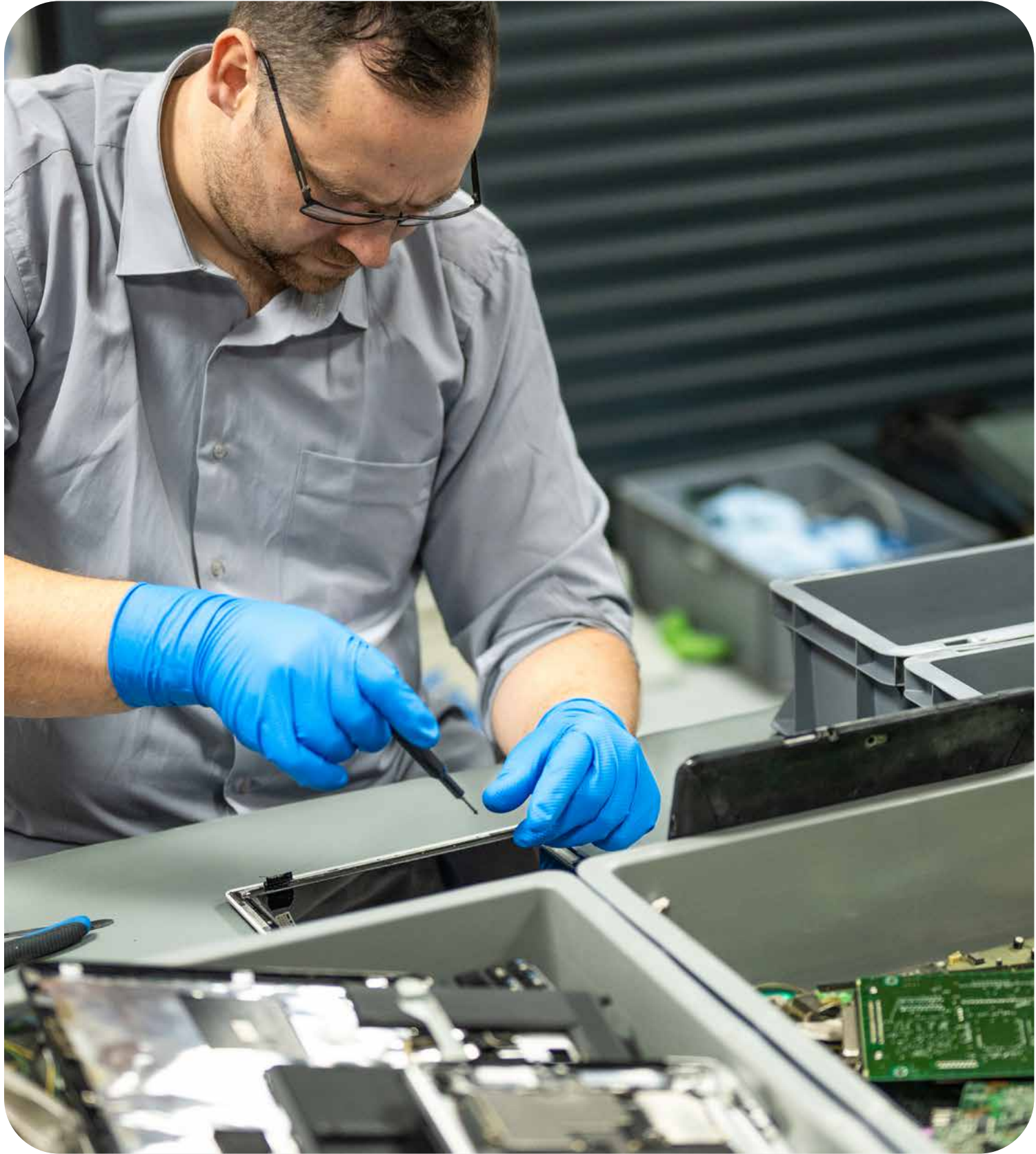
These developments reflect a broader shift. Manufacturers are beginning to treat batteries as assets that can be maintained, reused, and repurposed, opening up new business opportunities, such as battery leasing, second-life storage systems, and long-term service models.

Similarly, new business models such as furniture-as-a-service are also gaining momentum, aligning with consumer demand for flexibility, sustainability and convenience. Programmes such as Ahrend, in the Netherlands,²² and Fernish, in the US,²³ offer high-quality furniture on a rental or subscription basis. They collect, refurbish and reissue furniture, significantly extending product lifespans and reducing waste.

This approach promotes the design of products that are durable, easy to repair, and fit for multiple cycles of use. For customers, the model provides transparent costs and convenience, without the environmental burden of short-lived purchases. It also enables companies to adapt rapidly to changing needs, while maintaining a low-waste footprint. As infrastructure and policy evolves, such practices have the potential to become standard features of tomorrow's economy.

22 [Ahrend's Furniture as a Service webpage, Ahrend, accessed May 2025](#)

23 [Fernish, accessed May 2025](#)



2.1. Product-service level enabling conditions for tipping points

For circular products and services to scale and become mainstream, they must reach a tipping point: generally defined as a moment at which adoption moves beyond early experimentation and becomes self-reinforcing across the market.²⁴ Drawing upon tipping point theory³² and circular business models,²⁵ we set out below the following key conditions that need to be in place, both at the circular *product level* and the *service level*.

Circular value credibility

Circular offerings must first demonstrate that they are financially and functionally competitive - not only offering a lower total cost of ownership or improved resource efficiency, but also meeting or exceeding expectations in terms of quality and reliability.

Harvard Business Review³³ analysis highlights that successful circular businesses begin with a strong understanding of where and how value is created, ensuring that their proposition does not compromise customer outcomes. An example of this is Caterpillar's Cat Reman²⁶ initiative which collects used components for reprocessing them to as-new standards and provides a financially compelling, and technically credible, alternative. Products are guaranteed with the same performance and warranty.

This aligns with Malcolm Gladwell's concept of the 'law of the few': the importance of credible early adopters who demonstrate the practical and financial value of a new product.³²

Customer appeal

Circular products must resonate with customers' personal values and cultural aspirations. This involves aligning branding with the evolving lifestyle choices and consumer preferences. Crucially, circularity must be embedded into the product's identity and desirability at the design stage, not perceived as an afterthought. Service-based models demonstrate this by pairing good quality, sustainable furniture with flexible leasing options.

