

Circular consumption

Enablers and barriers to demand-side circularity





Key messages

Higher-impact practices drive circularity

Dematerialisation strategies – reducing car ownership and living space – offer the greatest circularity gains, yet practical, economic and social barriers persist.

Car sharing remains a niche mobility option

Cars provide convenience, autonomy and status that alternatives struggle to match. 73% of respondents with access rarely or never use car sharing, limiting its potential to replace ownership.

Rightsizing is an untapped opportunity

More than a quarter (28%) of respondents are willing to move to a smaller home if a suitable one is available, while 27% already share residential space, mainly entrances and hallways.

Digitalisation can support circular consumption

Two-thirds (66%) of respondents say digital platforms improved access to local services. However, repair, borrowing and lending receive less digital support, and easier online purchasing may increase consumption.

Policy recommendations

Make circular choices the easiest choices

- **Shift responsibility for circularity upstream** by embedding it in product design and production, rather than relying on consumers to make costly circular choices. **Strengthen policy coherence and improve implementation** of the Ecodesign for Sustainable Products Regulation, Digital Product Passports and Extended Producer Responsibility across Member States; making durable, repairable and reusable products the default.

Reduce dependence on private car ownership

- Invest in public transport, walking and cycling while embedding car sharing in multimodal mobility systems. Support **compact neighbourhoods, mixed-use buildings, 15-minute cities, and reform incentives that favour car ownership** (tax breaks, scrappage schemes and free or low-cost parking). Incentives, awareness campaigns and better integration with public transport, can increase car sharing and reduce reliance on private cars – complementing rather than replacing public transport and active mobility.

Govern digitalisation for circular outcomes

- Make digital platforms active enablers of circular consumption, limiting ICT's environmental impacts and avoiding additional consumption. **Develop standards for simple, trustworthy and inclusive digital platforms** that prioritise repair, reuse, sharing and second-hand markets through information on repair, durability and provenance, search and recommendation systems, and targeted financial incentives. Further extend the principles of the Right to Repair framework to digital marketplaces and support social research to better understand how digitalisation can enable and maintain circular practices.

Make rightsizing a realistic housing option

- Reduce financial barriers to rightsizing across life-stages through relocation grants, **rent-retention schemes, tax incentives and shared housing matching services**. Housing and renovation policies should support flexible, mixed-use homes and shared spaces that accommodate diverse household types, making appropriate floor space per person practical and attractive.





Policy context

The European Green Deal and the proposed Circular Economy Act provide the overarching policy framework for reducing material use, improving resource efficiency and supporting circularity across the EU. Within this broader context, several policy initiatives address the enablers and barriers affecting demand-side circularity. The **Ecodesign for Sustainable Products Regulation** and the **Right to Repair Directive** seek to extend product lifetimes by improving product durability, reparability and consumer access to information. **Digital Product Passports** increase transparency around product provenance, lifespan and repair options. Similarly, the **Waste Framework Directive** promotes waste prevention, reuse and more circular resource management, while **Extended Producer Responsibility** schemes strengthen incentives for durable, repairable and recyclable product design. **Green Public Procurement** leverages public purchasing power to stimulate demand for durable, repairable and resource-efficient products and services, helping suppliers invest in and scale circular solutions.

Why this matters

Many circular economy policies focus on product design, production and end-of-life management. **Greater attention is now needed on the demand side to create the conditions that enable more circular consumption.** Despite the circularity benefits of, for instance, reducing car ownership, EU motorisation rates rose from 518 passenger cars per 1,000 inhabitants in 2016 to 578 in 2024 [1]. Creating those conditions requires coordination beyond individual consumers. Effective policy must identify and address the barriers that limit circular practices across mobility, housing and digitalisation, while strengthening the enabling conditions that make them practical, affordable and attractive.

What the evidence shows

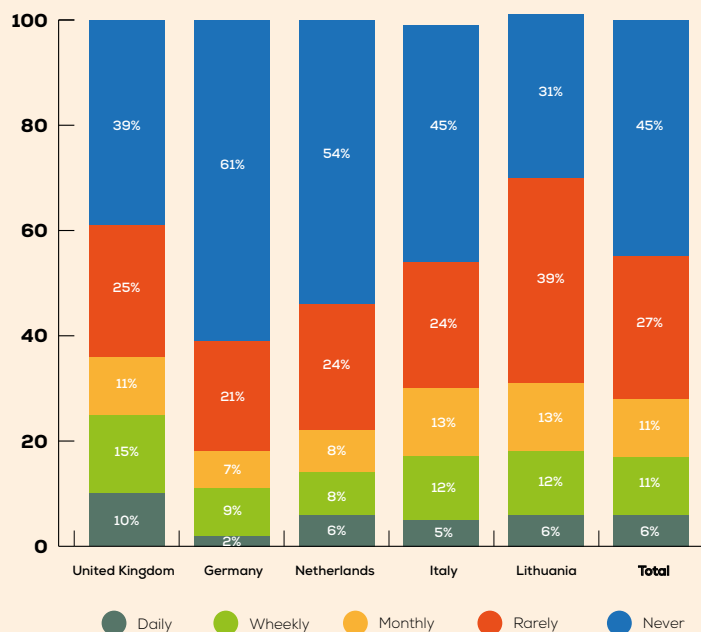
Access to car sharing has limited impact on car ownership [3,4]

