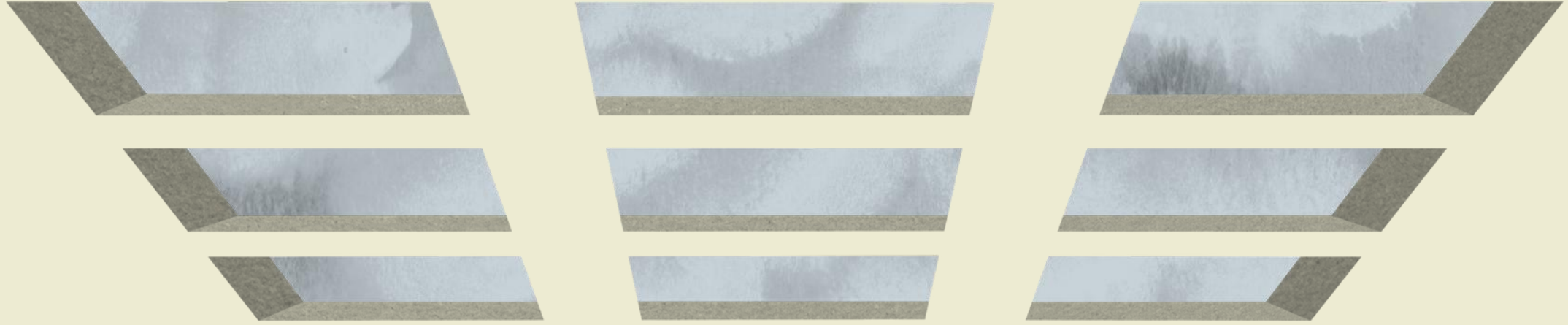




CFR Early Insight #42

Closing the Loop in Retail: Making Circular Solutions Work in Practice

Center for Retailing (CFR) at the Stockholm School of Economics has a mission to provide high-level academic education and to conduct world-class research on retailing in close collaboration with the Swedish retail industry. CFR Early Insight is a breakfast seminar series through which CFR faculty members share insights from ongoing research projects. The series provides a platform for employees at our partner companies to meet and discuss current challenges in retailing.



CENTER FOR
RETAILING

Welcome!

Agenda

- What Do We Know About Reduce, Reuse, and Repair?
- Narrowing the Focus: Packaging
- Insights from the CIRKLA Project
- Key Takeaways for Retailers



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Reduce
Reuse
Recycle



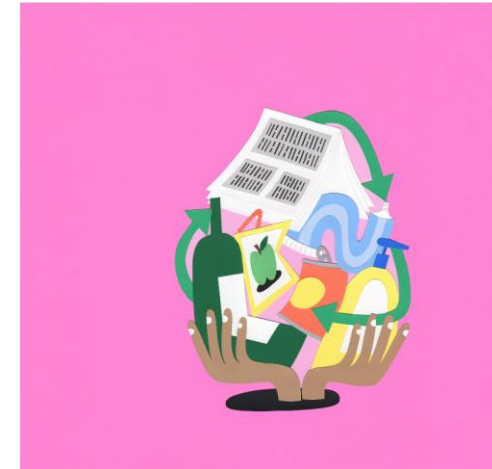
The New York Times

Account ▾

ASK NYT CLIMATE

Recycling Is Broken. Should I Even Bother?

Every little bit helps. But doing it wrong can actually make matters worse.