Customers enjoy well-designed interiors without long-term ownership, appealing to customer preferences around convenience, environmental responsibility and style.

Luxury fashion brands are also repositioning circularity as it further promotes the exclusivity and uniqueness of products. Chanel's classic products – often resold or passed down through generations – gain sentimental and financial value over time. Ralph Lauren has likewise embraced circular principles, with initiatives to refurbish or recycle iconic garments, reinforcing the value of craftsmanship and legacy and demand for vintage products.²⁷ These examples speak to what Gladwell calls the 'stickiness factor': the emotional resonance and memorability that drive adoption and advocacy.³²

²⁴ Gladwell, M. (2000). *The Tipping Point: How little things can make a big difference*. Little, Brown and Company.

²⁵ Harvard Business Review. (2021). *The Circular Business Model*. Harvard Business Review

²⁶ [Cat Reman hub webpage](#), Caterpillar, accessed May 2025

²⁷ [Ralph Lauren Strengthens Its Commitments to Advancing a Circular Economy with New 'Live On' Promise, Further Enabling Extended Life of Its Products](#), Ralph Lauren, 2022



Accessibility and processing

The ease with which customers can engage with a circular product or service is decisive in its ability to scale – namely: ‘How easy is it to get my product back?’ and ‘How easy is it to recover value from it?’.³³ Infrastructure must support collection, repair, redistribution or renewal in a way that integrates the user’s experience. This includes physical logistics, digital platforms, after-sales services and clear customer communication.

Volvo’s remanufacturing success is enabled by a reverse logistics system that collects used components from dealers across Europe and Asia and returns them to a dedicated facility for rapid processing.

This mirrors Gladwell’s ‘power of context’: the idea that behaviours change when the environment is conducive, and systems are easy to navigate.³²

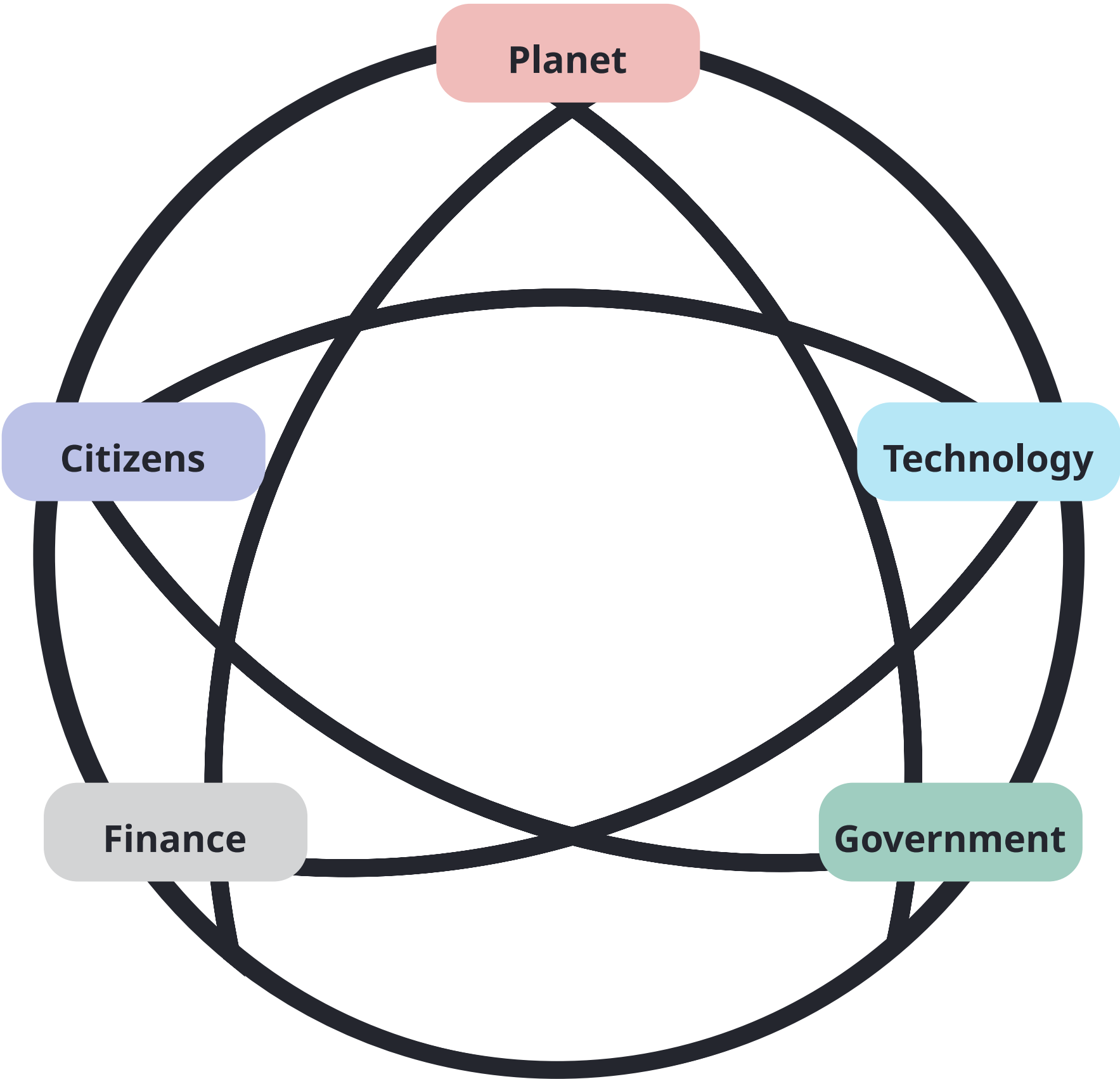
2.2. System-level enabling conditions for tipping points

Without sustained momentum, however, advancements risk being limited to small-scale pilot/'hero' projects that 'never fail, but never scale'. Creating the system-level enabling conditions for a circularity tipping point involves shifting these drivers from primarily sustaining the linear 'take-make-waste' model to actively disrupting it and reinforcing circular practices through the five *dynamic system drivers* set out below.²⁸