Greater access to car-sharing services has yet to translate into widespread use. Of the 2,558 respondents with access to car-sharing platforms, almost three-quarters (73%) use it rarely (27%) or never (45%). Regular users (17%) are typically male (57%), urban residents (73%) and have mid-to-high levels of education (79%). This indicates that uptake remains concentrated among specific groups. Similar use patterns occur among households with and without a car, showing that access alone is insufficient to shift mobility behaviour.

Country differences are modest. Germany reports the lowest uptake, with 82% rarely or never using available car-sharing services, while the UK has the highest regular use, at 24% daily or weekly. >>



How often do you use car sharing?



Reducing private car ownership requires more than expanding access to car sharing. Interview insights suggest that car sharing works best as part of a wider multimodal mobility system. Interviewees without a car, particularly in dense urban areas, often view ownership as costly or unnecessary, favouring shared mobility and multimodal travel.

Car-sharing services facilitate occasional or leisure trips, highlighting their potential to reduce private car ownership. Expanding car sharing's contribution to circular mobility will depend on better mobility services, greater trust in sharing systems and broader shifts in social norms related to car private ownership. [2]

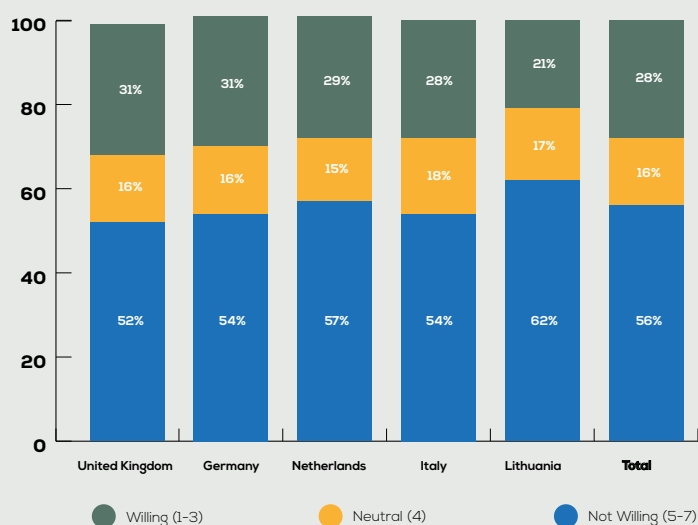
Financial and practical barriers limit rightsizing [3,4]

Making better use of existing housing stock will require addressing the barriers to rightsizing. Over a quarter (28%) of respondents state they would consider moving to a smaller home if a suitable property were available, while 56% were unwilling to do so.

Relocation costs, the inconvenience of moving and reluctance to reduce living space were the main barriers. Willingness to downsize was broadly similar across countries. Lithuania reported the lowest willingness, likely reflecting that households already have the lowest living space per person.

Housing market conditions often prevent willingness from translating into action. In urban areas, many interviewees say downsizing would only be attractive if it offered a clear financial benefit, reflecting growing gaps between long-term rental agreements and current market rates. >>

Willingness to live in a smaller home if readily available



The lack of suitable properties in highly pressurised housing markets also limits (local) relocation. Social norms, including expectations around shared spaces, also constrain more efficient use of housing. Past experience matters: 73% of respondents do not share any residential spaces, while those with prior experience of shared spaces are more willing to share in the future.

