



Consumer study on packaging for home and personal care products



Content

- 03 Introduction
- 04 The plastic problem
- 05 Consumer attitudes and behaviours
- 08 Pre-packaged refills versus in-store refills
- 11 Cartons for household products
- 12 Cartons as refill packaging
- 17 Alternatives: cartons vs pouches
- 21 Cartons in practice: Orkla Home and Personal Care
- 22 Conclusion
- 22 Notes




Introduction

Elopak believes there is a big opportunity for the increased uptake of cartons as a sustainable packaging solution in the home and personal care sector.

To better understand current consumer behaviour and appetite for cartons in the sector, particularly as a refill option, Elopak commissioned two rounds of research in December 2023.

The first, undertaken by Absolute Market Research (AMR), surveyed 1,025 adults online in the UK and Germany. The second, undertaken by Kantar in Stockholm and Linköping, Sweden, was a more focused study involving face-to-face interviews and handling test with 150 adults who were frequent users of liquid detergents. Across both studies it was found that there is considerable appetite for cartons and that cartons performed well when compared with alternatives.

This white paper presents the results of these surveys and provides insight into their wider relevance in driving the plastic to carton transition.



“This research shows that cartons are a natural fit for consumers’ needs, both from a convenience and environmental standpoint.”

– Astrid Näscher,
Marketing Director Region Europe North & India

The plastic problem

Plastics are a serious problem for the planet, not just in terms of litter and the health impact of microplastics, but also because of the greenhouse gas emissions (GHG) from plastic production and disposal. Yet, according to the United Nations Environment Program (UNEP) an estimated 1,000,000 plastic bottles are bought every minute and we now produce about 400 million tonne of plastic waste every year¹. The scale of the problem is not only huge, but also increasing. According to research by the Organisation for Economic Co-operation and Development (OECD), global plastic waste is set to almost triple by 2060².

Given that around 36% of plastics produced are used in packaging³, it is clear that any solution to the plastic problem is going to require a significant shift in how we package everyday products. While efforts to reduce packaging are important in this respect, they are insufficient, and packaging remains essential for ensuring product integrity and preventing waste.

Recognising the urgency of the challenge to

reduce plastics, we must therefore consider what readily available alternatives exist that can help to reduce plastic consumption and overall GHG. This is where cartons come in.

It is important to note that cartons do contain a very small amount of plastic in the form of a thin layer of polyethylene which preserves product integrity and freshness and, in some cases, a screw cap. However, the vast majority is made from paperboard, which can be sourced from sustainably managed forests.

Multiple Life Cycle Assessments (LCA) have shown that cartons have a smaller carbon footprint than plastic bottles. For example, a 2019 study by the Institute for Energy and Environmental Research Heidelberg, found that a 1l carton for fresh milk resulted in 77% lower emissions than a reusable glass bottle and 82% lower than a PET bottle of the same size. The same study also found that for fruit juice, cartons were associated with 67% lower emissions than PET bottles and 45% lower emissions than glass bottles⁴. Meanwhile, a 2020

meta-analysis of LCA studies commissioned by the Alliance for Beverage Cartons and the Environment (ACE) found that beverage cartons had an average carbon footprint of 83g CO₂/litre, compared to 156g CO₂/litre for PET bottles, 430g CO₂/litre for single-use glass bottles, and 100g CO₂/litre for reusable glass bottles⁵. The study attributed the strong performance of cartons in large part to their transport and packaging efficiency, as well as the fact that they are mainly comprised of renewable materials.

Cartons have already become widely adopted in the food and drink sector, with roughly 75% of milk⁶ and 59% of juice packaged in cartons in the EU in 2019⁷. However, their use elsewhere remains limited. This white paper sets out the findings of Elopak's recent research and looks specifically at the opportunity for transitioning to cartons in the home and personal care sector with a strong focus on consumer appetite for cartons as a way of packaging refills.



“When it comes to reducing emissions from plastic packaging, cartons are a natural solution.”

– Astrid Näscher,
Marketing Director Region Europe North & India

Consumer attitudes and behaviours

Consumers care deeply about the environmental impact of the products they buy – this includes the packaging those products come in. Separate research commissioned by Elopak in March 2023 found that over three quarters of UK consumers consider companies’ environmental credentials to be important when making shopping decisions. One in three shoppers said they make environmentally conscious decisions about the packaging they buy and two thirds of respondents said they are likely to switch to a brand which demonstrates it is taking steps to mitigate climate change, assuming price and availability remain the same⁹.

Data also shows that these trends are likely to increase over time. 7 in 10 survey respondents said they were interested to learn more about the environmental impact of the packaging they consume, with 1 in 4 saying they were ‘very interested’. Among Generation Z (born between 1997 and 2012), 70% wanted to hear more from brands about their environmental credentials and actions¹⁰.

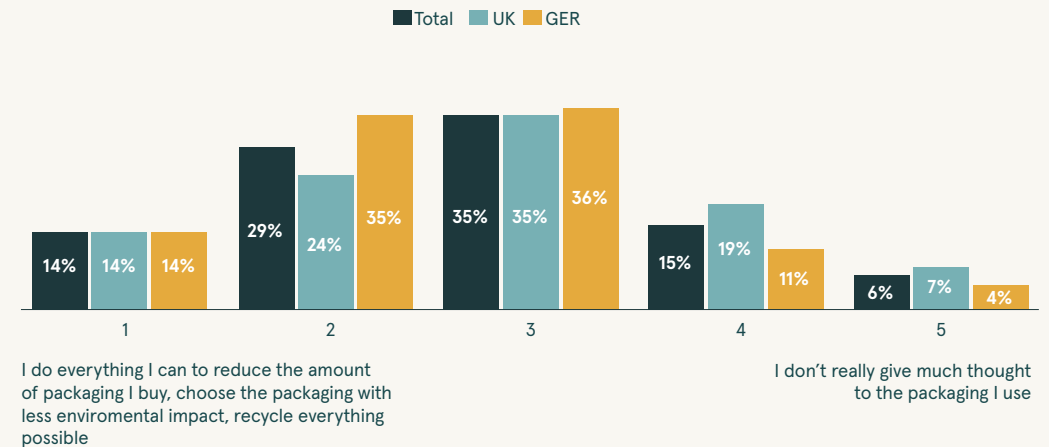
Choice of packaging is not only a highly visible way for companies to improve their environmental footprint, it also serves as a useful touchpoint for consumers to learn more about brands’ overall commitment to sustainability. In the same UK survey, Elopak found that 55% of UK consumers prefer to get information about a product’s environmental impact directly from its packaging¹¹.

Actions speak louder than words

In both the UK and Germany, consumers are acting on their sustainability convictions. In the AMR study, respondents were asked to rank their packaging purchasing habits on a scale of 1 to 5, with 1 indicating that respondents do “everything I can” to buy packaging with less environmental impact and 5 denoting “I don’t really give much thought to the packaging I use”.

Across both countries, 78% of survey respondents recorded a response of 3 or lower, and a notable proportion of shoppers (14%) said they do “everything” possible to choose sustainable packaging.

On a scale of 1-5, how could you rate your behaviours in relation to choosing environmentally friendly packaging and recycling?