28 *Navigating low carbon disruption: Systems thinking and dynamic system drivers in power, road transport and agriculture*, University of Cambridge Institute for Sustainability Leadership (CISL), 2023

Figure 10: 5 dynamic system drivers



Dynamic system drivers

- 1. Planet:** The increasing visibility of planetary boundary overshoot – resource depletion, waste accumulation, pollution, biodiversity loss. This acts as a fundamental disruptive pressure and strengthens the case for circularity.²⁹
- 2. Technology:** The development and scaling of innovations crucial for circularity. This includes advancements in material science (durable, reusable, recyclable materials), product design (modularity, repairability), advanced sorting and recycling technologies, remanufacturing processes, and digital platforms (for tracking resources, enabling sharing models).
- 3. Government:** Policy and regulation that actively promotes circularity. This involves creating incentives (such as taxes on waste/virgin materials and extended producer responsibility schemes), setting standards, supporting circular infrastructure development, using public procurement to create demand, and removing regulatory barriers.
- 4. Finance:** Capital to flow towards circular economy initiatives. This requires investors and financial institutions to recognize the long-term value creation potential, along with innovative financing mechanisms tailored to circular models.
- 5. Citizens:** A shift in consumer mindset and behaviour. This includes: embracing service-based models over ownership, participating in take-back schemes, demanding transparency about product lifecycles, and potentially exerting pressure through activism and voting.

²⁹ *A Doughnut for the Anthropocene: Humanity's Compass in the 21st Century, The Lancet Planetary Health, 2017*

A circularity tipping point becomes more likely when these drivers align and reinforce each other. For example: government policy favouring recycled content (Government) can stimulate investment in advanced recycling (Finance), leading to better and cheaper recycling (Technology), making products with recycled content more appealing and affordable (Citizens), further reinforcing the policy and investment case. Understanding these interconnected dynamics is key to accelerating the transition.



Chapter three

Identifying circularity tipping points in key sectors



Built Environment

The built environment represents one of the largest opportunities and challenges for circularity. The sector remains dominated by linear ‘take-make-waste’ models, driven by high material intensity, especially in rapidly urbanizing regions.

Circular interventions span different levels of the supply network, from concepts like Design for Disassembly³⁰ and Design for Adaptability³¹, to techniques such as prefabrication and modular construction. Use of recycled and regenerative materials is increasing, such as recycled concrete, or timber from sustainably managed forests, and bio-based materials. However, challenges remain, as follows:

- **Fragmented, complex value chain** hindering collaboration in terms of material recovery and reuse.
- **Regulatory inertia:** Building codes and regulations often prioritise traditional materials and methods.
- **Cost and risk:** Circular solutions can be perceived as more expensive or risky, particularly with regard to upfront costs.
- **Lack of metrics and data:** Limited visibility of material flows and lifecycle impacts hinders effective reuse and recycling strategies.

³⁰ *A Guide to Design for Disassembly*, ArchDaily.com, 2020

³¹ *Buildings That Last: Design for Adaptability, Deconstruction, & Reuse*, American Institute of Architects.



Signs of momentum

Despite the barriers, there are positive developments. When these converge, positive feedback loops are reinforced, which can act as tipping points for a systemic shift.

- **Material reuse and Design for Disassembly:** Projects like Velux's commitment to circular design and closed-loop product systems³² are demonstrating how materials can be recovered and repurposed without loss of quality.
- **Green building standards:** Frameworks like BREEAM, LEED and WELL are increasingly integrating circular principles. These not only incentivise reuse and low carbon materials but also elevate market expectations around building performance and longevity.
- **Retrofitting over new build:** There is a shift in focus from demolition to adaptive reuse.
- **Digital tools:** Emerging platforms for building material passports and lifecycle assessments are improving traceability and transparency – essential for scaling reuse.

³² *A commitment to become a circular business*, Velux, accessed May 2025

Consumer goods and retail (fashion and electronics):

This sector is under growing scrutiny due to its substantial environmental footprint and high-volume waste generation. The 'fast fashion' model has normalized overproduction and short product life cycles, contributing to the annual disposal of an estimated 92 million tonnes of textiles globally.³³ Meanwhile, the electronics sector generates over 50 million tonnes of e-waste each year, reaching a record 62 million tonnes in 2022.³⁴ Recovery rates for valuable materials therefore remain critically low.