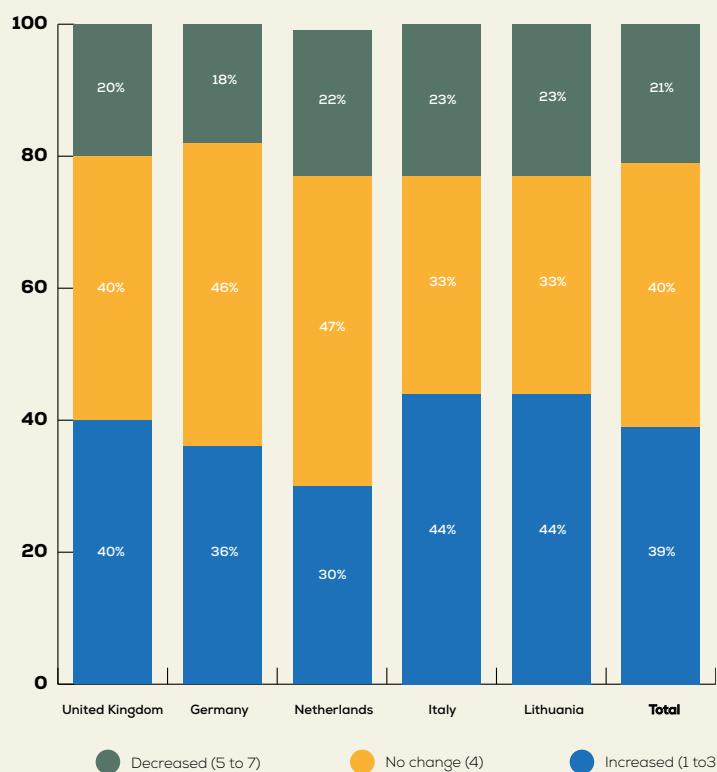
Digitalisation is reshaping consumption [3,4]

Digitalisation can support circular consumption by improving access to services, information and second-hand markets. It can also increase efficiency and enable new business models that reduce the need for private ownership. Respondents report improved access to local services (65%), information (72%) and online banking and shopping (71%). Digital platforms also facilitate the recirculation of goods, with 74% of respondents engaged in second-hand trade reporting that offering goods online made recirculation easier.

The same digital technologies can also make purchasing goods and services faster, easier and cheaper, potentially increasing overall consumption while reducing the appeal of repair and other circular practices. Respondents were more likely to report increases than decreases in their consumption of media (50% vs. 18%) and household goods and services (35% vs. 21%). Many also associate digitalisation with higher energy use (39% reporting increased energy consumption compared with 21% reporting a decrease). Perceived increases were highest in Italy (44%) and Lithuania (44%), and lowest in the Netherlands (30%).

Without targeted measures, gains in access and efficiency may be offset by higher levels of consumption, limiting digitalisation's contribution to the circular economy and wider sustainability goals.

How do you feel digitalisation has affected the amount of energy you use at home?





Research Methodology

The empirical evidence used in this study combines insights from 80 qualitative interviews and survey data on circular consumption practices. The Circular Consumption Interviews [4] were conducted between October 2023 and March 2024 using a mix of face-to-face and online interviewing techniques. Interviewees included both people who were already engaged in circular consumption practices as well as those who were not. Using a retrospective biographical approach, the interviews focused on past, current and future engagement in circular consumption practices, including life events and socio-economic factors that shaped their adoption. Interviews were conducted in the local language by CircEULAR research partners in the United Kingdom, Germany, the Netherlands and Italy.

The Circular Consumption Survey [3] was conducted online between October 2023 to March 2024, with 5,651 respondents across five countries. Nationally representative samples were selected based on age, sex, education level and region, with more than 1,000 respondents surveyed in each country. The survey examined engagement with circular consumption practices, including frequency of use and factors influencing (un)willingness to adopt these practices in the future. Results are based on descriptive and segmentation analyses of survey responses.

References

Numbers in brackets correspond to this reference list.

- [1] **Eurostat (2025).** Passenger cars per 1,000 inhabitants (ROAD_EQS_CARHAB).
https://ec.europa.eu/eurostat/databrowser/view/ROAD_EQS_CARHAB/default/table
- [2] **Rau & Grealis (2026).** Car sharing and car shedding across the life course: Lessons for sustainable mobility research and policy. GAIA (accepted).
- [3] **Grealis et al. (2025).** Data set of the Circular Consumption Survey. Zenodo.
<https://doi.org/10.5281/zenodo.15267507>
- [4] **Grealis et al. (2025).** Data set of the Circular Consumption Interviews. Zenodo.
<https://doi.org/10.5281/zenodo.17599841>



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CircEular project

CircEular is a Horizon Europe project (2022–2026) led by the International Institute for Applied Systems Analysis (IIASA) and involving 11 European partners. It develops integrated modelling frameworks and circular pathways for a net-zero economy, with detailed analysis of mobility and buildings as material-intensive demand sectors, and digitalisation as a potential enabler of circularity. Combining quantitative modelling, qualitative research, and stakeholder engagement, the project generates evidence to support Europe's climate and circular economy objectives. **Visit our website:** <https://circeular.org/>

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