The Tipping Point: Building trust in the circular economy

Built environment sector

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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, fuelled by the assumption of abundant resources and limitless disposal capacity, is increasingly revealing its inherent flaws. According to the UNEP, global material consumption has more than tripled since 1970, and continues to rise.

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 trends continue.

According to estimates in the 2024 Circularity Gap Report, the global economy is only 8.6% circular; a slight decrease from 9.1% in 2018. The unsustainability of this linear path is no longer a distant concern – it is a present reality demanding a fundamental shift in thinking.

86% globally think circularity should be a priority for business and governments in addressing environmental challenges

The circular economy (CE) offers a compelling and necessary alternative. It represents a systemic shift towards an economy that is intentionally designed to be restorative and regenerative. While the economic and environmental logic of the CE is compelling, its successful widespread adoption hinges on a less tangible but equally critical factor: trust.

A transition to circular models requires significant shifts – not only consumer behavioural change, but also expectations from all participants in the economy. Business must embrace new operational models, invest in reverse logistics, redesign products, and often collaborate more deeply with partners across the value chain. Consumers, in turn, are asked to engage differently – accepting refurbished goods, participating actively in take-back or return schemes, opting for product-as-a-service models over ownership, and potentially altering long-standing consumption habits.

Trust in the CE is the result of deliberate, consistent actions and verified commitments. Building trust requires acknowledging and addressing several barriers that currently impede progress. However, these challenges also present opportunities for businesses willing to lead the way. By building trust in the CE for businesses and consumers, we can accelerate progress towards a tipping point whereby a circular approach becomes the go-to.

56% of people said a lack of trust in quality might prevent them from buying or using circular products

02 - Circularity in the built environment

The built environment represents one of the largest opportunities and challenges for circularity. It is responsible for nearly 40% of global greenhouse gas emissions and over half of global material consumption. Construction and demolition waste contributes up to 40% of global waste streams, with wide disparities in recovery and reuse practices. The sector remains dominated by linear ‘take-make-waste’ models, driven by high material intensity, especially in rapidly urbanising regions. Despite improvements in operational energy efficiency, embodied carbon in materials and construction processes remains largely unaddressed.

Examples of circular interventions in the built environment span different levels of the supply network. At a design-stage, concepts like Design for Disassembly and Design for Adaptability are being integrated by several companies in the built environment. Additionally, manufacturing techniques such as prefabrication and modular construction are gaining traction, reducing waste and improving material efficiency. Through procurement, use of recycled and regenerative materials is increasing, such as recycled concrete, recycled steel, timber from sustainably managed forests, and bio-based materials. These materials often face challenges in terms of cost, availability, and performance perceptions.

Barriers

Common barriers to circularity in the built environment sector

Fragmented value chain

The built environment value chain is complex and fragmented, hindering collaboration for circularity in terms of material recovery and reuse.

Regulatory barriers & inertia

Building codes and regulations often prioritize traditional materials and methods, creating barriers for innovative circular solutions.

Cost and perceived risk

Circular solutions can sometimes be seen as more expensive or risky compared to conventional approaches, particularly regarding upfront costs.

Lack of metrics and data

Limited visibility of material flows and lifecycle impacts hinders effective reuse and recycling strategies.

Signs of momentum

Despite the barriers, several developments suggest growing progress towards a tipping point into circularity:

Material reuse and design for disassembly

Several projects, such as Velux's commitment to circular design and closed-loop product systems, 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 standards 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, as seen in the work of many real estate developers, which is embedding circular practices in building renovations.

Digital tools

Emerging platforms for building material passports and lifecycle assessments are improving traceability and transparency – essential for scaling reuse.

03 - Global Consumer Survey Findings

BSI's global survey* found that under half of people (43%) are familiar with the concepts of circularity and the circular economy, rising to 54% for those who work within the built environment sector. This suggests that there is an opportunity for the sector to upskill and educate workforces on the circular economy and circular opportunities.