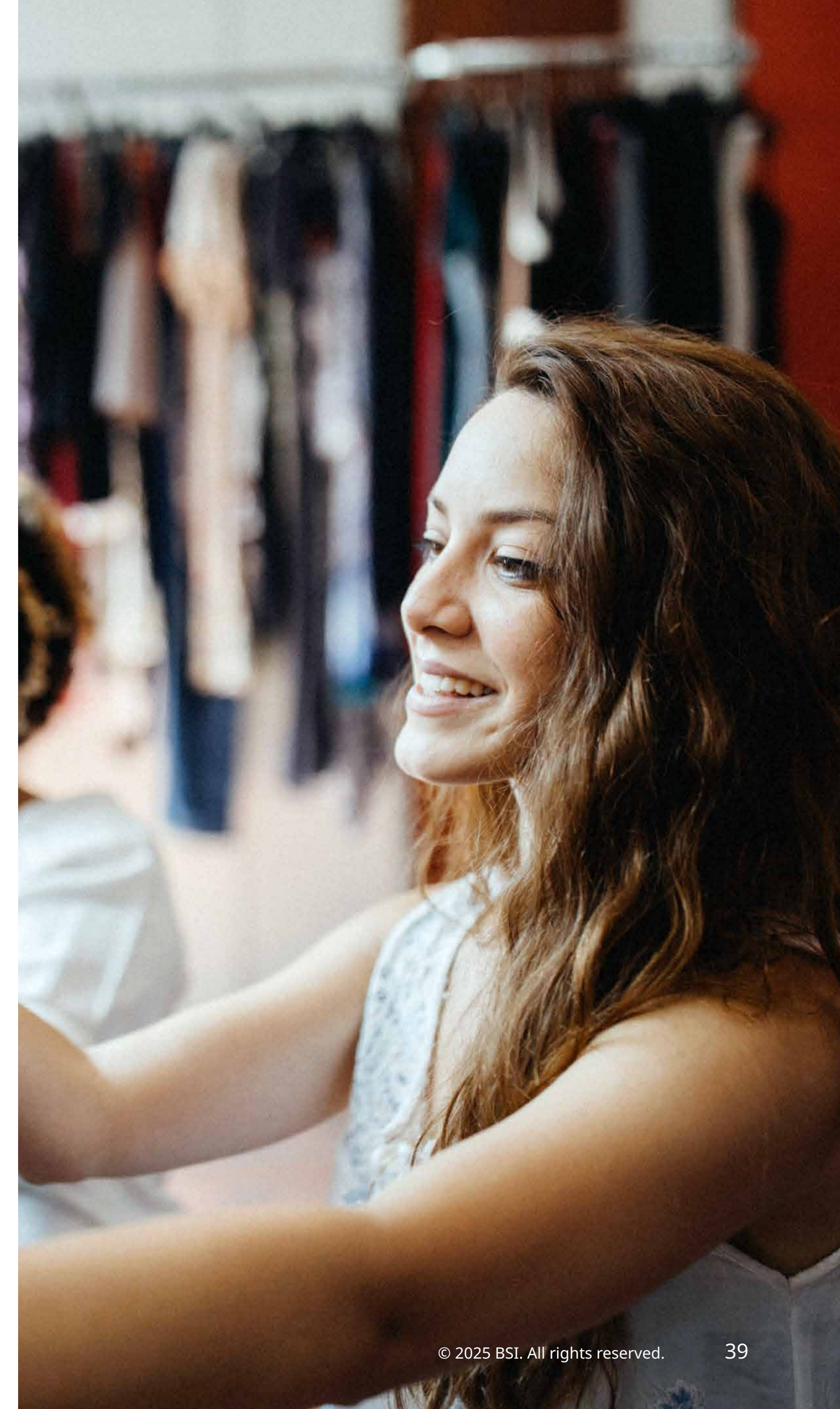
Linear production and consumption remain dominant. Garments are frequently produced using non-renewable resources, then discarded after minimal use. In electronics, frequent upgrades, deliberate design obsolescence, and limited repair options shorten product lifespans and undermine resource efficiency. Both sectors have complex supply chains that limit visibility into sourcing, labour practices, and environmental impact. While sustainability commitments have become more visible, industry-wide transformation remains fragmented and uneven.

³³ *Unsustainable fashion and textiles in focus on International Day of Zero Waste 2025*, United Nations Environment Programme, 2025

³⁴ *Global e-waste monitor 2024: Electronic waste rising five times faster than documented e-waste recycling*, United Nations Institute for Training and Research, 2024

Barriers

- **Product design and material complexity:** Most clothing and electronic devices are not designed with end-of-life considerations. Mixed fibres in textiles hinder recycling, while tightly integrated electronic components make repair difficult.
- **Lack of infrastructure:** Collection, repair and remanufacturing systems are underdeveloped, especially outside high-income markets, discouraging participation in circular schemes.
- **Economics:** Business is still built around fast turnover and volume-based profitability. Investments in durability, recyclability or reverse logistics can appear financially unattractive in the short term.
- **Consumer perceptions:** Circular options, such as second-hand or refurbished goods, are still stigmatized in some markets. Concerns around hygiene, quality, and social status persist.
- **Legal and regulatory gaps:** [EPR](#)⁶⁷ and eco-design regulations are evolving, but remain inconsistent. Intellectual property restrictions also limit third-party repair services.





Signs of momentum

- **Growth of resale and rental markets:** Platforms such as Vestiaire Collective, Vinted and ThredUp, have become mainstream, particularly among younger consumers. The global resale market is projected to more than double by 2027.³⁵ Clothing rental services further show a cultural shift towards access over ownership.
- **Circular design and innovation:** Brands like Stella McCartney and PANGAIA are pioneering the use of bio-based or recycled materials and investing in mono-material design for easier recycling. Initiatives such as the Ellen MacArthur Foundation's Jeans Redesign programme encourage circular design.³⁶
- **Corporate-led circular initiatives:** Major brands like Zara and H&M are launching take-back and refurbishment schemes, in an attempt to close the loop.

- **Repair and modular electronics:** Companies such as Fairphone and Framework are designing modular electronics that prioritise repairability, reinforced by the EU's introduction of mandatory repairability labels for smartphones and laptops.³⁷
- **Refurbished technology market:** The global market for refurbished smartphones is forecast to exceed \$140 billion by 2030,³⁸ driven by platforms like Back Market and Swappie. Tech giants, including Apple and Samsung, now operate certified refurbishment schemes, offering warranties and support.
- **Regulatory progress:** The EU is leading on circular policy, with developments such as the Circular Economy Action Plan,³⁹ the proposed Ecodesign for Sustainable Products Regulation,⁴⁰ and the Digital Product Passport initiative,⁴¹ aimed at enhancing product traceability and circular performance.

³⁵ *US Resale Market to Reach \$70B by 2027*, ThredUp, 2025
³⁶ *The Jeans Redesign*, Ellen MacArthur Foundation, 2023

³⁷ *Smartphones and tablets energy-efficient product list*, European Commission, 2025
³⁸ *Global Refurbished and Used Mobile Phones Market Size Likely to Grow at a CAGR of 11.45% By 2030*, Customer Market Insights, 2023
³⁹ *Circular economy action plan (CEAP)*, The European Commission, 2020
⁴⁰ *Ecodesign for Sustainable Products Regulation*, The European Commission, 2024
⁴¹ *EU's Digital Product Passport: Advancing transparency and sustainability*, The European Union, 2024