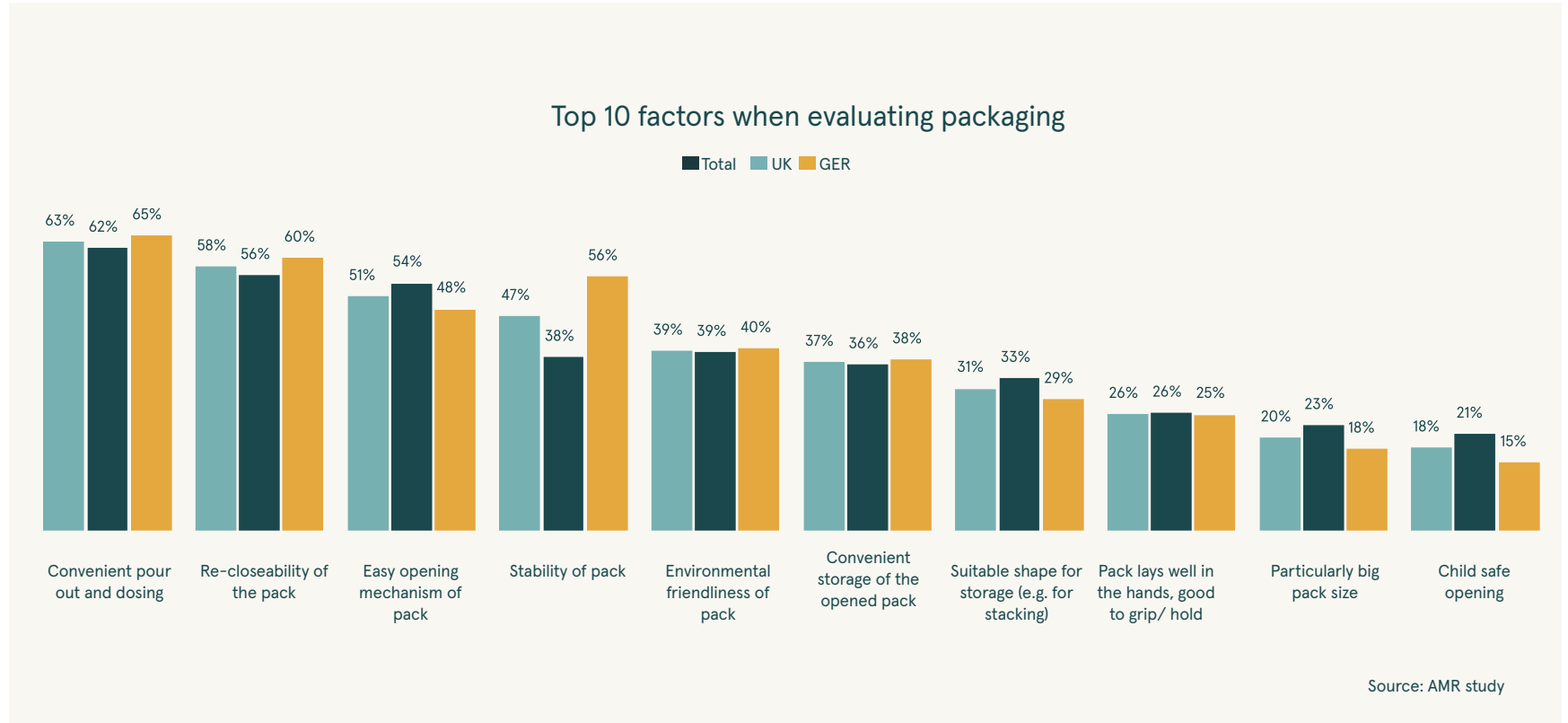
Source: AMR study

Giving the people what they want

Thinking about packaging generally, consumers tend to weigh up both practical and environmental considerations, suggesting that while they care about the planet, they don't expect to compromise on usability.

Of the UK and German shoppers surveyed, 63% said they pay particular attention to how convenient it is to pour the product out of the pack, and 58% noticed how easy it is to re-close the packaging. At the same time, close to 40% identified environmental friendliness as an important factor when choosing packaging.

Likewise, in Sweden, respondents to the Kantar study listed ease of pouring and closing the packaging in their top two most important purchase criteria, while a solid 47% recorded environmental friendliness as the most important factor.