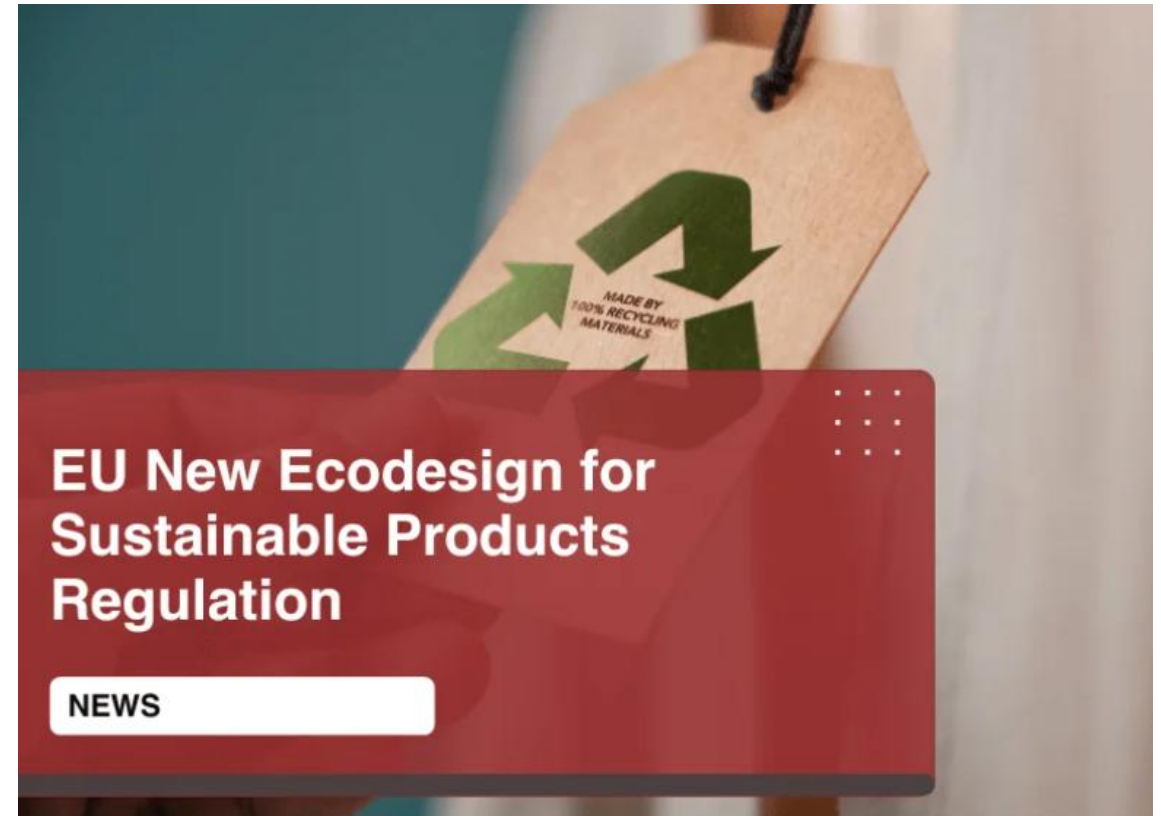
STOCKHOLM SCHOOL
OF ECONOMICS

Packaging waste

EU rules on packaging and packaging waste, including design and waste management.



Right to Repair



EU New Ecodesign for Sustainable Products Regulation

NEWS

Consumers are aligned with the shift toward durability and circularity

“

48%

of global consumers are highly concerned about how a product can be **reused**, **its durability**, and how it will **minimize waste**.



Bain & Company (2023)
Global survey of more than
23,000 consumers, June 2023

“

72%

of consumers are willing to invest in **durable and repairable goods**.



Deloitte (2023)
Survey of 1,000 consumers
in Germany



High creativity

Please imagine you own a new Samsung smartwatch that is highly creative, meaning extremely novel, and of good quality (price: \$299).