Food and packaging

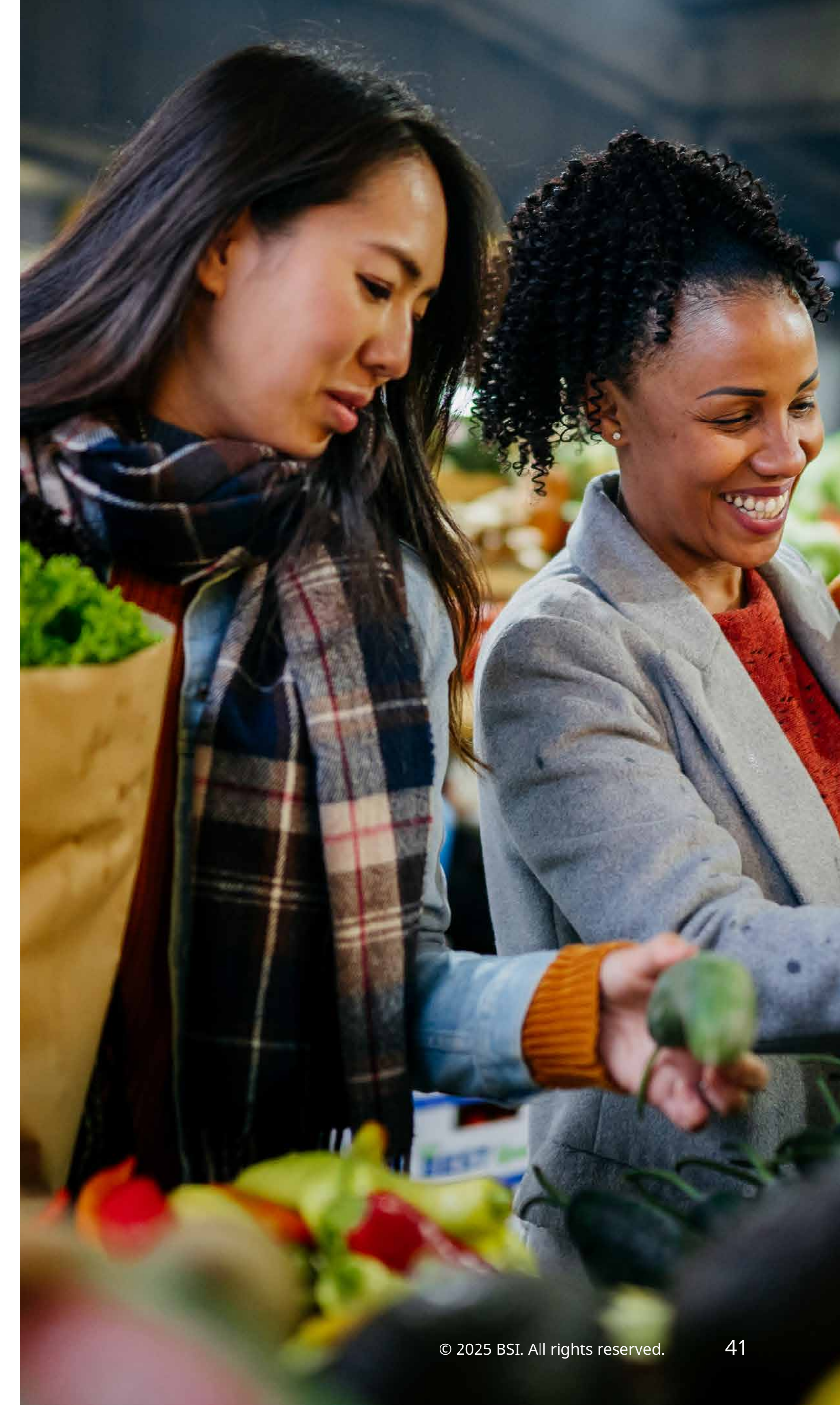
The global food system is a significant contributor to environmental pressures and global emissions, from biodiversity loss to freshwater depletion and soil degradation. Inefficiencies remain entrenched: around one-third of all food produced globally is either lost or wasted.

Packaging waste amplifies this. While essential for preserving food and supporting logistics, most packaging is designed for single use and rarely recovered. Despite growing consumer concern, recycling rates – particularly for flexible plastic and composite materials – remain low and inconsistent across regions.⁴² Virgin materials are often preferred due to cost and performance.

⁴² *Plastic pollution is growing relentlessly as waste management and recycling fall short, OECD, 2022*

Short product lifespans, fragmented supply chains and reliance on just-in-time logistics, along with stringent cosmetic standards and misinterpreted date labelling, make the sector particularly prone to waste, with edible food discarded at various stages. The system also lacks coherence on key enablers such as harmonized labelling, collection infrastructure, or policy incentives for recovery and reuse.

Consumer expectations around convenience and affordability have historically shaped linear models that tend to prioritize volume and availability over resource efficiency, while infrastructure for food recovery or compostable packaging remains patchy. Circular interventions are still the exception, rather than the rule.





Barriers

- **Infrastructure gaps:** Limited infrastructure for food waste separation, anaerobic digestion, or industrial composting restricts the viability of circular food systems, especially in urban areas.
- **Economic misalignment:** The true cost of food waste is often externalized. Circular models can be seen as more expensive or harder to scale.
- **Consumer behaviour:** High reliance on convenience, limited knowledge about food preservation, and low awareness of product end-of-life.
- **Fragmented value chain:** This causes challenges with supply chain collaborations for the development of closed-loop strategies.

Signs of momentum

- **Policy and legislation:** The EU Farm to Fork Strategy⁴³ and EPR frameworks are driving reform, incentivising waste prevention, sustainable packaging, and recovery of surplus food. France, for example, has banned supermarkets from discarding edible food, mandating donation or reuse.⁴⁴
- **Retailer commitments:** Major retailers like Tesco have launched initiatives to halve food waste in their supply chains and stores
- **Circular start-ups and innovations:** Too Good To Go, OLIO, and Karma are creating digital marketplaces to redistribute surplus food to consumers and charities.
- **Packaging innovation:** Brands such as Notpla and Loop are rethinking packaging formats with innovations like seaweed-based films or refillable containers, to move away from single-use plastics.
- **Regenerative food systems:** There is growing interest in systems that can shorten supply chains, close nutrient loops (e.g. compost-to-soil programmes), and reduce dependency on synthetic inputs.⁴⁵

⁴³ *Farm to Fork strategy for a fair, healthy and environmentally-friendly food system*, European Commission.