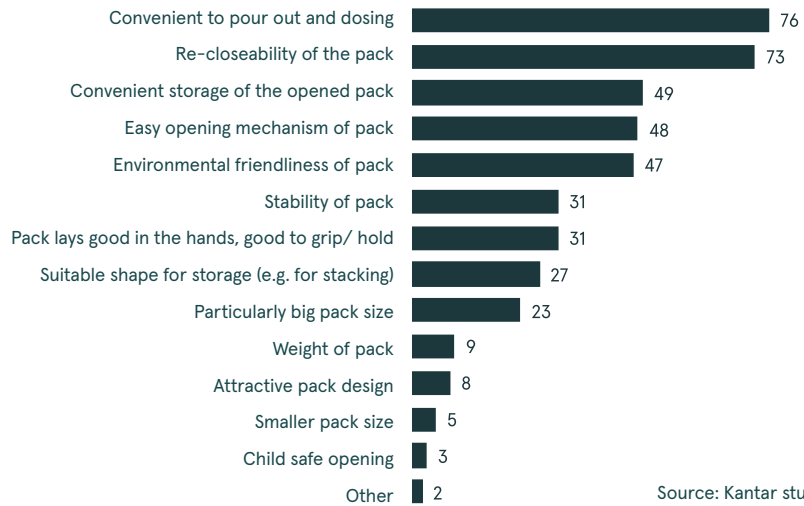


Most important purchase criteria for laundry detergents

General – Top 3



Pack – Top 6



Source: Kantar study

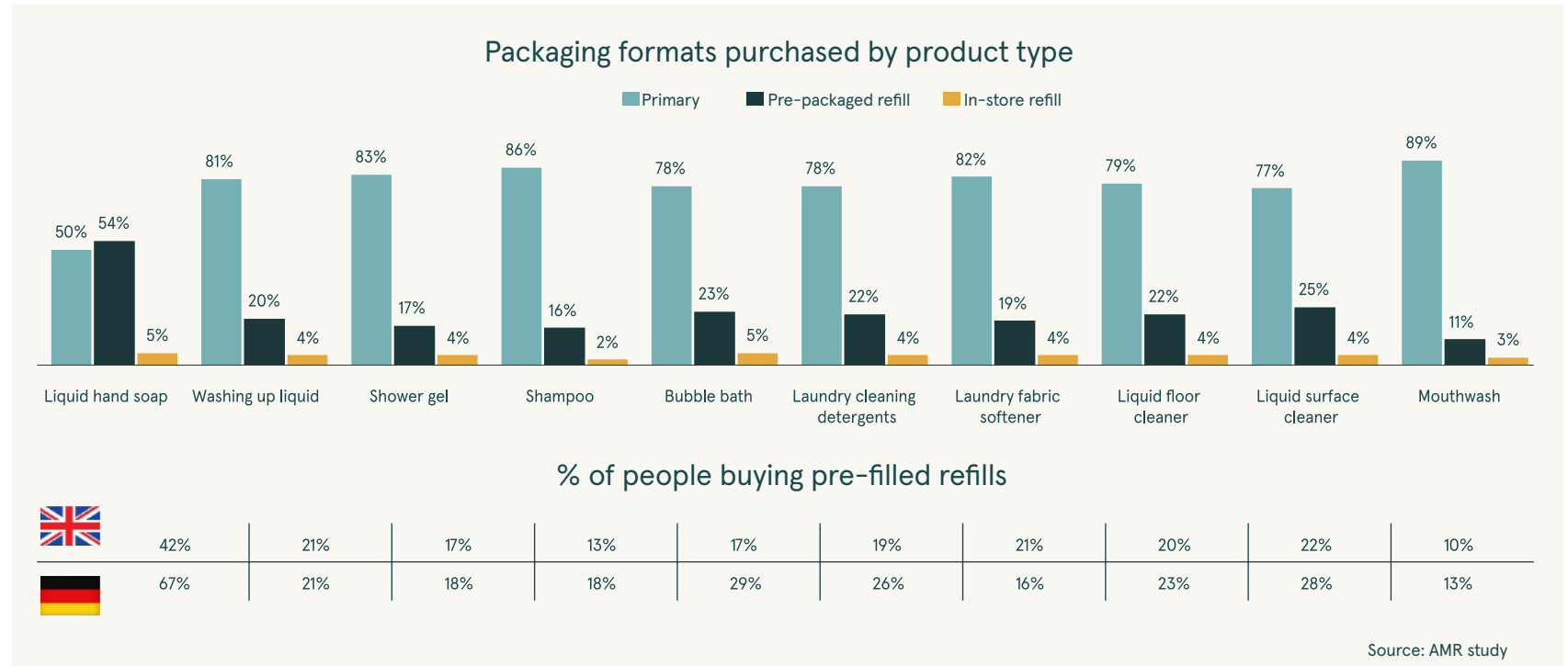


Pre-packaged refills versus in-store refills

An important trend within this shift towards more sustainable packaging choices is the rise of refillable packaging. Although primary or original packaging remains the most common format in which UK and German consumers purchase household products, refill packs are on the rise, with 59% of survey respondents buying some kind of refill for hand soap and 29% purchasing surface cleaner in refill packaging.

In the household products segment, pre-filled refill packaging is distinctly more popular than refill options which require shoppers to bring their own containers to a store (bring-your-own). Pre-fills are sold with the product already inside but differ from a product's original packaging in terms of volume, cost, or lack of accessories (e.g. a hand pump or nozzle).

In Germany, 67% of survey respondents buy pre-fills for hand soap and 29% for bubble bath.

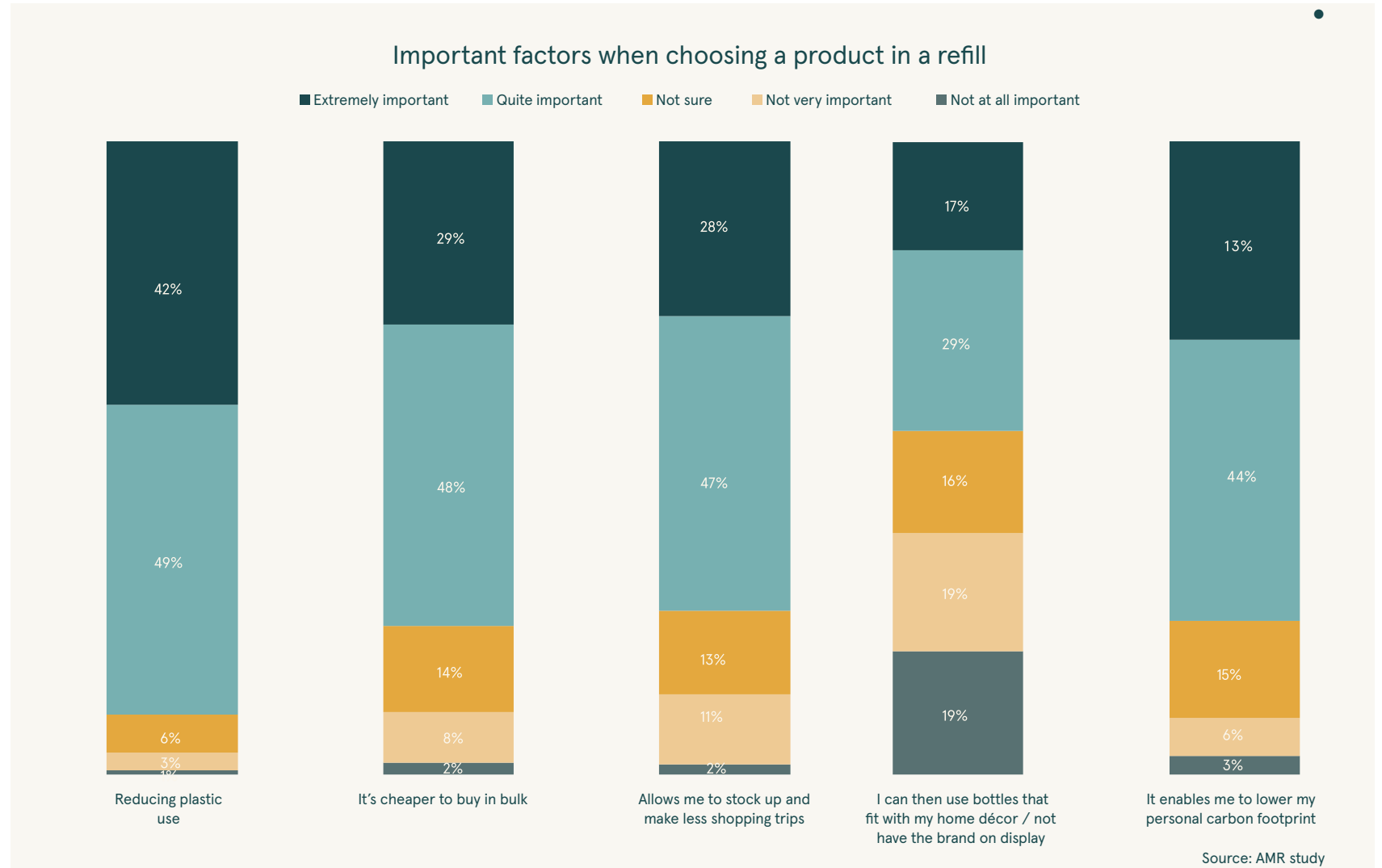


In the UK, meanwhile, 42% purchase hand soap in pre-fill packs, and 22% use pre-fills for surface cleaner.

Of those not currently using refill packaging, 49% said it was because “they don’t make refills for the products/brands I use” – a further encouraging sign that it is only lack of availability which holds many shoppers back from also using refill options.

Meanwhile, those who already use refill packaging largely attribute it to environmental factors. 91% of respondents say it is ‘important’ or ‘extremely important’ that refill packaging reduces their plastic use, while 75% feel the same way about reducing their personal carbon footprint.