SAMSUNG

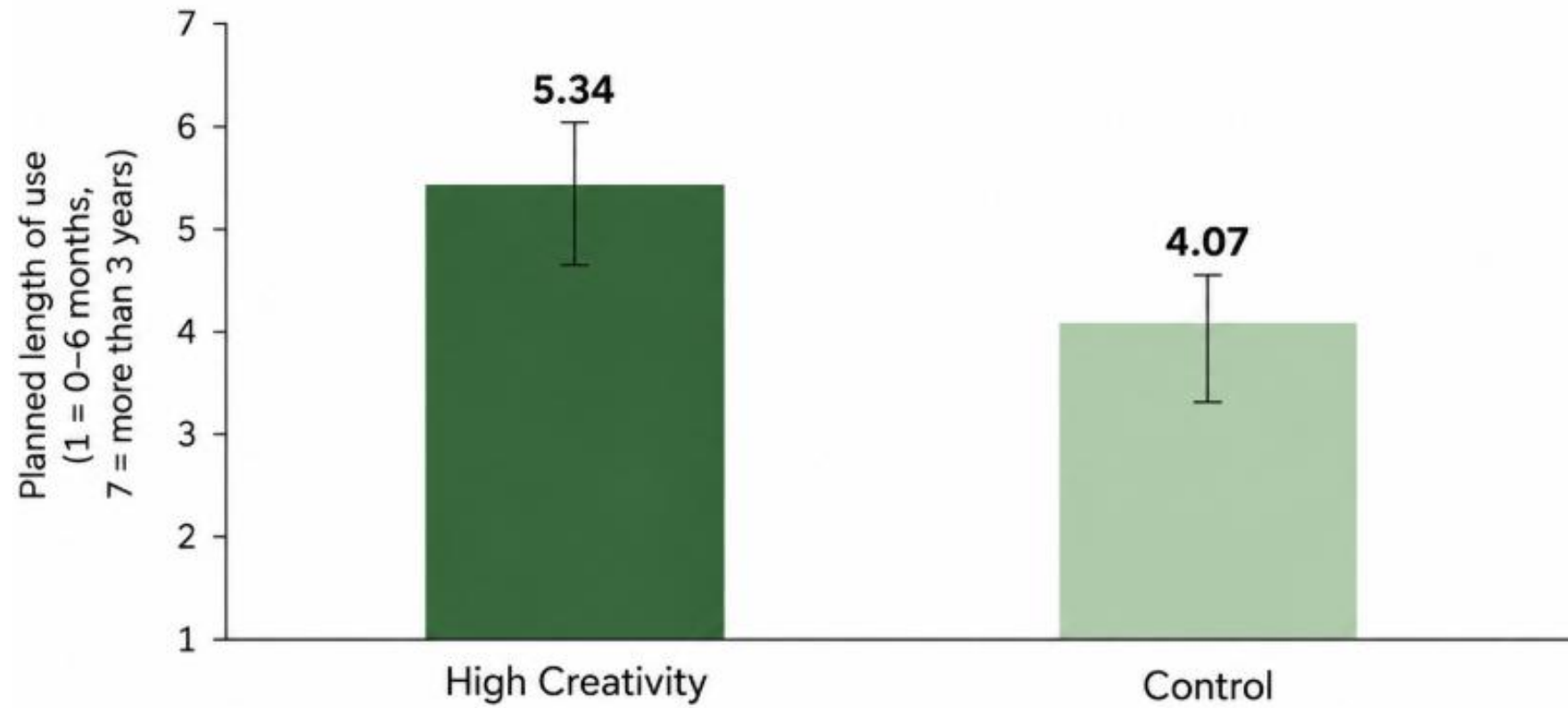
Control

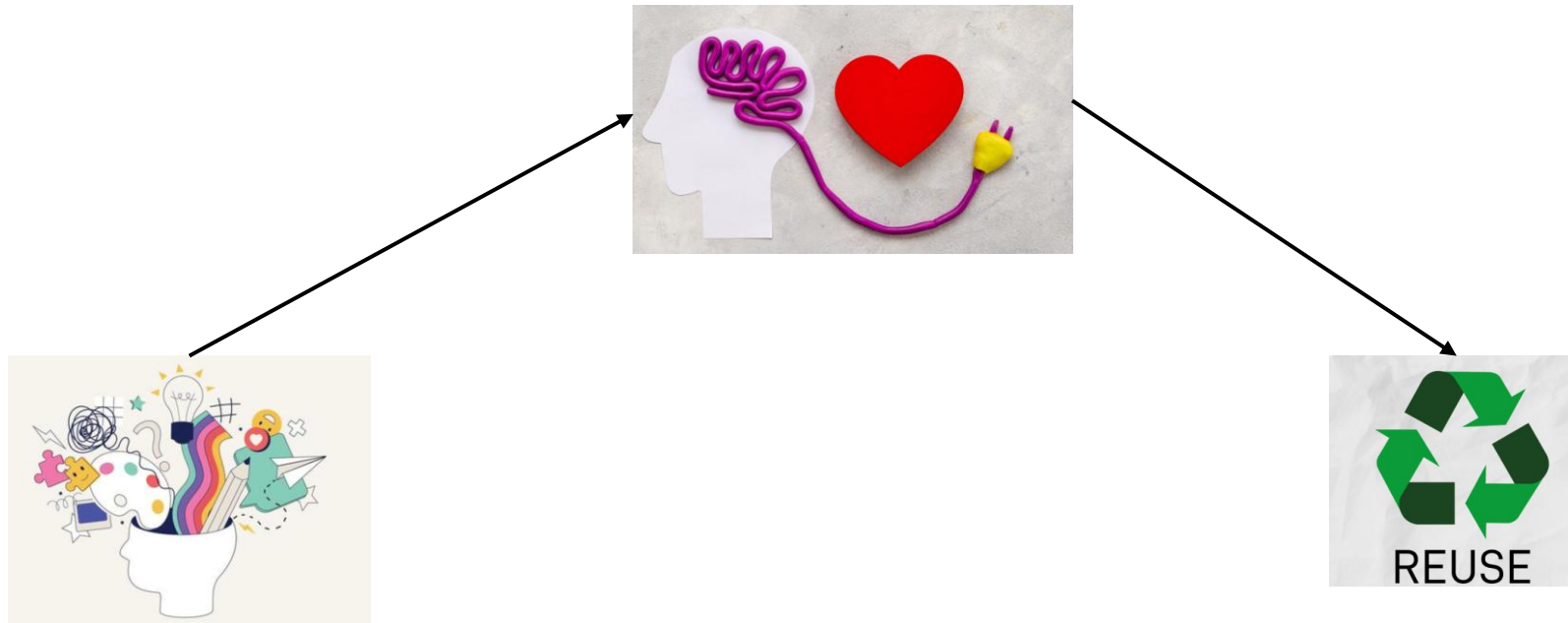
Please imagine you own a new Samsung smartwatch that is of good quality (price: \$299).



SAMSUNG

How long do you plan on wearing/using this product before you no longer want it?
1 = 0-6 months, 7 = > 3 years.