⁴⁴ *France Becomes First Country to Ban Supermarket Food Waste*, Global Citizen, 2016

⁴⁵ *Regenerative agriculture*, Ellen MacArthur Foundation, 2021

Healthcare

The sector generates large volumes of waste, consumes significant resources, and operates under strict regulatory, hygiene, and safety requirements that often favour disposable materials. It relies heavily on single-use plastics, disposable personal protective equipment, and sterile packaging – much of which ends up in incineration or landfill.

Pressure to reduce environmental impact is increasing, with rising recognition of this in procurement, waste reduction, and supply chain resilience, as well as of ensuring the long-term availability of critical medical materials. Efforts are emerging to implement circular strategies, such as reprocessing medical devices, reusable materials, and improved pharmaceutical waste management. Nevertheless, the transition remains imbalanced, shaped by regulatory variation, perceived risk, and institutional conservatism.

Barriers

- **Strict hygiene and regulatory standards:** The sector prioritizes infection control and patient safety, often favouring disposability. Regulatory requirements vary widely, limiting cross-border harmonization.
- **Perception of risk:** Even where reuse is technically safe and approved, healthcare professionals may be hesitant due to perceived reputational or health risks.
- **Procurement practices:** Procurement is frequently driven by cost and compliance and short-term budgeting, with sustainability criteria still emerging.
- **Waste segregation challenges:** Poor separation of clinical, hazardous and recyclable waste reduces the feasibility of recovery and reuse. Many facilities lack the infrastructure and training required to manage waste streams effectively.
- **Limited manufacturer engagement:** Medical device manufacturers may lack incentives to design for reuse or recyclability. Product liability concerns can also deter innovation.





Signs of momentum

- **Reusable medical products:** There is growing adoption of reusable surgical instruments, gowns, and diagnostic tools. Studies suggest reusable gowns can reduce emissions by 30%⁴⁶.
- **Medical device reprocessing:** Regulated third-party reprocessors are extending the life of single-use devices such as catheters and compression sleeves, which can cut costs by up to 50% while reducing waste volumes.⁴⁷
- **Sustainable procurement frameworks:** The UK's NHS has integrated sustainability into procurement policies, supported by supply chain guidelines that favour low-waste and recyclable products.⁴⁸
- **Circular pharmaceutical initiatives:** Pilot schemes for medicine take-back and recycling are being trialled.⁴⁹ These initiatives aim to limit pharmaceutical pollution and encourage safer disposal practices.
- **Strategic commitments by healthcare networks:** Large healthcare providers and global alliances, such as Health Care Without Harm⁵⁰ and the Global Green and Healthy Hospitals (GGHH)⁵¹ initiative, are promoting knowledge exchange and setting circularity targets across hospitals and national systems.

46 *An environmental analysis of reprocessing of single-use medical devices in the USA.* Resources, Conservation and Recycling, ozzola, E., Overcash, M., & Griffing, E., 2018
47 *Cost savings*, Association of Medical Device Reprocessors, 2025
48 *Delivering a net zero NHS*, NHS England, accessed May 2025

49 *Unused medicine take-back programmes: a systematic review*, Journal of Pharmaceutical Policy and Practice, 2024
50 About us, Health Care Without Harm, accessed May 2025
51 About us, Global Green and Healthy Hospital, accessed May 2025

3.1 Disruptors as the tipping points

Free Pack Net

Free Pack Net⁵² is focused on advancing circular economy practices within the large household appliance sector, particularly through a reusable returnable protective packaging (RPP) rental service that include reverse logistics to factories. After a very long experience in deploying very positive global pilots with zero product damages and efficient reverse logistics, the company started by establishing trust through active involvement in shaping CE regulations in Europe, playing a technical advisory role in supporting the developing of the Packaging and Packaging Waste Regulation by explaining the practical Impacts (zero waste, zero damages, reduction of TCO and reduction of CO2 emissions) and problems relevant to unrealistic and inefficient reusable packaging targets like 10%.

The communication of real-world findings – e.g. showing that disposable packaging in Expanded Polystyrene and Cardboard are not protecting appliances⁵³ and increases environmental impact – helped them to successfully support the European Council to become conscious of the big economic and environmental problems behind and finally adjust targets.

By openly sharing technical insights, collaborating with supply chain partners, and taking a long-term view of sustainability beyond quarterly financial pressures, the company positioned itself as a reliable actor in advancing circularity and, more in general, global environmental goals.



The Royal Mint

The UK's Royal Mint has moved away from solely making coins and has ventured into the recovery of precious metals - for example, gold extraction from discarded circuit boards, and the use of silver from old X-ray films.

Recovered gold and silver is currently being used across The Royal Mint products, including beautiful, modern jewellery. The pieces not only reflect the company's commitment to sustainability but have an emotional appeal - with people buying into a story of renewal, responsibility, and heritage.

What makes this work is trust. The Mint is a government-owned, centuries-old institution, so consumers already perceive it as dependable. Trust also comes from transparency about where the materials come from, how they are processed, and how the system supports a circular economy.

Limetrack

Limetrack's patented smart food-waste wheelie bins offer an effortless, cost-effective solution for accurate and reliable data capture on waste generation and disposal, even in shared or high-traffic environments.

By integrating IoT communication, advanced data analytics, intuitive user interfaces, and mobile applications, Limetrack allows businesses of all sizes to:

- Demonstrate regulatory compliance
- Reduce food-waste to reduce costs
- Help avoid tonnes of CO₂e emissions

Additionally, waste management companies benefit from improved route optimisation and real-time alerts on hazardous or overweight bins, which enhance both safety and efficiency.

Food waste is just the beginning. Over the next 18 months, Limetrack will expand its technology across multiple waste streams, supporting a broader transition to smarter, more sustainable waste management.



Chapter four

Overcoming the barriers to building trust in circularity



A number of significant barriers to trust hinder the adoption of circular economy practices:

- Consumer scepticism, primarily driven by concerns about the quality (56%), safety (51%), and reliability (49%) of products that are not brand new, along with worries about hygiene (48%).
- Practical hurdles, like convenience or increased cost. This (or the expectation of it) was the top factor preventing people from adopting circular behaviours or purchasing circular products (19%).
- Information gaps, fragmented data, and fear of greenwashing, with 31.6% citing a lack of trust in sustainability claims as a deterrent.
- Ingrained habits and attitudes, together with a lack of circularity knowledge and education, remain at significant levels.
- On the business side, the complexity of transitioning to circular models and the need for intricate supply chain collaboration add further impediments.