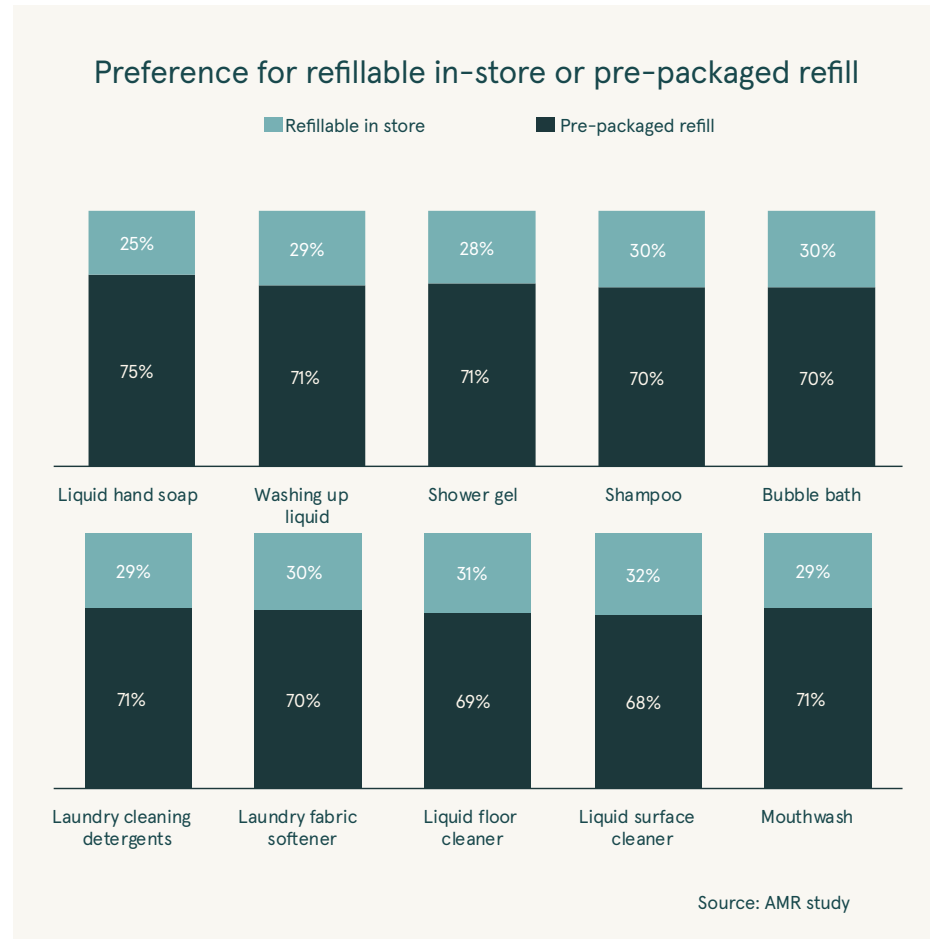
In a straight race between pre-fill and bring-your-own container refill, consumers’ preferences are even more pronounced. The AMR study



shows that across 10 of the most purchased household goods, shoppers universally prefer pre-fill packaging, with 84% selecting it for hand soap and 76% for laundry detergent.

As indicated earlier, the reasons for consumers preferring pre-fills largely come down to balancing sustainability with convenience and usability. When explaining why they preferred pre-fills, AMR respondents recognised that it was a more convenient option, which allowed them to bulk buy without having to remember to bring their own containers.

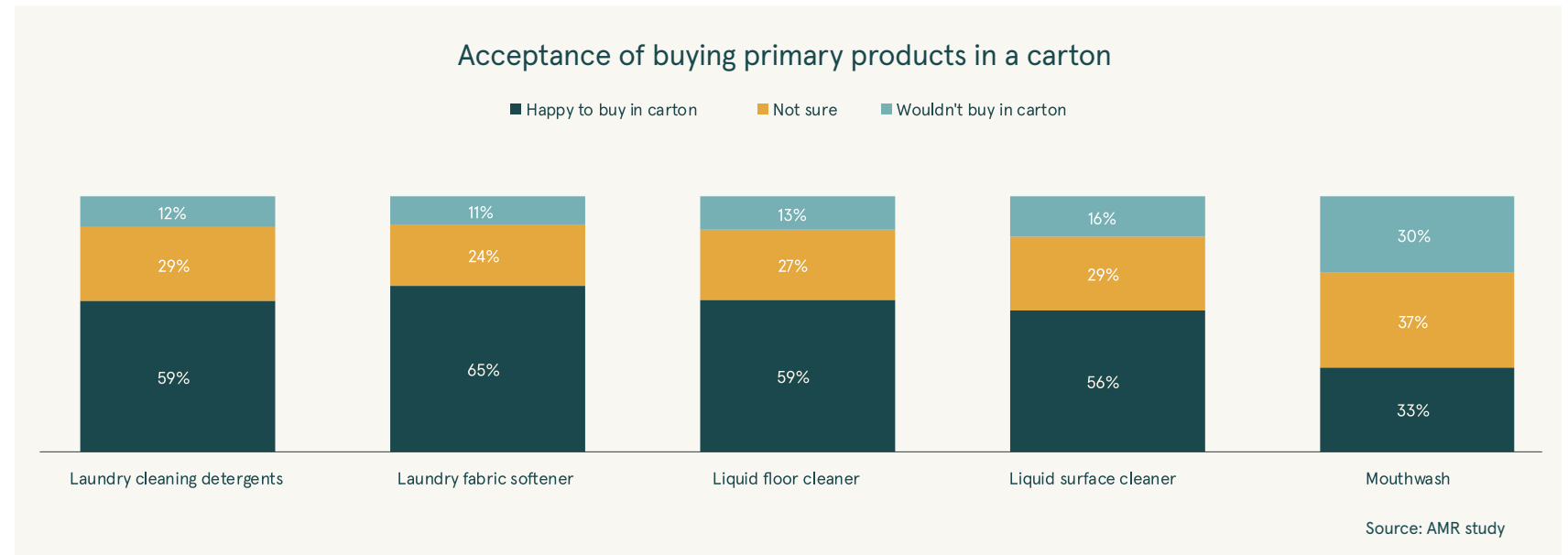
Bring-your-own refill users, meanwhile, emphasised value for money alongside environmental concerns as a rationale for using this kind of refillable packaging.



Cartons for household products

Cartons are a common sight for European shoppers, accounting for roughly 75% of milk¹³ and 59% of juice¹⁴ packaged in cartons in the EU in 2019. However, they are currently only used to package a small proportion of household and personal care goods. Given cartons' significant sustainability advantages and the ever growing desire for environmentally friendly packaging across all sectors, this seems like a golden opportunity.

The research backs this up. Of the UK and German consumers surveyed in the AMR study, more than half said they would be 'happy' to buy laundry detergent, floor cleaner, and surface cleaner packaged primarily in cartons; meanwhile 65% said they would happily purchase fabric softener in a carton.



“Consumers have been looking for more sustainable packaging options for a long time. Now it is clear that they recognise the environmental benefits of cartons and want to extend these benefits to new product categories, including household products.”

- Martin Shaw, Market Unit Manager Elopak UK & Ireland

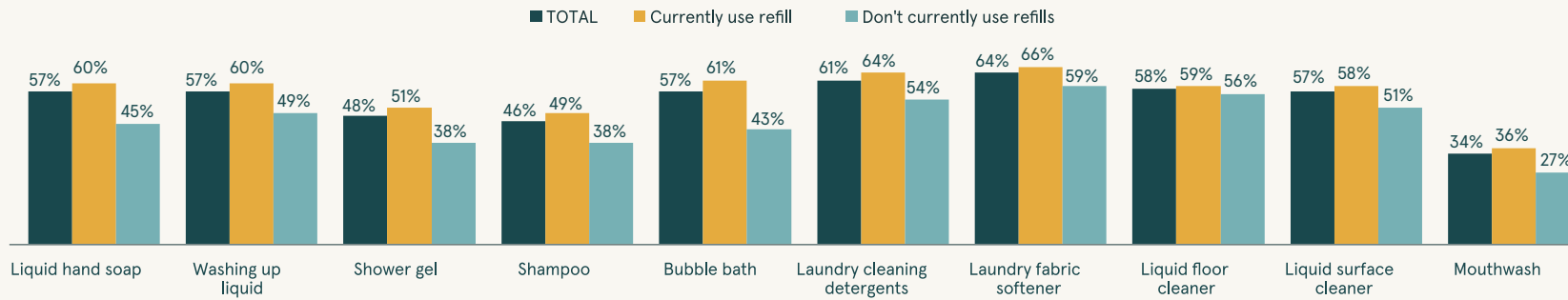
Cartons as refill packaging

The growing interest in cartons as packaging for household products is even more evident when consumers think about cartons as a pre-filled refill. In this scenario, more than half of shoppers are happy to buy a range of household products in cartons, including hand soap (57%), washing-up liquid (57%), bubble bath (57%), laundry detergent (61%), fabric softener (64%), floor cleaner (58%), and surface cleaner (57%). Additionally, 55% of UK consumers surveyed are happy to purchase shower gel in a carton.