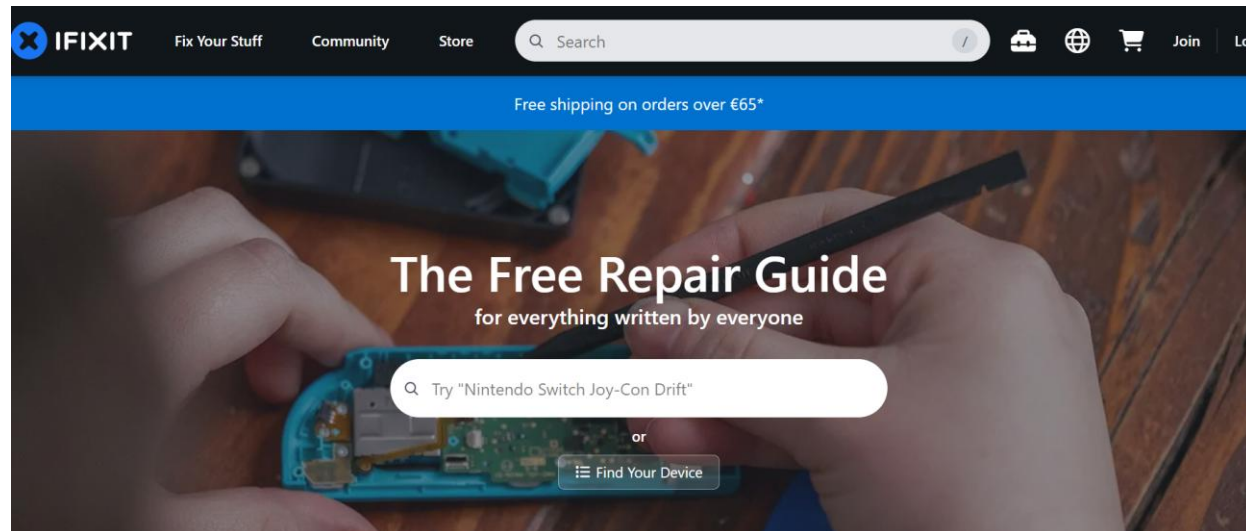
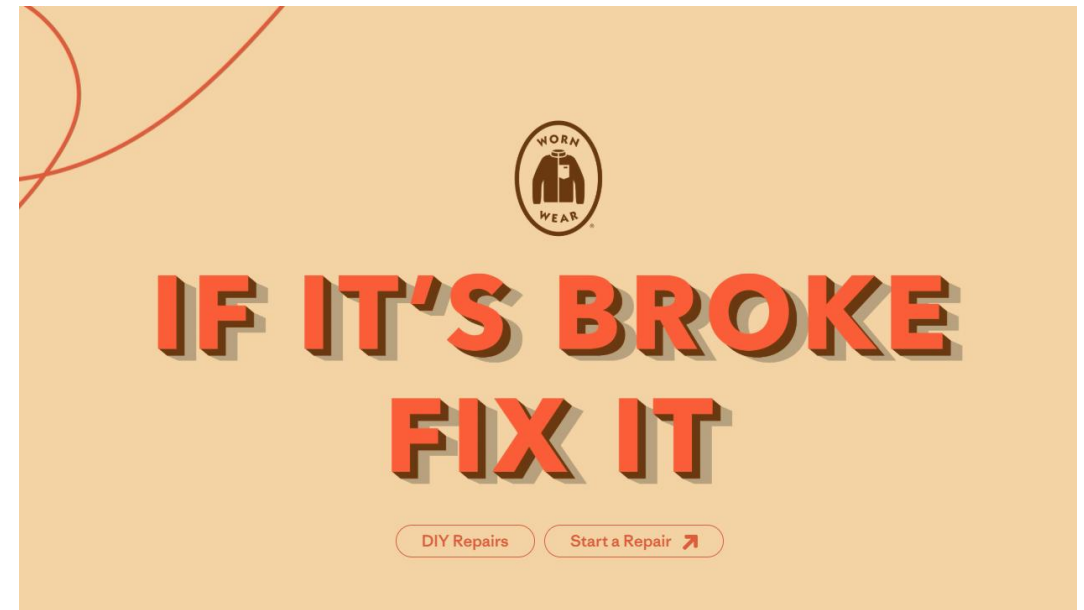
[ABOUT US](#) [BRANDS](#) [SUSTAINABILITY](#) [INVESTORS](#) [CORPORATE GOVERNANCE](#) [JOIN US](#) [MEDIA](#)

Materials

By deciding which materials are used in our products and packaging, and prioritising recycled materials where feasible, we aim to manage material-related impacts and reduce our dependence on finite resources.

H&M launches its online repair service in partnership with Reekom and Save Your Wardrobe

Is H&M pursuing sustainability? On Thursday, the Swedish retailer announced the launch of its online repair service for France, adding to its activities and services one of the key tools available to fashion industry players in the drive towards sustainability.