Despite these barriers:

- Consumer motivation towards circularity is robust, primarily driven by the desire to create positive environmental impacts (ranked 1st by 26% of respondents) and achieve cost savings (ranked 1st by 27% of respondents).
- Financial incentives show strong potential; nearly one in two (48%) indicated that receiving money back for recycling would encourage participation.
- While consumer awareness levels vary significantly between nations, a clear majority (86%) believe circularity should be a moderate or high priority for businesses and governments.

Analysis across diverse sectors reveals common themes, such as the need for adequate infrastructure, supportive policy alignment, and ways to overcome negative user perceptions. However, each sector faces unique challenges, such as the management of hygiene concerns in healthcare or addressing aesthetic preferences in fashion.

Despite scepticism, the research shows that consumers value mechanisms that build trust – recognized labels (valued by 59%) and independently verified certification (valued by 49%) are seen as effective ways to bolster confidence in circular products and claims.

Key takeaways



Key takeaways

Encouragingly, three quarters globally believe their purchasing behaviours can drive circular adoption, and high numbers identify as early adopters of circular choices. Circularity and the need to preserve resources rather than waste them and pollute the planet is not a divisive or distrusted topic; the challenge is in facilitating the transition rather than making the case for it in the first place.

Importantly, our research shows that cost and quality are the critical dealbreakers when it comes to the CE – meaning that building trust in these areas is vital. While people understand the concept of circularity and recognize its importance, they won't make what might be perceived as trade-offs or sacrifices for the sake of the planet – particularly when it requires upfront expenditure or entering new or previously unknown markets. The following takeaways explore how to enable the transition away from a linear economy to one based on reuse, repair and recycling.

1. Disrupt to drive change

The linear economy is embedded in all walks of life. Truly going circular will require significant disruption and a fundamental rethinking of economic models. This means transforming how we construct the economy, so that the upfront costs of circularity are not prohibitive for consumers or for businesses. Existing markets, for example clothing rental, second hand cars or misshapen vegetables, offer an indication of how this new economy can be built.



2. Focus on quality above all

People are driven to engage in circularity by the desire to see positive environmental and sustainability outcomes, but they won't part with their money unless they have faith in the quality and safety of the products and services in question. To get people comfortable with a whole new way of thinking about consumerism, talking about sustainability and the environmental benefits alone – while important – will not be enough to drive behaviour change. For circular products and services to gain widespread acceptance, they must meet or exceed customer expectations regarding their performance, durability, reliability and overall quality.