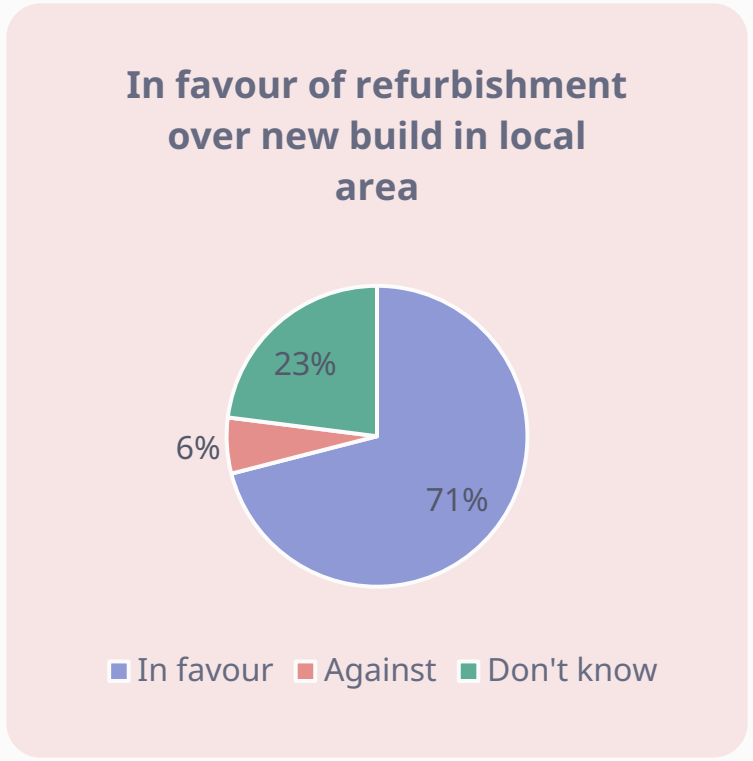
After being provided with a description of the circular economy and examples of circularity within the built environment, public attitudes towards circularity are positive, with 86% saying circularity should be a priority for businesses and governments in addressing environmental challenges. In addition, 67% ranked creating positive impacts for the environment as a top three driver for adopting circular behaviour.

** Burson/Focal Data survey, commissioned by BSI, 8,225 adults in eight countries between 7-11 April 2025, in the UK, US, Germany, The Netherlands, China, Japan, India and Australia*

Public support for refurbishment over new build

When asked about circularity in the built environment sector specifically, global support for refurbishment of existing assets over new build assets was high.

Two thirds of people (71%) stated they would like to see more refurbishment within their local area over new built assets, highest in China and India (82%).



Evidence is critical for trust

In terms of circularity of appliances and fittings, only 24% of people would consider buying these items refurbished, and only 22% would consider buying them second-hand.

However, 58% cited evidence of quality and reliability as the most important factor when considering buying these items, and similarly 60% ranked evidence of quality as a top three driver that would encourage them to make more sustainable choices about the materials and fittings used within their home.