Repair likelihood (e.g., How likely would you be to repair your Apollo headphones?)



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Results

Name	Products	Est. Cost
 apollo Official Repairs	Repairs products from the following brands: Apollo	\$50



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Results

Name	Products	Est. Cost	Certifications
Teko Repair Services	Repairs products from the following brands: Apollo, Juked, TRC Sound, SystM	\$50	none

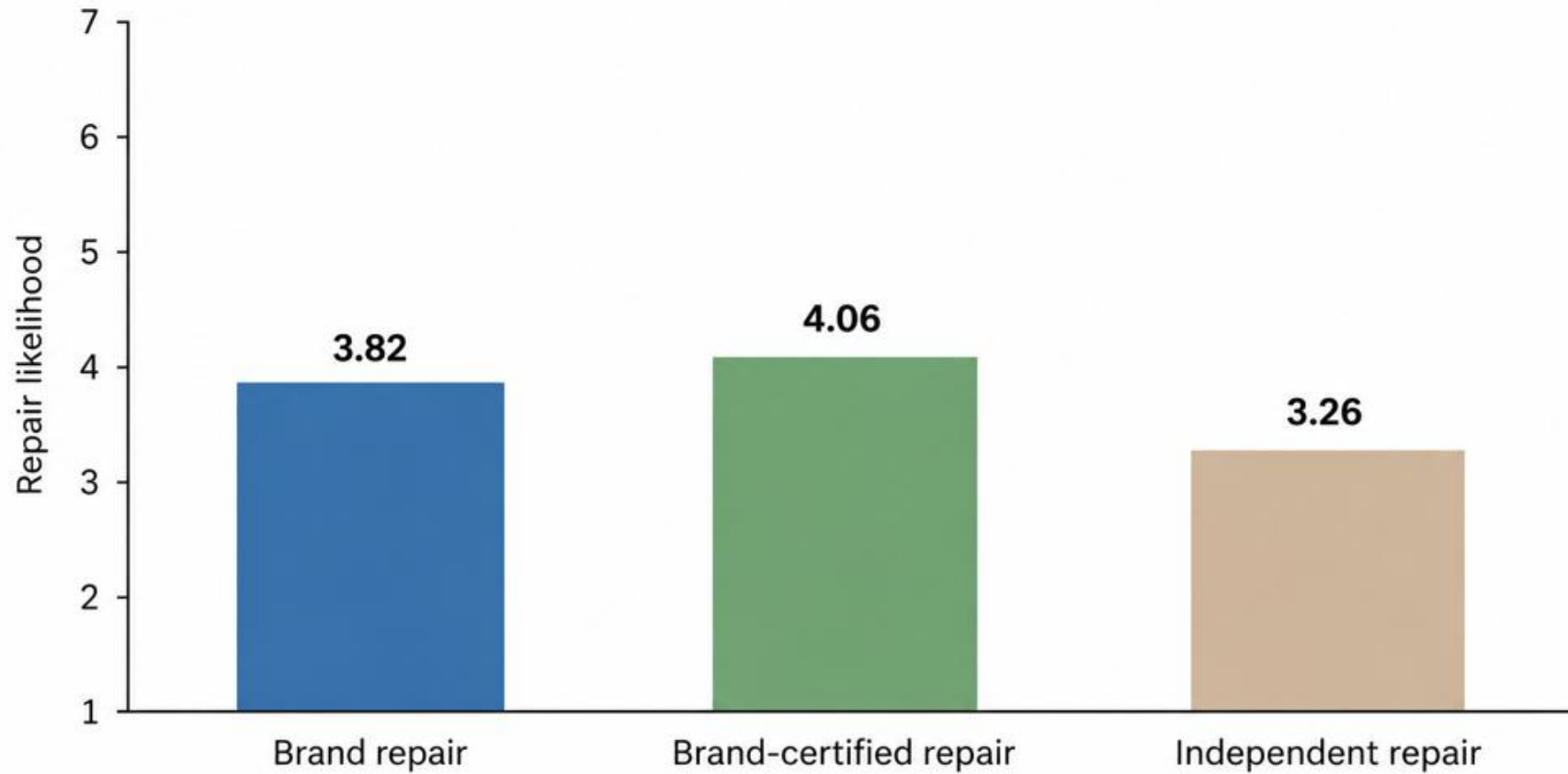


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Results

Name	Products	Est. Cost	Certifications
Teko Repair Services	Repairs products from the following brands: Apollo, Juked, TRC Sound, SystM	\$50	 apollo Certified





Consumers were more satisfied with their purchase.
They perceive the brand more environmentally friendly.

For a reusable packaging to be **more sustainable** than its single-use counterpart, it is crucial that it is **used beyond its break-even point** (i.e., the minimum number of uses necessary for a reusable packaging to be preferable than a single-use packaging; Cottafava et al., 2021).



This means consumers play a key role.