These figures are even higher among those in both countries already using refill packaging (both pre-fill and bring-your-own). 66% of this category said they would purchase a refill of fabric softener in a carton and 64% said they would be happy to buy laundry detergent. This data shows that not only are cartons acceptable to the majority of shoppers as a pre-fill option but, crucially, they are even more popular among the forerunner group of shoppers who already use refillable packaging options.



Acceptance of buying refill products in a carton

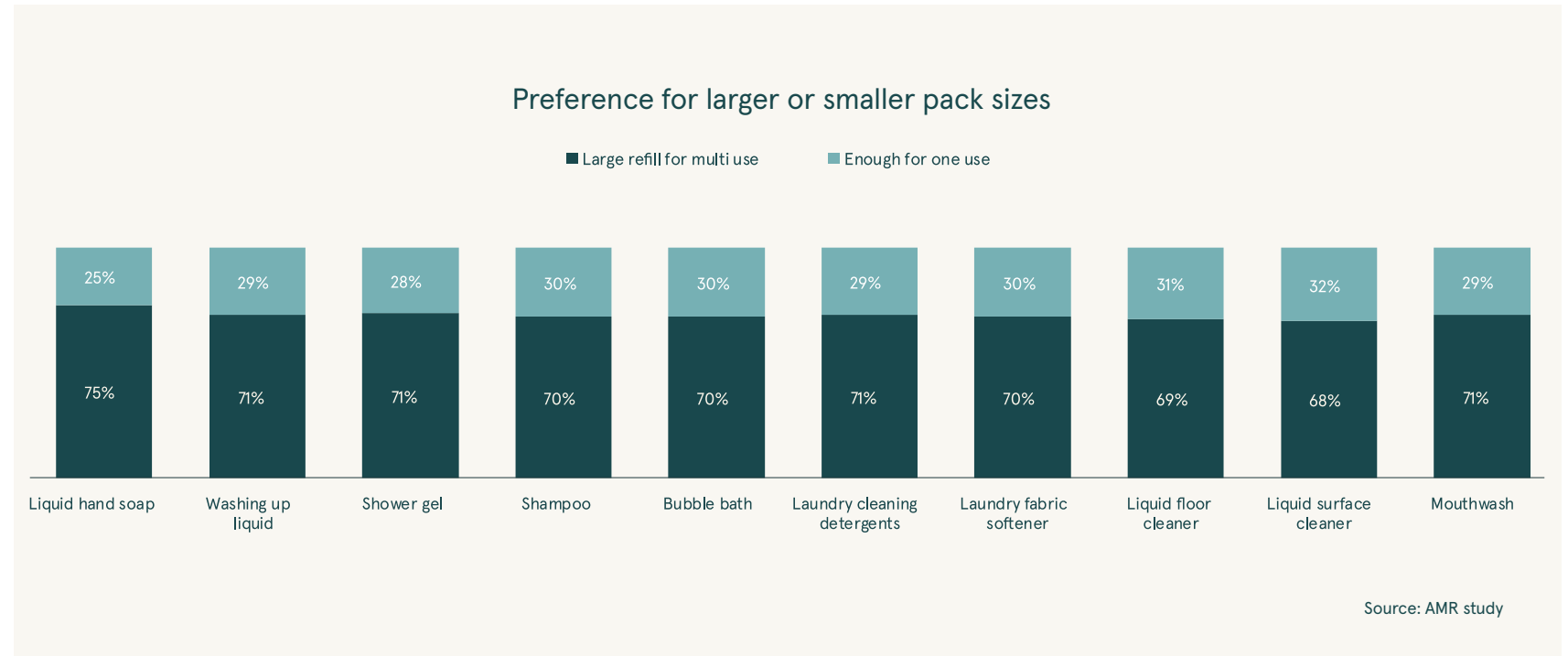


Source: AMR study

Size matters – and so does sustainability

Across all refill packaging, whether pre-fill or bring-your-own container refill, the ability to buy in bulk is a key factor. Over 70% of refill-buying consumers want refill packs that reflect more than their immediate need for hand soap, washing-up liquid, shower gel, shampoo, bubble bath, fabric softener, and mouthwash.

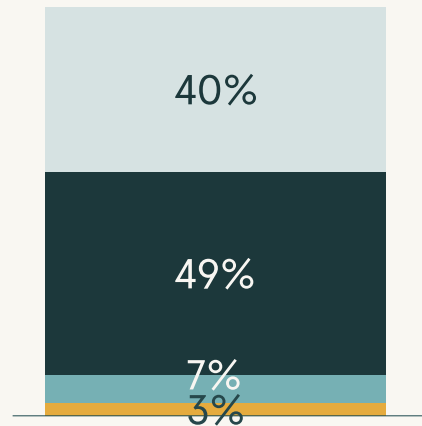
Based on the importance which both pre-fill and bring-your-own shoppers place on value for money and convenience, we can infer that buying in bulk allows them to spend less and results in fewer trips to the shops. This naturally has important implications for cartons as a refill pack, suggesting it may be advantageous to have refills available in larger sizes than the original packaging which the product was marketed in.



As with consumer attitudes to packaging generally, sustainability also ranks highly in the minds of pre-fill shoppers. 49% said it is 'quite important' that a refill pack is recyclable, with a further 40% characterising it as 'very important'.

Data from the Kantar study in Sweden shows that these trends are good news for refills. On the whole, shoppers in Sweden perceive refills as good for the environment and good value for money, as well as being easy to use. All of this is also beneficial for cartons, which come in a variety of sizes, are easy to use and store, and can be recycled where collection and sorting facilities are available.

