

# Cross-system REUSABLE INFRASTRUCTURE in the take-away area

Pilot project in the municipality of Haar  
June – December 2023



ReFrastructure



# CONTENT

<b>1. INITIAL SITUATION</b> - Reusable for take-away	1
<b>2. REFRASTRUCTURE</b> - Our vision of a reusable infrastructure	2
<b>3. PILOT PROJECT</b> - "Haar goes reusable"	3
<b>4. IMPACT MEASUREMENT</b>	9
<b>5. FINDINGS AND RECOMMENDATIONS FOR ACTION</b>	11
<b>6. CONCLUSION</b>	13

**IMPRESSIONS**

**SOURCES**

# INITIAL SITUATION - Reusables for take-away



## POTENTIAL

**15 billion** pieces of packaging are used annually in the German catering industry, esp. in the take-away area. These could be replaced by **reusable packaging**.<sup>1</sup>



## REALITY

Despite the range of **established reusable solutions** on the German market, only 0.7% of food and beverages-to-go were sold in reusable packaging in 2022.<sup>2</sup>

The **obligation to offer reusable containers** (VerpackG §§ 33, 34), which has been in force since 2023, led to an increase in the use of reusable beverage cups to 7%. Overall, however, the rate remains low at 1.6% despite the law.<sup>1</sup>



The potential for saving single-use packaging cannot be exploited, as the parallel operation of many reusable systems causes a high level of effort for all stakeholders (esp. Inconvenience for consumers).



There is no cross-system infrastructure that can unlock synergy effects in reusable use.

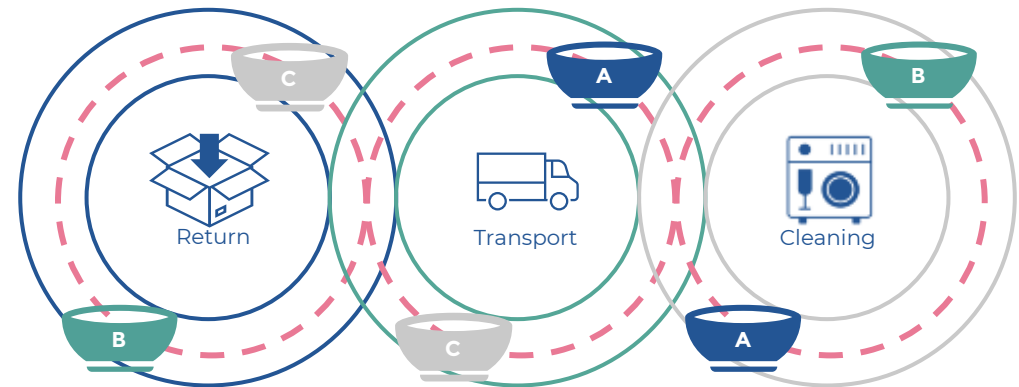
<sup>1</sup>WWF 2023: Pre-publication on "One Year of Reusable Offering: What Has Changed??"

<sup>2</sup>WWF 2023: Reusable in German gastronomy

# REFRASTRUCTURE – Our vision of a reusable infrastructure

ReFrastructure (= **Infrastructure** for **Reusables**) offers a logistics platform oriented towards the **common good**. This digitally **tracks and records** the reusable containers of all established reusable systems.

In this way, a **cross-system, regional** infrastructure is made possible across the various steps in the multi-channel cycle.



Our community is less littered and is developing a circular economy.



Municipality

We can leverage synergy effects and scale!



Providers

I can drop off the containers anywhere – just like with returnable bottles!



Consumer

The concept brings **advantages for all parties** involved in reusable use:

Consumers benefit from convenience through a **densified return network** ("Return-Anywhere"). Reusable system providers **save emissions** and **costs** in the reprocessing of containers. Municipalities **can reduce costs for cleaning public areas** by investing in independent reusable infrastructure.



# PILOT PROJECT



**HAAR** Mehr  
GEHT DEN Weg

# Aim and hypotheses

With the pilot project in the municipality of Haar near Munich, the ReFrastructure Foundation has set itself the goal of testing the idea of a **cross-system infrastructure for reusable packaging in the take-away sector** for the first time physically and digitally in a microcosm. Together with the three reusable system providers RECUP, ReCircle and Relevo, a condensed return network was simulated in Haar over a period of three months, in which reusable containers, regardless of the system offered, could be returned to all participating catering establishments ("cross-return").

The pilot will provide the necessary insights for **scaling the concept** to around 30,000 existing distribution points throughout Germany from reusable pool system providers for food and beverages to-go.



## HYPOTHESIS - RAISING AWARENESS

With a communication campaign, we can increase citizens' knowledge of reusable solutions, arouse interest in their use and make the pilot project in Haar known.



## HYPOTHESIS - FEASIBILITY OF INFRASTRUCTURE

A cross-system infrastructure for the physical take-back and reprocessing of reusable containers in the take-away sector can be implemented with the help of digital, common good-oriented software and can create simpler return options.