For reusable packaging to be environmentally beneficial, it needs to be used again and again. The more we reuse, the bigger the positive impact.

Refillable by bulk: Allows consumers to refill their own packaging or the brand's packaging in store or at a mobile truck.

Returnable packaging: Is returned by consumers when it is empty.



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The possibilities of application are endless

Stores



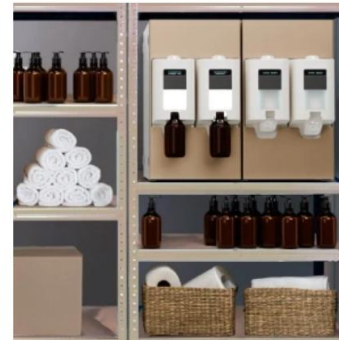
Roasteries & cafés



Packaging-free offices



Hospitality





Last weekend, you did your grocery shopping at your usual online grocery store.

Reusable packaging option	Single use packaging made from recycled materials
You noticed your retailer had introduced a reusable packaging option for some products. These products are delivered at your home in a reusable/ refillable packaging. Once the product is finished, the empty package is picked up at your place, professionally cleaned and re-filled for the next consumer. In order to make sure that the packages are returned, the retailer asks for a small deposit, which is reimbursed as soon as the empty package is picked up.	



Barriers toward reusable packaging:

- Convenience
- Hygiene
- Choice and brand diversity
- Initial cost



The CIRKLA project

- CIRKLA is a collaborative project uniting several stakeholders to achieve the requirements stated in the EU Packaging and Packaging Waste Regulation (PPWR). With a focus on the logistical infrastructure and communication, the mission is clear: Be one of the first countries in Europe to crack the code on circular e-commerce packaging.



Project goals:

- **Develop Logistical Solutions:** Show how current logistical infrastructure can be used to make circular packaging possible.
- **Develop Business Models:** Show one or several possible business models that make circular packaging possible.
- **Examine Consumer Behavior:** Examine what variables that affect consumer adoption of circular e-commerce packaging, such as incentives, communication, and convenience.
- **Examine Need for Support System:** Show what support systems that are needed to enable circular e-commerce packaging. For example, digital trackability, consumer insights, and digital interaction between retailers and other stakeholders.



RePack

Reusable packaging.

REUSABLE PACKAGING.

RePack

originalrepack.com

RePack

originalrepack.com

REUSABLE PACKAGING.

RePack

Project Members



Retail Partners



Logistics Partners



Customer Survey

Out of the 202
respondents...

97.5%

displayed a positive first
reaction to circular
packaging.

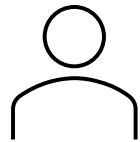
“I think it’s a great idea, there is far too much packaging used and thrown away, every time I order something I feel guilty about the resources I am wasting”

“It sounds like a fantastic idea and one that I’d wholly support. I think it is wonderful”

“This sounds like a brilliant idea. It’s new and fresh and can’t believe no one has thought of this before”

Two Issues Were Raised by the Customers

WILL IT PUT MORE BURDEN ON THE CUSTOMER?



Many were scared that more burden would be put on the customer, both in terms of **effort** and **costs**.

IS IT REALLY ENVIRONMENTALLY BENEFICIAL?



Doesn't it require more transportation?
What is RePack really made of? Is it really getting reused? Customers want to be sure that it actually makes a **positive difference**.

Twill & Co.

Secure Checkout

Your Item

White T-Shirt

£20.00

A comfortable, high-quality white T-shirt made from 100% cotton.

Total: £20.00

Delivery Options

Single-Use Packaging (£3.99)

Standard delivery in single-use packaging, delivered to your chosen address within 2–5 business days.

Reusable Packaging (£3.99)

Standard delivery in reusable packaging, delivered to your chosen address within 2–5 business days.

Twill & Co.

Secure Checkout

Your Item

White T-Shirt

£20.00

A comfortable, high-quality white T-shirt made from 100% cotton.

Total: £20.00

Delivery Options

Single-Use Packaging (£3.99)

Standard delivery in single-use packaging, delivered to your chosen address within 2–5 business days.

Reusable Packaging (£3.99)

Standard delivery in reusable packaging, delivered to your chosen address within 2–5 business days.

Reusable packaging made easy: once you want to return the packaging, just leave it by your door and we will pick it up without any extra effort.

Imagine you're ordering a new white T-shirt from Twill & Co. You find the T-shirt on the website, select your usual size, and add it to your cart. You proceed to checkout. At checkout, you're **offered two delivery options**: standard delivery in **single-use** packaging, or standard delivery in **reusable** packaging.

Choosing reusable packaging means you need to unpack your order, fold the packaging flat, and return it to a nearby drop-off point.

Online Experiment

After testing 34 (!!!) different
messages, a message
highlighting

CONVENIENCE

was the only one that increased
the intention to choose the
reusable packaging from 58% to
81%.