Importance of refill packaging recyclability



- Not at all important
- Not very important
- Not sure
- Quite important
- Very important

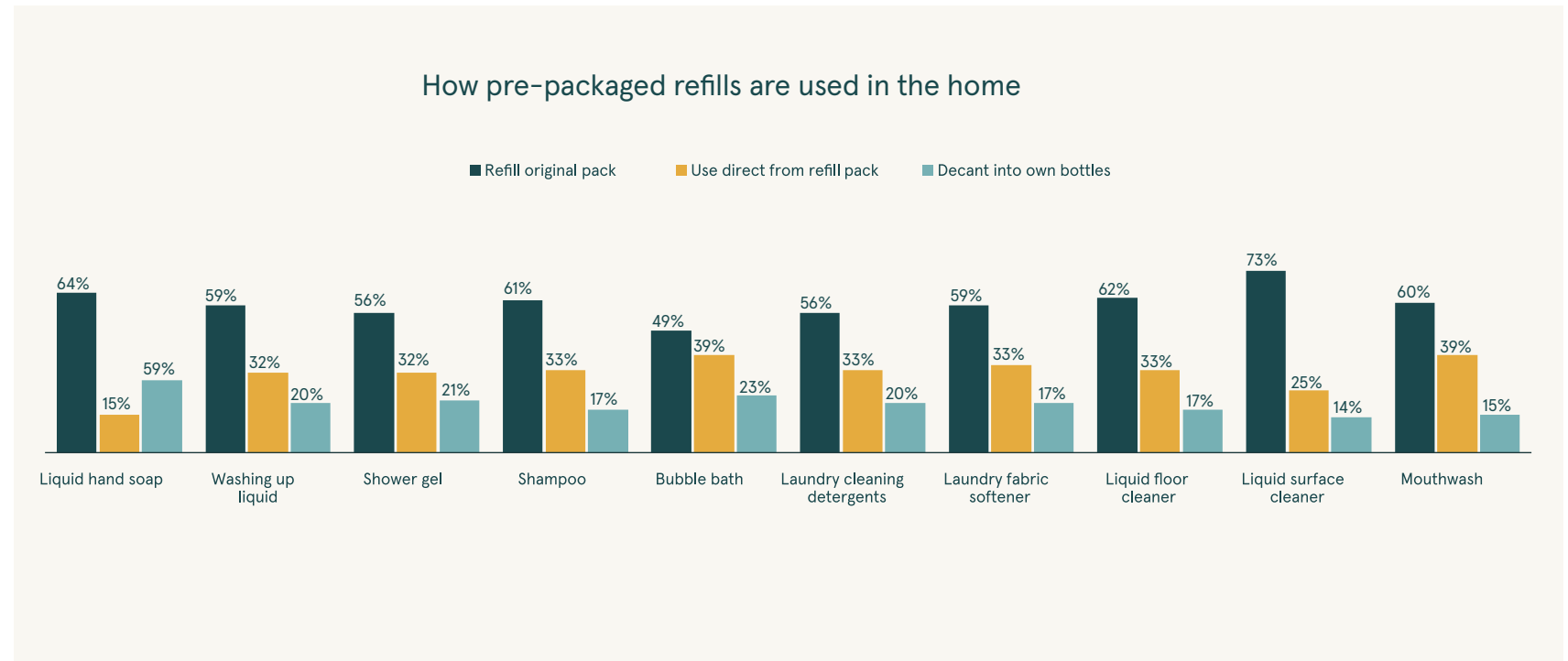
Source: AMR study



It's in the way that you use it

Interestingly, pre-fill shoppers don't always use their refills as top-ups for the original packaging or another container at home. A significant proportion of UK and German consumers simply pour the product directly from the pre-fill to where they need it, including 39% who do so for bubble bath and shampoo, as well as 35% of pre-fill buyers who pour fabric softener straight from the refill pack into the washing machine.

This shows that the ideal refill packaging needs to be convenient and versatile enough to also be used as a primary package. Consumers' acceptance of cartons as primary packaging for household goods (see 'Cartons for Household Products') again constitutes a strength of the format. Indeed, Norwegian FMCG company Orkla Home and Personal Care (OHPC) initially launched cartons as a pre-fill option for their Klar brand of hand soap and laundry detergent but transitioned to packaging the household products in cartons as their primary packaging after just a few years (see 'Case Study: OHPC').



Cartons vs pouches

As previously mentioned, cartons currently make up only a small percentage of the packaging market for household products, including in the refill segment. However, as the consumer data demonstrates, there is a huge opportunity for growth in this area.

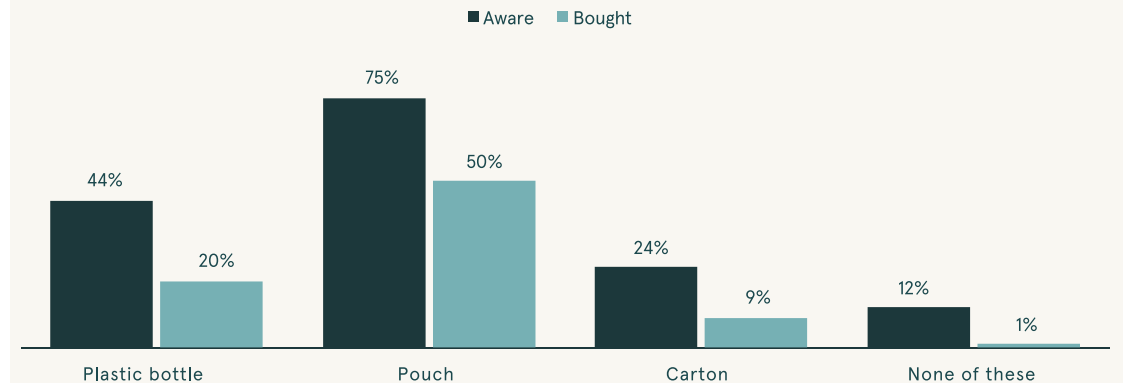
Currently the leading refill packaging solution in the UK and Germany is plastic pouches, with over 75% of AMR study respondents saying they have heard of pouch refills and 50% saying they have bought one.

As explained in section 2, 'The plastic problem', cartons offer a distinct advantage over plastic packaging in that they contribute far fewer GHG emissions in their production and disposal. This sustainability advantage is crucial in the refill segment, where 91% of shoppers in the UK and Germany say reducing their plastic use is important to them.

Cartons also rank higher than plastic pouches when it comes to another key metric: convenience. When participants in the Kantar study were asked to compare an Elopak D-PAK™ carton with a pouch for laundry detergent, 80% said the carton was 'easy to use', compared to less than 10% who said the same for the pouch. Indeed, the carton outperformed the pouch in practically every element of the user experience, scoring particularly well in relation to how easy it is to close the package. Additionally, 80% of users said D-PAK™ 'helps to avoid plastic'.

Perhaps unsurprisingly, given how uncommon cartons are in the home and personal care market, most Swedish consumers also felt the D-PAK™ was 'new and different' compared to the pouch refill.