# Location and Consortium

## THE COMMUNITY HAAR

(Third largest community in county of Munich)#



≈ 23.000 Residents, 12.790 Households (2023)



**Workplace location with ≈ 11.000 Employees**  
High number of commuters in both directions



**Circular Economy Anchored in Municipal Guidelines - Striving for Circular City Status**



## Initiators



## System Providers



## Municipality Haar



## Science



## Gastronomy

Lokale Gastro, DEHOGA



## Sponsors

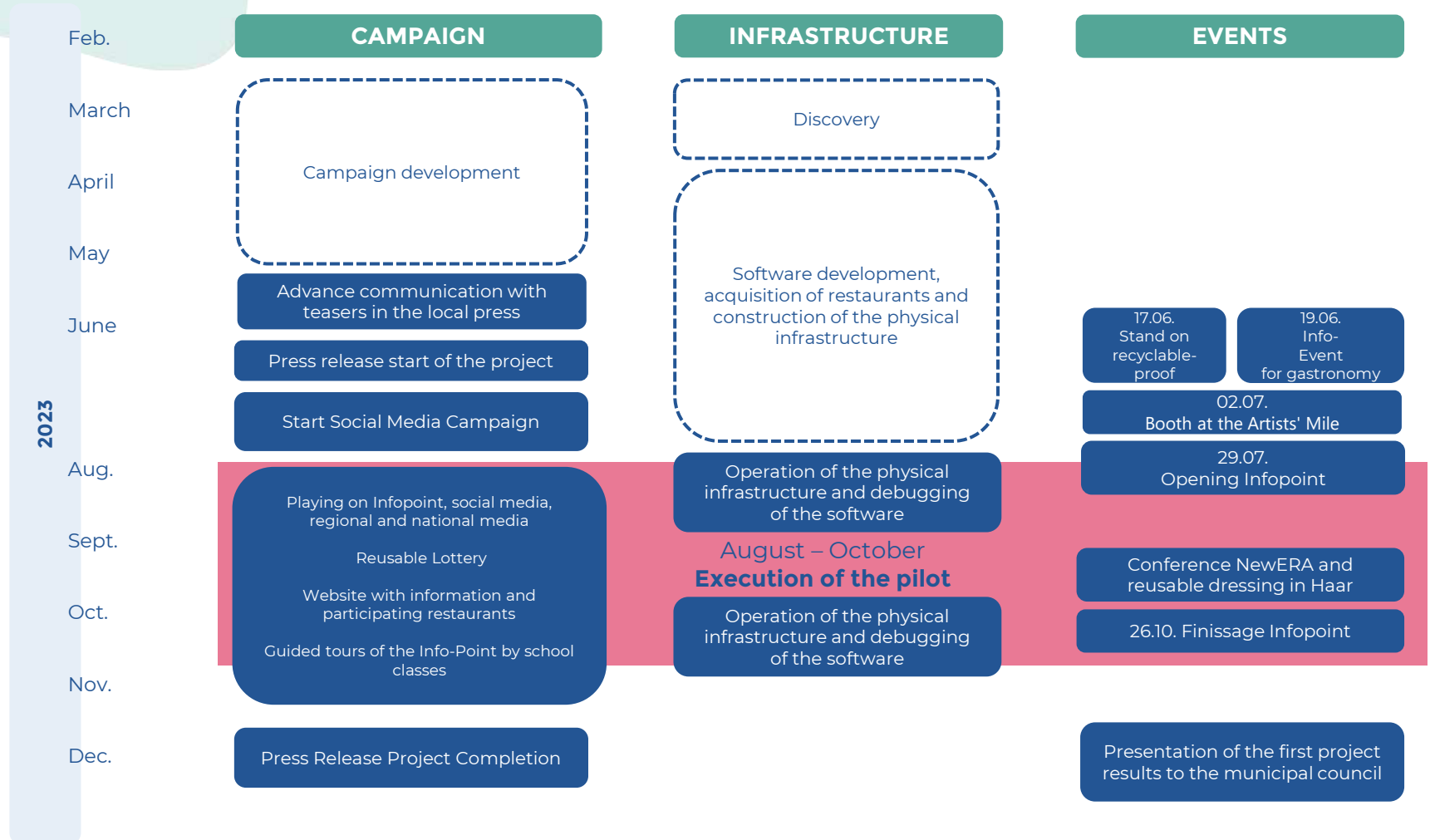


+ Philanthropie  
+ Ehrenamt

## Service



# Timeline





# Citizens' Campaign



[Go to Video](#)

## MEDIA



- Over 140,000 media reach via print and social media
- Supra-regional media interest

## EVENTS



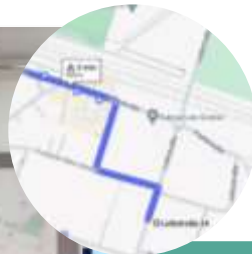
- Booths at community events
- Conference of German and European Reusable Associations



## REUSABLE-LOTTERY



- Distribution of lots for each order in reusable
- Winning food vouchers in the amount of 5-20 €