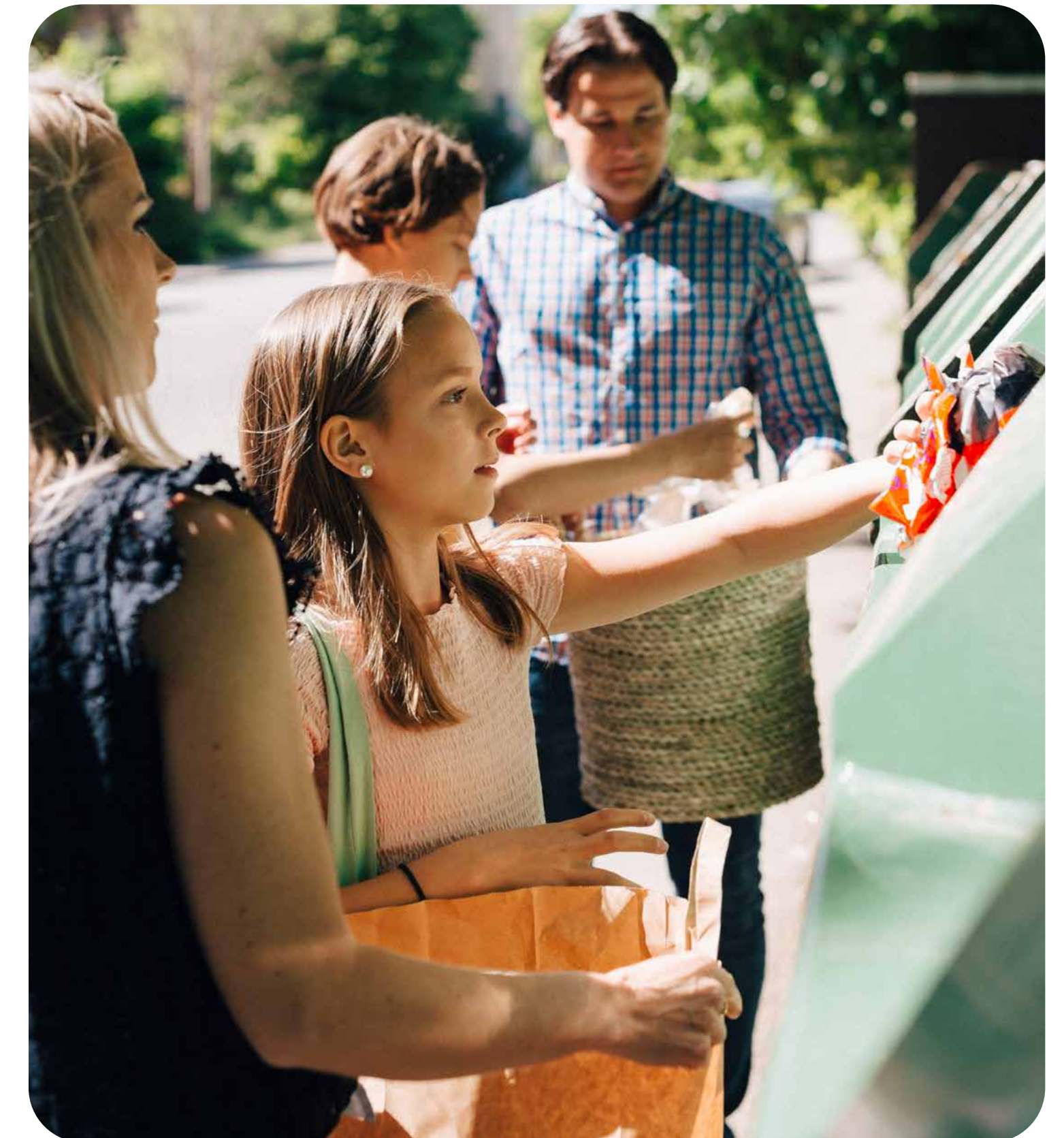


3. Validate to reassure

Organizations have the opportunity to drive both sustainability and commercial success by building trust in the circular options they are introducing to the market. This means overcoming the conventional perception that 'used', 'refurbished' or 'recycled' equates to 'inferior' quality, safety, usability or longevity. Assurance of performance can directly confront this scepticism and provide a credible demonstration that circularity does not necessitate a compromise. A visible, recognised and trusted certification mark can help here by confirming quality and performance based on objective assessment against established benchmarks.

4. Be transparent

Opacity creates fertile ground for greenwashing, which can diminish trust. If consumers cannot be confident that a circular option has genuine environmental benefits, they are unlikely to consider it in the first place. Again, assurance has a role to play here – in ensuring people feel claims are valid. 59% of consumers believe a recognized label that supports sustainability and environmental claim would build their trust in circular products' credentials.





5. Money matters

Financial costs and economic incentives were identified as the key drivers for the adoption of circular behaviours. Increased cost, or the expectation of this, was ranked highest as a barrier, whereas 48% of respondents stated that getting money back for recycling would encourage adoption. Financial elements can both encourage and discourage consumer circular behaviours – but policymakers should look to deploy tactics carefully. Measures such as implementing fines, for example, appear far less effective at encouraging circular behaviour.

6. Work together

Transforming the economy is necessarily a global project. Individual companies or even countries can build a certain degree of trust, but scaling the circular economy requires industry-wide collaboration, both on platforms and technologies, and on creating a common language and agreed rules of engagement. In particular, harmonization through standardization can build trust by creating clarity, consistency, and comparability.

Methodology



This research has been developed in partnership with Cambridge Institute for Sustainability Leadership (CISL), an impact-led institute within the University of Cambridge that activates leadership globally to transform economies for people, nature and climate.

CISL drives engagement on the circular economy by tapping into its diverse corporate network for real-world case studies and insights. Its work encompasses applied research to inform policy recommendations, accelerating startups to demonstrate innovation's role, and advising corporates and financial sectors to shape markets.

Research components included:

- Literature review to understand how tipping points have occurred historically in circularity through historical and more recent cases, and to map out the circular economy journey's movement/milestones.
- One-to-one in-depth interviews conducted by CISL with 30 key stakeholders, ranging from large corporates across different sectors, startups, investors, and industrial experts etc. Through interviews, we explored the critical role of trust in accelerating the circular economy transition, delved into why trust falters, therefore identified pillars for building trust.
- A multi-market (Australia, China, Germany, India, Japan, Netherlands, UK and USA) multi-sector (Built Environment/ property, Healthcare management, Pharmaceuticals/ life sciences, Food, Retail, Energy & Utilities, Technology, Financial Services, Transportation & Logistics, Education, Manufacturing & Industrial Goods and Other) opinion poll of 8,225 people aged 18 and over. Fieldwork was conducted by Burson via Focaldata between 8 and 10 April 2025.

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Massimo De Santis, Free Pack Net
Rana Hajirasouli, The Surpluss
Ramon Arratia, Ball
Andy King, Limetrack
Alejandro Espinosa, Computer Aid
Irina Ankudinova, RECOUP
Chris Allen, Decathlon
Sean Millard, The Royal Mint





Your circularity journey with BSI

Our research suggests businesses need to cultivate new skills, adopt innovative tools, and foster cross-functional collaboration to embed circular thinking deep within their product development and operational strategies. BSI has a range of services to support your organization on this journey.

Standards – Creating a foundation for trust in circularity

Scaling the circular economy requires a common language and agreed rules of engagement. BSI standards, like the world's first circular economy standard (BS 8001) can provide clarity, consistency and comparability, helping to build trust and ensure quality in circular practices.



Popular standards related to sustainability, circularity and quality:

- Framework for implementation the principles of the circular economy in organizations (BS 8001:2017)
- Executive briefing (Free to download)
- Circular economy. Vocabulary, principles and guidance for implementation (BS ISO 59004:2024)
- Circular economy. Measuring and assessing circularity performance (BS ISO 59020:2024)
- Circular economy. Guidance on the transition of business models and value networks (BS ISO 59010:2024)
- Circular economy in the construction sector – Framework, principles, and definitions. (BS EN 18177)
- Circular economy. Product circularity data sheet (BS ISO 59040:2025)
- Environmental management and circular economy. Sustainability and traceability of the recovery of secondary materials. Principles, requirements and guidance. (BS ISO 59014: 2024)
- Design for manufacture, assembly, disassembly and end-of-life processing (MADE) – Remanufacture of luminaires. Code of Practice (BS 8887-221:2024)
- Design for manufacture, assembly, disassembly and end-of-life processing (MADE) – The process of remanufacture. Specification (BS 8887-220:2010)
- Design for manufacture, assembly, disassembly and end-of-life processing (MADE) - Specification for reworking and remarketing of computing hardware (BS 8887-211:2012)
- Waste resource management – Performance Reporting – Specification (PAS 402:2025) (Free to download)
- Waste collection and transportation management. Vocabulary. (BS EN ISO 24161:2024)

- Net zero transition plans for small and medium enterprises. Code of practice (BSI Flex 3030 v2.0:2024-12) (Free to download)
- Greenhouse gases – Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals (BS EN ISO 14064-1:2019)
- Climate change management – Transition to net zero – Part 1: Carbon neutrality (BS ISO 14068-1)
- Event sustainability management systems. Requirements with guidance for use (BS ISO 20121: 2024)
- Carbon Management in Infrastructure and Built Environment (PAS 2080) (Free to download)
- Environmentally Sustainable AI (CEN CLC TR 18145)
- Quality Management Systems (BS ISO 9001)

BSI Knowledge standards subscription

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