Awareness and purchasing of refill packaging types



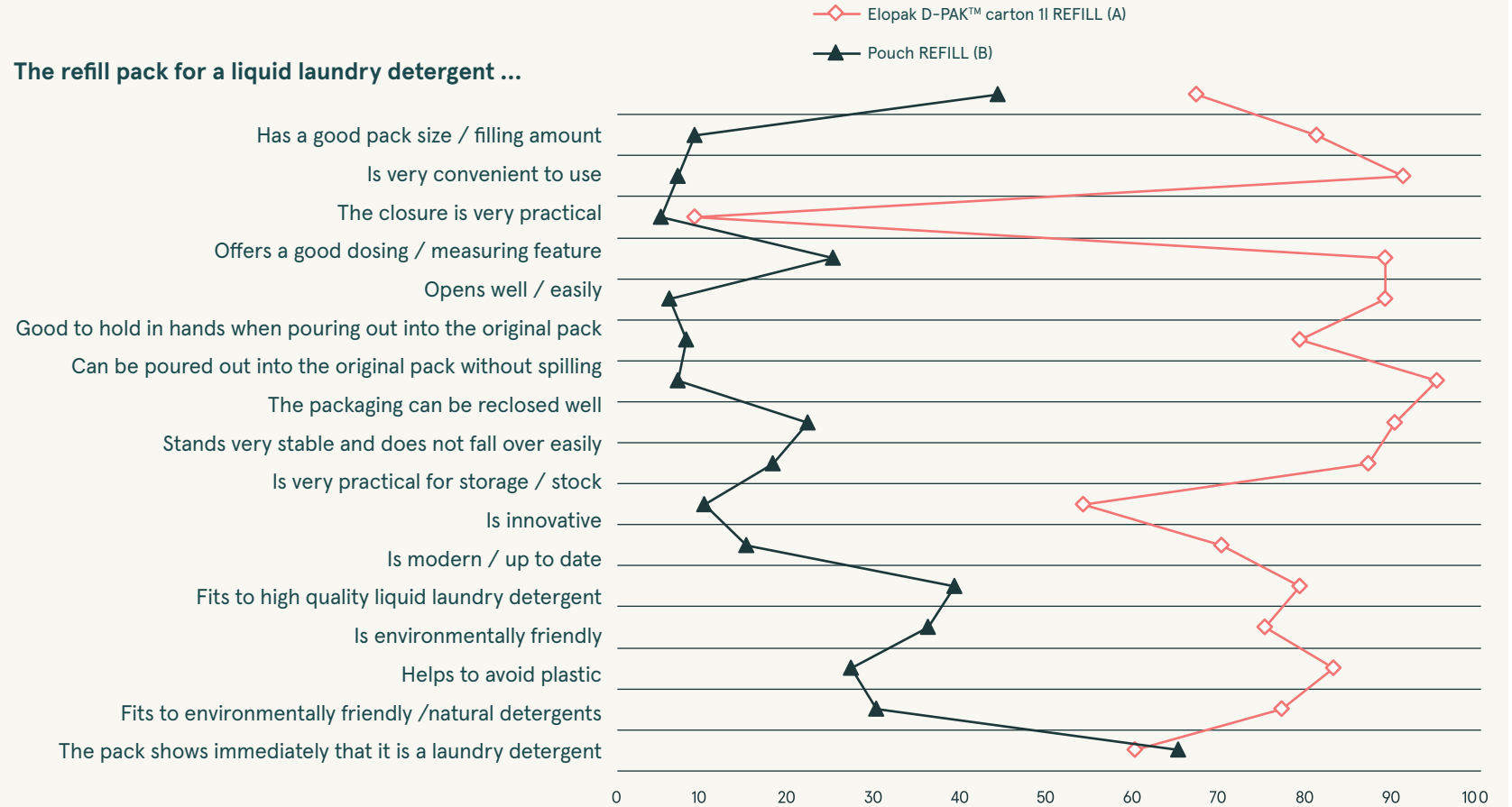
Awareness and usage of the pouch was significantly higher in Germany than the UK and the opposite was the case for Plastic bottles in the UK v Germany

Source: AMR study

When asked about purchase intention and willingness to buy, the D-PAK™ carton performed well with a three times higher purchase interest compared to the pouch packaging. While less than one in five participants said they “definitely would buy” the pouch re-fill, the D-PAK™ carton recorded a much higher result at 67%. This figure increased to 71% post handling, suggesting the D-PAK™’s handling properties outperformed consumer expectations. Meanwhile, the pouch recorded a lower figure post handling with just 11% saying they “definitely would buy”, down from 18% prior to handling.

D-PAK™ refill is superior on almost all dimensions

The refill pack for a liquid laundry detergent ...

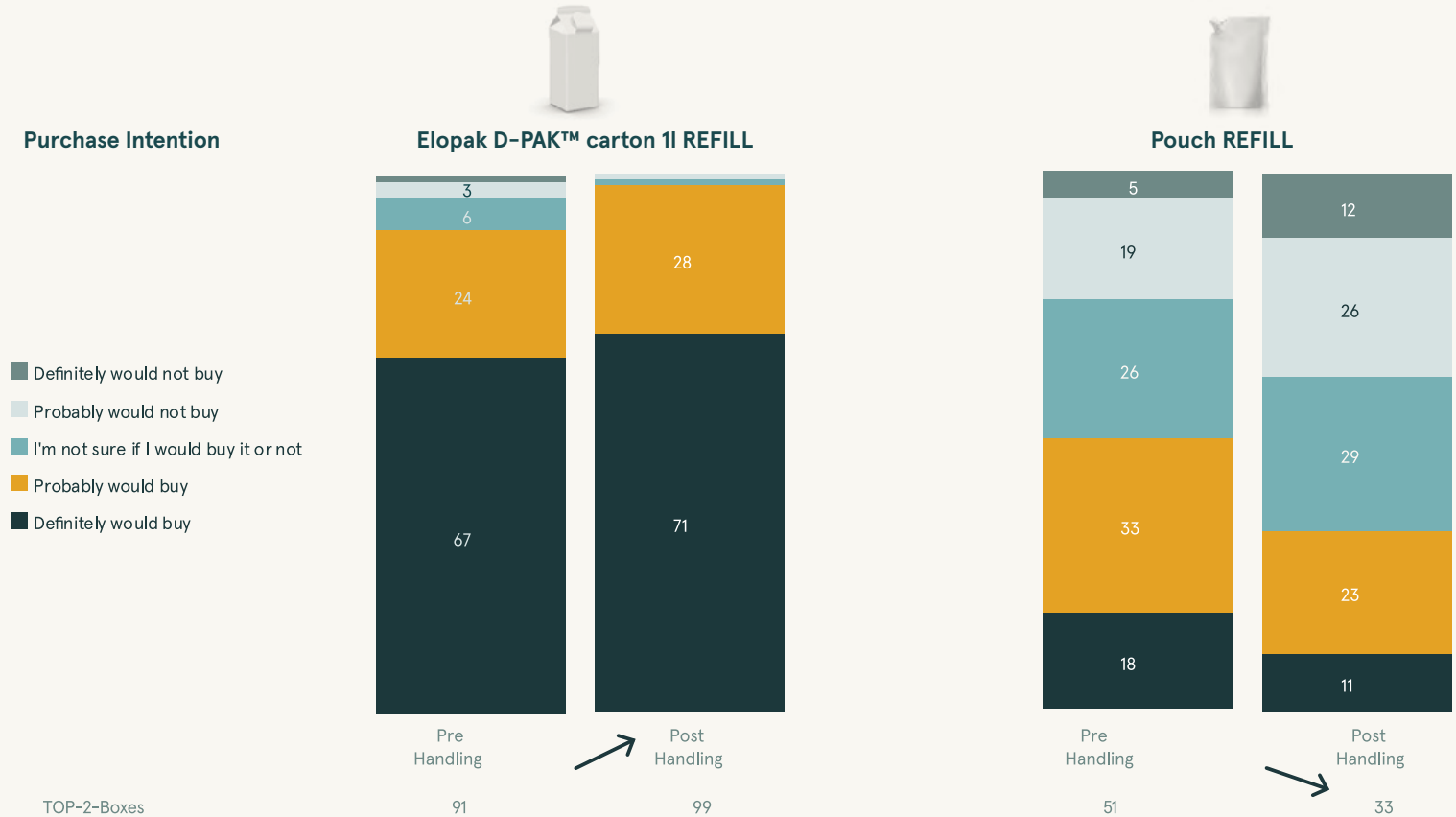


Source: Kantar study

The majority of participants in the Kantar study also felt that D-PAK™ refill cartons should be 1l or 1.5l in size, perhaps reflecting a compromise between the noted desire of refill users to bulk buy and the fact that many such users also like to use the refill pack in lieu of primary packaging (see 'Cartons as refill packaging'), for which a 2l carton might be unwieldy.