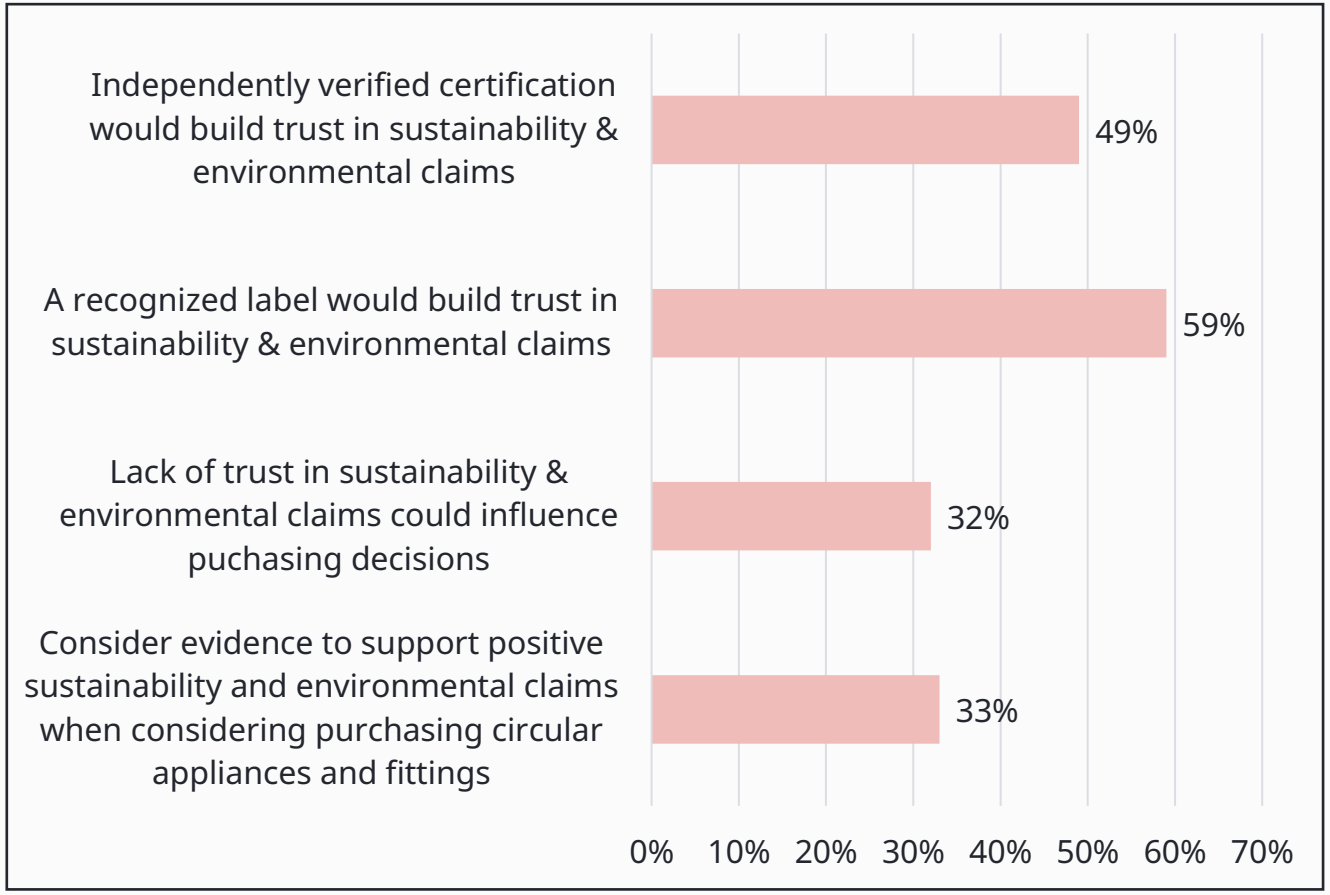
This suggests that people's purchasing decisions could be positively influenced towards circular products where evidence of quality and reliability is provided.

60% said evidence of quality would encourage them to make more sustainable choices about the materials and fittings used in their home

Trust in circular sustainability and environmental claims

A third (33%) also consider evidence to support positive sustainability and environmental claims when considering purchasing circular appliances and fittings. But validating these claims is essential as 32% also stated a lack of trust in these claims could negatively influence their purchasing decision.

Promisingly, 59% said trust in sustainability and environmental claims could be built with a recognized label such as a BSI Kitemark™, and 49% said the same for independently verified certification.



04 - Case studies and tipping point analysis

Through our research with CISL, we conducted in-depth interviews numerous built environment organizations to understand their progress on circularity. We evaluate the organizations approaches based on "Tipping Point Elements" at both the product/service level and the system level

For each element, we analyse the organizations initiatives and explain how trust is established or influenced within that specific context.

Tipping point elements at product and service level

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. Drawing upon tipping point theory and circular business models, we set out below the key conditions that need to be in place, both at the circular product level and the service level in the built environment, for tipping points in circularity to occur.

Circular Value Credibility

Circular offerings must first demonstrate they are financially and functionally competitive with traditional alternatives. This means not only offering lower cost of ownership or improved resource efficiency, but meeting or exceeding expectations of quality and reliability.

HBR research 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.

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 product identity and desirability at the design stage, not perceived as an afterthought.

Accessibility and processing

The ease with which customers can engage with a circular product or service is a decisive factor in its ability to scale.

Infrastructure must support collection, repair, redistribution or renewal processes in a way that integrates into the user's experience. This includes physical logistics, digital platforms, after-sales services, and clear customer communication.