*“Reusable packaging made easy:
once you want to return the
packaging, just leave it by your
door and we will pick it up without
any extra effort”*

Learnings From the Online Survey and Experiments

- Customers overall like the idea of reusable packaging in online retail.
- Three barriers identified: 1) **Cost**, 2) **Effort**, and 3) **Sustainable impact**
- In **four field studies** (2nd pilot phase) in collaboration with the project members, we investigate the impact of trying to target these barriers, observing real adoption and return behavior:
 1. **Nelly and Early Bird:** Testing convenience and sustainability messages in the checkout to target the **effort** and **sustainable impact** barriers and reminders to target the **effort** barrier.
 2. **Gina Tricot and Postnord:** Testing a financial deposit to target the **cost** barrier.
 3. **Stadium:** Implementing reusable packaging for the Click&Collect orders to target the **effort** barrier.
 4. **Stadium and ICA:** Testing a gift to target the **cost** barrier.

Study Design: Nelly and Early Bird

- 1,215 RePack bags were sent out between 02/2026 and 05/2026 (originally planned: 1,500).
- Customers were semi-randomly (based on location / postal code) exposed to 1 of 3 conditions at checkout.
- Conditions: control group, sustainability, and convenience messaging.
- Approximately half of customers received a reminder for returning the packaging, while the other half did not (also based on postal codes).

"Tack för ditt köp! Dags att cirkla din förpackning. Har du redan gjort det? Då kan du bortse från detta sms. [länk]"



Study Conditions – Checkout Messages

Hur vill du ha dina saker?

Leveransalternativ

Standardleverans – Brevlåda är ~~49 SEK~~ Gratis 
gratis om du handlar för
ytterligare 301 SEK.

☒ Snabbleverans – Paketskåp 49 SEK 
Tisdag - Onsdag
 Budbee ·
Valfritt paketskåp. Bank ID kan behövas

Upphämtning vid
Västertorp spel och tobak, Störtloppsvägen 13 

☐ Snabbleverans – Brevlåda 49 SEK 
Torsdag
 CityMail · Brevlåda/dörr

☐ Snabbleverans – Brevlåda 49 SEK 
Onsdag
 Early Bird · Brevlåda/dörr

☐ Återanvändbar förpackning – Brevlåda* 49 SEK 
Onsdag
 CIRKLA ·
Förpackningen som kan användas igen

Hur vill du ha dina saker?

Leveransalternativ

Standardleverans – Paketskåp är ~~49 SEK~~ Gratis 
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ytterligare 301 SEK.

☒ Snabbleverans – Paketskåp 49 SEK 
Tisdag - Onsdag
 Budbee ·
Valfritt paketskåp. Bank ID kan behövas

Upphämtning vid
Ålidhem Coop, Ekonomstråket 7 

☐ Snabbleverans – Brevlåda 49 SEK 
Torsdag
 Early Bird · Brevlåda/dörr

☐ Återanvändbar förpackning – Brevlåda* 49 SEK 
Torsdag
 CIRKLA ·
Förpackningen som är gjord för att
återanvändas, inte för att slängas

Hur vill du ha dina saker?

Leveransalternativ

Standardleverans – Brevlåda är ~~49 SEK~~ Gratis 
gratis om du handlar för
ytterligare 301 SEK.

☒ Snabbleverans – Paketskåp 49 SEK 
Tisdag - Onsdag
 Budbee ·
Valfritt paketskåp. Bank ID kan behövas

Upphämtning vid
Uppsala C Svava Tobak, Kungsgatan 57E 

☐ Snabbleverans – Brevlåda 49 SEK 
Torsdag
 CityMail · Brevlåda/dörr

☐ Snabbleverans – Brevlåda 49 SEK 
Onsdag
 Early Bird · Brevlåda/dörr

☐ Återanvändbar förpackning – Brevlåda* 49 SEK 
Onsdag
 CIRKLA ·
Förpackningen hämtas smidigt upp vid din
brevlåda/dörr



Study Results – Checkout Messages

	Control (N = 372)	Sustainability (N = 446)	Convenience (N = 397)
Ø Order value	Baseline	+11.1%	+7.5%
Ø SKUs	Baseline	+2.0%	-2.7%
Product return	28.2% (N = 105)	29.0% (N = 115)	25.3% (N = 112)
Empty RePacks*	41	72	47
Share return/all RePacks	71.9%	61.8%	70.4%
Ø Return value	Baseline	+14.7%	-5.9%
Ø Returned SKUs	Baseline	+5.2%	-15.8%
Ø Conversion of all Early Bird	3.5%	3.6%	3.1%