Even more encouragingly, a very large proportion of the Swedish respondents felt the D-PAK™ carton was suitable as a refill pack for a variety of household products, including 83% who would use it for soap and 73% for floor cleaner.

D-PAK™ carton refill is very unique, and way ahead compared pouches

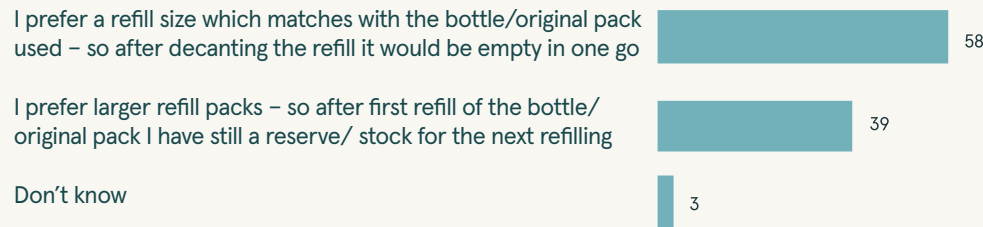


Source: Kantar study

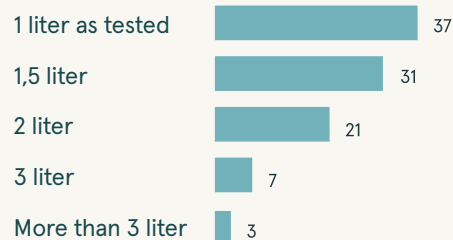
Ideal size of a refill pack should be 1l up to 1.5l

Only 1/3 claim to wish for a size of 2l or bigger

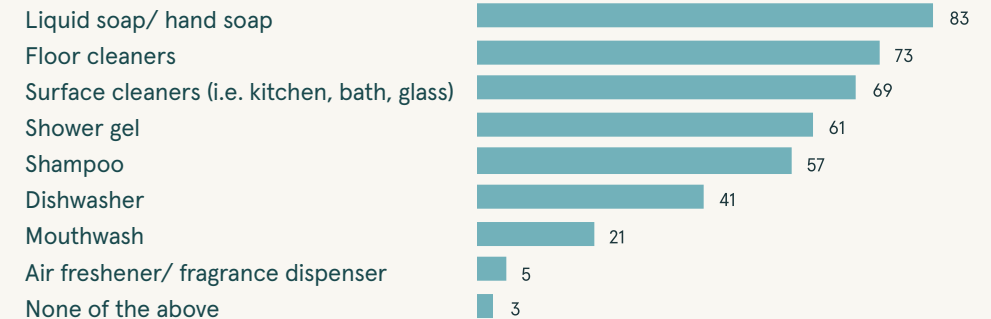
Ideal size refill – general



Ideal size refill for Elopak D-PAK™ carton 1l REFILL



Suitability of pack type for other categories



Cartons in practice: Orkla Home and Personal Care

Some brands have already put cartons to the test in the home and personal care products sector, enabling us to reflect on the findings of this research alongside practical case studies looking at their use and uptake.

One of the earliest adopters was Norwegian FMCG company Orkla Home and Personal Care (OHPC), which partnered with Elopak to trial D-PAK™ cartons for its Klar range of hand soap and laundry detergent in 2020. While the company was already using recycled plastic bottles for many of its products, it wanted to improve the environmental credentials of its packaging further by opting for a solution made from entirely renewable materials.

Since people often like to keep soap in a display bottle or use a measuring cap to portion detergent, the cartons were sold as pre-filled refill packs, or simply 'pre-fills'. The results were far beyond OHPC's expectations. The initial limited launch on

the company's website sold out in record time and over 1,000 people signed up to the waiting list. The company also received positive feedback via social media and the cartons were subsequently rolled out at supermarkets across Norway.

Building on this success, in 2022 OHPC expanded this carton refill model across its other popular brands in Norway, as well as in Sweden and Finland. Given the high levels of consumer acceptance for the prefill format, in 2023 OHPC's also started offering 750ml and 1l cartons as a replacement for plastic bottles as their primary packaging.

The cartons reduced the amount of plastic being used to package OHPC's products and consequently the GHG emissions associated. They also improved efficiency and cut back on other sources of emissions like transport because cartons can be transported flat.



“Our goal is to help consumers reduce their carbon footprint without having to compromise on quality, fragrance or ease of use. Consumers told us the new carton refill is easy to use and is an easy, convenient, and great solution”

– Anne Marheim Støren,
Senior Strategy & Sustainability advisor Orkla Home and Personal Care (OHPC)

Conclusion

There is an urgent need to rapidly reduce the amount of plastic we use, including in the packaging sector. The research set out in this white paper demonstrates the existing appetite for readily available solutions that can significantly reduce reliance on plastics for packaging home and personal care products. This is supported by case studies from early adopters of cartons in the sector, as well as Elopak's experience working with brands in the food and drink industry where the carton format is well established.

The research supports findings from previous rounds of research that consumers are interested in more environmentally friendly packaging solutions but demonstrates that these need to be balanced with practical considerations such as usability if they're going to be widely adopted.

Transitioning from plastic to carton refills presents a particularly compelling opportunity. Among those consumers already opting to buy refills, environmental factors are high on their agenda, with the research indicating a clear preference for pre-filled rather than bring-your-own formats. Of those not currently using refill packaging, almost half said it was because they were not available for the products they use.

The research also demonstrates the appetite for a much wider variety of products to be packaged in cartons beyond those already available, from fabric softener to floor cleaner, as well as the option of larger format sizes.

All-in-all, the findings presented here suggest that brands in the home and personal care sector can feel confident about joining the plastic to carton transition.

Notes

¹ <https://www.unep.org/interactives/beat-plastic-pollution/>

² <https://www.oecd.org/newsroom/global-plastic-waste-set-to-almost-triple-by-2060.htm>

³ <https://www.unep.org/interactives/beat-plastic-pollution/>

⁴ https://www.getraenkekarton.de/wp-content/uploads/2021/08/ifeu_2020_oekobilanz_fkn_final.pdf

⁵ https://www.tetrapak.com/content/dam/tetrapak/publicweb/gb/en/sustainability/20-011-Circular-Analytics_ACE-Full-report_2021-01-25.pdf

⁶ <https://www.squareandcircular.eu/wp-content/uploads/2022/03/ACE-Impact-assessment-study-of-an-EU-wide-collection-for-recycling-target-of-beverage-cartons-Roland-Berger.pdf>

⁷ https://aijn.eu/files/attachments/.598/2018_Liquid_Fruit_Market_Report.pdf

⁸ <https://www.elopak.com/app/uploads/2023/12/Consumer-research-2023-white-paper.pdf>

⁹ Ibid.

¹⁰ Ibid.

¹¹ <https://www.squareandcircular.eu/wp-content/uploads/2022/03/ACE-Impact-assessment-study-of-an-EU-wide-collection-for-recycling-target-of-beverage-cartons-Roland-Berger.pdf>

¹² https://aijn.eu/files/attachments/.598/2018_Liquid_Fruit_Market_Report.pdf