Tipping point elements at system level

Without sustained momentum, the advancements at product-service level 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 drivers from primarily sustaining the current linear 'take-make-waste' model to actively disrupting it and reinforcing circular practices.

Policy and regulation

Policy and regulation need to shift from favouring linear models (e.g. subsidising virgin resource extraction) to the active promotion of circularity.

This involves creating incentives (such as taxes on virgin materials and extended producer responsibility schemes), setting standards, supporting circular infrastructure development, using public procurement to create demand, and removing regulatory barriers for circular businesses.

Market maturity

Achieving system-level circularity critically depends on a mature market, which drives down costs through economies of scale and establishes robust infrastructure for reverse logistics like collection and recycling.

It also fosters widespread consumer demand and creates stable supply chains for secondary materials, making circular options economically viable and competitive

User preference

A shift in consumer mindset and behaviour is crucial. This includes embracing service base models over ownership, participating in take-back schemes, demanding transparency about product lifecycles, and potentially exerting pressure through activism and voting.

Company A –

Europe-based building manufacturer making the circular economy a central part of its sustainability strategy

Actions include: increasing use of recycled aluminium and steel, piloting a glass take-back scheme, and committing to design all new products for recyclability by 2027. The company is exploring refurbishment models for windows and aims to scale its take-back efforts from 10,000 to 250,000+ units, annually. While the shift is voluntary and not driven by regulation, it reflects a strong internal commitment to climate and biodiversity goals.

Trust in the supply chain is built through collaboration and its willingness to pay for greener materials, though data gaps remain a challenge. Consumers are often cautious about refurbished products, though uptake is higher among institutional clients. Public procurement, landfill fees, and forward-thinking policies in countries like France and Denmark are seen as key enablers.

Internally, Company A is embedding circular thinking into innovation processes and metrics, including zero landfill targets and lifecycle assessments for new business models.

Company B –

Asia-based property developer embedding circularity into its long-term strategy, aiming to transition from to a circular economy by 2023

Drawing on frameworks from the Ellen MacArthur Foundation and Metabolic, Company B sees regulation, rather than voluntary schemes, as the true driver for scalable impact. Practical initiatives across its office renovations include gypsum board recycling, and the adoption of data-driven standards like RESET. The firm is also piloting embodied carbon benchmarking and is collaborating with engineering experts to integrate circularity principles into new developments.

Despite challenges with data collection and entrenched leasing norms, it is pushing for sector-wide change through internal standards, collaboration platforms, and public reporting. Key barriers include fit-out waste, driven by inflexible tenancy agreements and a lack of standardized methods for reuse.

However, the company is positioning itself as a frontrunner by aligning financial models, procurement practices, and policy advocacy to enable circular construction and interior design across China's real estate market.

Product-service level analysis

Tipping point element	Company A	Company B	Trust
Circular value credibility	Willing to pay a green premium for low-carbon, recycled materials. Refurbished products show early signs of economic viability, approaching profit parity.	Advocates policy-driven incentives to make circularity financially attractive. Benchmarking embodied carbon aims to clarify value.	Trust in circular products is earned through clear, measurable long-term circular sustainability outcomes. Verified data and transparency are crucial to demonstrate the value and quality of circular solutions.
Customer appeal	Refurbished windows perceived as inferior by private customers; aesthetic concerns hinder uptake. Institutional buyers are more open.	High-end tenants resist reused materials due to luxury aesthetics. Internal competition (e.g. among LVMH brands) seen as a lever.	Emotional trust comes from alignment of values, perceived authenticity, and long-term commitment.
Accessibility and processing	Take-back pilots active; ambition to scale from 10K to 250K+ units. Closed-loop schemes in development with suppliers.	Early pilots for gypsum board reuse and circular fit outs. Barriers include demolition norms and limited reusability in short leases.	Need consistent and transparent supplier data to build consumer trust. Standards need to be aligned across suppliers