Study Results – SMS Reminders

	Control (N = 372)	Sustainability (N = 446)	Convenience (N = 397)	Total (N = 1215)
Returned with reminder	21/41 (51.2%)	58/72 (80.5%)	24/47 (51.1%)	103/160 (64.4%)
Returned without reminder	20/41 (48.7%)	14/72 (19.5%)	23/47 (48.9%)	57/160 (35.6%)
Total	41/372 (11.0%)	72/446 (16.1%)	47/397 (11.8%)	160/1215 (13.2%)

Key Takeaways

- **Messaging did not significantly change packaging choice:** Selection rates were 3.5% for control, 3.6% for sustainability, and 3.1% for convenience ($p = 0.11$).
- **Sustainability messaging showed an increase in empty returns:** Empty-return rates were 16.1% for sustainability, 11.0% for control, and 11.8% for convenience ($p = 0.06$).
- **Reminders significantly increased empty-package returns:** The return rate was 16.0% with a reminder versus 10.0% without one ($p < 0.01$).

Study Design: Gina Tricot and Postnord

- 994 RePack bags were sent out between 02/2026 and 04/2026.
- Randomized checkout interface showing one of the following two options:

(A) RePack – cirkulär förpackning (+24,95 SEK)

Ett val som gör skillnad. Returnera förpackningen enligt instruktionerna så kan den cirkulera vidare.

(B) RePack – cirkulär förpackning (+24,95 SEK)

Ett val som gör skillnad. Returnera förpackningen enligt instruktionerna och du får 24,95 kronor tillbaka.



Study Results – Pant vs. no Pant

	Total (N = 994)	No pant info (N = 446)	Pant info (N = 548)
Ø Order value	-	Baseline	+6.8%
Ø SKUs incl. RePack	-	Baseline	+3.3%
Ø SKUs excl. RePack	-	Baseline	+4.2%
Ø Unique SKUs incl. RePack	-	Baseline	+4.6%
Repack/package returned	44.6% (N = 443)	37.4% (N = 167)	50.4% (N = 276)
Product return	33.9% (N = 337)	29.6% (N = 132)	37.4% (N = 205)
Empty RePacks	106	35	71
Share return/all RePacks	76.1%	79.0%	74.3%
Ø Return value	-	Baseline	+3.1%
Ø Returned SKUs incl. RePack	-	Baseline	+7.1%
Member	41.6%	41.9%	41.4%
Ø Customer age (members)	-	Baseline	-0.5 years

Key Takeaways

- On an aggregate level, the **conversion rate increases** when customers are exposed to the condition with a refund for the reusable packaging (+13.6% conversion increase for pant info, $p < 0.01$).
- **Refund information increased packaging returns:** The RePack return rate rose from 37.4% to 50.4%.
- **Most packaging returns coincided with product returns:** 76.1% of returned RePacks came back with a return. Empty RePacks were more common when the refund was communicated: 13.0% of orders versus 7.8%.
- **Slight differences in purchase and return behavior:** Orders exposed to the refund information had a higher average value, returned more overall but also more empty bags.



Lessons Learned: Key Takeaways for Retailers

- Customers are **open to the idea** of reusable packaging but lack the understanding that they are **needed to make this work** (+ keep packages for alternative use?).
- **Selection and return rates** for reusable packaging **remain low**, and **checkout messaging** had **limited influence** on customer choice.
- This needs to change since **return rates of >80% and 15-20 circulations** of packaging are required to make this work from a cost and environmental perspective.
- The most **promising ways forward** are targeted use of reusable packaging for orders with a higher likelihood of product returns, deposit systems, reminders, and in-store pickups (e.g., customers not handling package).
- Stricter **legislation and a central actor** may facilitate the journey to an industry-wide reusable packaging system!

Lessons Learned: Potential pitfalls

- A successful circular packaging system **requires investments in the development of infrastructure and systems** to manage and track packaging.
- Implementing circular packaging is a system effort, meaning that **if systems and actors are not aligned, it is likely to fail**. It can be enough if simply one actor is not onboard.
- Reaching broad adoption is likely to require continued efforts. If **initiatives are ended too early**, we are unlikely to see their full potential.
- Everyone, including consumers, retailers, couriers, and legislators are on a **learning journey** in terms of what is required to go from a linear to a circular economy.
- In a nutshell, **implementing and scaling reusable packaging remains difficult** but will become increasingly important as packaging waste continues to grow.

Thank You From Us and the CIRKLA Members in the Crowd!

Questions / comments? Let's have a discussion!



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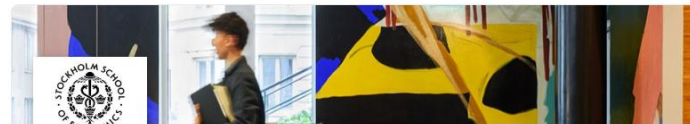
Next CFR Early Insights

November 18

Follow us on our new LinkedIn page where we will share insights and events related to our research and teaching, highlight collaborations with industry partners, and contribute to ongoing conversations about the future of retail.

LinkedIn

Det bästa innehållet Personer Learning Jobb Spel



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