System level analysis

Tipping point Element	Company A	Company B	Trust
Policy and regulation	Benefiting from progressive policies in France, Denmark, and the Netherlands (e.g. landfill fees, zero-emission labels for refurbished goods).	Strong belief that regulation, not voluntary measures, is essential. China's new national recycling body and procurement reform are seen as key.	Regulation helps institutionalize trust, especially where internal capabilities are still developing. Public procurement can be used to build trust.
Market maturity	European construction sector more mature regarding recycling infrastructure and data for carbon. Suppliers still uneven in circular readiness.	China's construction slowdown may boost retrofits and reuse. Real estate leasing practices lag circular ambitions.	Trust increases with market evidence, performance validation, and sector-wide standards consistency.
User preference	Private sector end users still wary of refurbished products. Awareness and aesthetic expectations are barriers.	Tenant preferences and leasing defaults inhibit reuse. Efforts underway to gamify embodied carbon and shift internal expectations.	Trust requires sensitivity to end-user needs and local relevance. Top-down decisions alone aren't sufficient.

Explore the full research

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05 – Appendix
Recommendations, tools and solutions

Utilizing BIM for circularity

Building Information Modelling (BIM) is a transformative digital tool that has rapidly become integral in advancing sustainability within the built environment, particularly by supporting circularity and reducing waste.

BIM supports circularity and waste management by enabling a seamless flow of information across all project phases—from design and construction to maintenance and end-of-life deconstruction. This comprehensive integration not only minimizes waste through efficient planning and procurement but also ensures that materials can be repurposed or recycled, thus extending their lifecycle in a truly circular manner.

Learn more about achieving sustainability goals with BIM
Explore a range of BIM training courses

Designing for material efficiency in building projects (BS 8895)

Part 1 Designing for material efficiency in building projects - Code of practice for strategic definition and preparation and brief
Part 2 Designing for material efficiency in building projects - Code of Practice for concept and developed design
Part 3 - Designing for material efficiency in building projects - Code of practice for technical design

Recommendations, tools and solutions

Carbon Management in Infrastructure (PAS 2080)

As the leading standard for carbon management in buildings and infrastructure, PAS 2080 applies to new projects, retrofit works, and the management of existing assets. This ensures that the carbon footprint is considered across the entire lifecycle—from design and construction to operation and decommissioning. This standard is vital for all participants in the built environment value chain, including architects, designers, asset owners, constructors, and material suppliers.

PAS 2080 emphasizes the importance of embedding circular economy practices within infrastructure and buildings to support whole-life carbon management. It encourages early consideration of carbon impacts and promotes systems thinking, recognizing the interdependencies between assets and networks. Additionally, PAS 2080 aligns with sustainability goals by advocating for resource efficiency, reuse, and reducing waste, which are key aspects of circularity.

Learn more about PAS 2080 Certification
Explore PAS 2080 training

Circular economy in the construction sector – Framework, principles and definitions (BS EN 18177) CEN/TC 350 draft

A draft European standard being developed by **CEN/TC 350**, the technical committee focused on sustainability in construction, that lays the groundwork for integrating circular economy principles into the built environment.

Learn more

Recommendations, tools and solutions

Sustainability in buildings and civil engineering works. Design for disassembly and adaptability. Principles, requirements and guidance (ISO 20887)

ISO 20887:2020 is an international standard on sustainability which explains the design for disassembly and adaptability of buildings and civil engineering works. It provides an overview of design for disassembly and adaptability (DfD/A) principles and potential strategies for integrating these principles into the design process.

Introducing aspects of design for disassembly can be used to reduce and/or prevent waste and increase resource efficiency by encouraging alternative considerations at the project definition phase. The application of adaptability concepts and principles can minimize the need for unnecessary removal and new construction, by repurposing or modifying constructed assets to renew their service life, and result in constructed assets that are able to accommodate a larger variety of uses.

Learn more about ISO 20887:2020

Framework for implementing the principles of the circular economy in organizations (BS 8001)

BS 8001 was the world's first standard to offer a practical framework for organizations to implement the principles of the circular economy. Relevant to organizations from all sectors, the standard provides guidance and recommendations that will help an organization turn the circular economy concept and theory into practical action.

This framework can assist built environment practitioners in planning resource flows, assessing risks, innovating business models, fostering stakeholder collaboration, and thinking holistically over the entire lifecycle.

Learn more about BS 8001
Explore BS 8001 training