## INFO-POINT Leibstr.



- **Central point of contact** of the pilot for citizens in the Haarer shopping street - premises provided by the municipality
- Exhibition on the topics of circular economy, packaging transition and reusable packaging, **≈ 700 Visitors**
- One of **8 locations** for cross-system **return** of reusable

# Feasibility study infrastructure



Relevo



## RETURN-ANYWHERE

- Reusable containers can be returned to all participating locations in Haar, regardless of the reusable system offered

## GASTRONOMIEN



- 7 out of 10 companies that use reusable pool systems, participate in the pilot (5 restaurants and 2 bakeries)
- 1 central drop-off point at the Info-Point

= 8

Cross-system  
reusable  
return points

## DIGITAL INFRASTRUCTURE

- Development of a software for logistics management and deposit clearing
- Test under real conditions



## TRANSPORT AND RINSING

- Micrologistics within the community with a
- Testing of central flushing with an external provider



## OTHER

- Physical warehouse and inventory management

# IMPACT MEASUREMENT

DER DEUTSCHE  
DURCHSCHNITTSMONAT

 **HAAR**  
GEHT DEN  **Mehr  
Weg**

# Key figures

Transaction data collected from the 8 participating reusable locations during the pilot period show that...



- The condensed return network was not able to significantly increase reusable use.
- **319** of the 1,303 pool system containers in the system were actively used.
- **564 loans** and **440 returns** of reusable containers took place, requiring a total of 3,659 digital movements of containers.
- Individual containers have been borrowed **up to 6 times**.
- The **Info-Point** was accepted as a central point of return (80 returns).
- Café Jedermann as a "**heavy user**" of the municipality (86% of all expenses).

Documentation and collection campaigns **of garbage in public spaces in the pilot area** show that...



- Single-use waste due to take-away packaging is a **real problem** in the municipality of Haar and there is a **high potential for avoidance**.
- Mainly beverage **cups and lids** are disposed of in public areas.
- Municipalities such as Haar pay **around €140,000 annually for the disposal of single-use plastic food packaging, beverage packaging and carrier bags<sup>1</sup>**, which could instead be invested in the **operation of closed-loop packaging**.

Repeated **surveys of citizens\*** (digital and in the pedestrian zone) show that...



- Approx. 3/5 of the citizens have heard about the pilot.
- **To-go consumption patterns** have **not changed** during the pilot period.
- **Lack of return options is currently not perceived as the main reason against reusable use. Instead, obstacles arise earlier, e.g. due to a lack of supply.**
- The pilot has increased citizens' **satisfaction** with reusable products.

\* Not representative (N = 39-47)

<sup>1</sup>VKU 2020: Identification of [...] Disposable plastic products in public spaces, p. 21

TO®

# FINDINGS AND RECOMMENDATIONS FOR ACTION



# #1

**The current political framework conditions are unfavourable for positioning reusable packaging as a competitive alternative to single-use packaging in pilot projects.**

We recommend:

- Stronger enforcement of the obligation to offer reusables.
- Additional regulation (e.g. packaging tax).

# #2

**Restaurateurs are generally willing to participate in reusable cycles, but the willingness to make additional efforts (e.g. scanning containers) depends heavily on situations and the motivation of the staff.**

We recommend:

- Optimize software and processes to ensure even easier handling for restaurateurs.

# #3

**Simplified returns alone are not an initial measure to increase consumers' reusable use, but they are the prerequisite for sustainable (long-term) use of reusables.**

We recommend:

- To implement further impulses for the initial increase in reusable use.
- To rely on an existing reusable quota of over 5 percent for future pilots and to choose longer pilot periods.

# #4

**Cooperation with municipalities is essential for a reusable pilot. Municipalities are interested in such circular models as a supplement to waste management operations.**

We recommend:

- Close networking with local stakeholders.
- Examination of the feasibility and financing of a municipal operator model ("reusable collection").

# CONCLUSION



*"Tighter regulatory is essential to help pilot projects like ours succeed at scale and make reusable packaging the new standard."*

**Tilmann Walz**  
ReFrastructure

## Practice instead of theory

In the municipality of Haar, the ReFrastructure Foundation has proven that a cross-system infrastructure...

- is feasible.
- cannot increase the proportion of reusable products on its own.

Strong local effects – increasing awareness among citizens and imparting knowledge – were achieved in particular through the accompanying campaign.

The **first cross-system** pilot in Germany and Europe provides important insights for all stakeholders who intend to implement follow-up pilots and scale reusable infrastructure.

The project has a lighthouse character and has also achieved **international industry recognition**, for example by hosting the general conference of the European reusable association, New Era.

.The results provide inspiration for the Reusable conveyance in **other packaging industries**, esp. eCommerce and food retailers.

*„Let's go the short way towards  
reusable together!“*



**Ines  
Vanlangendonck**



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# IMPRESSIONS



## **VKU 2020:**

### **Determination of quantities and costs for the collection and disposal of single-use plastic products in public spaces**

Retrieved December 2023 from:

<https://www.vku.de/presse/pressemitteilungen/archiv-2020-pressemitteilungen/einwegplastik-und-zigarettenkippen-in-der-umwelt-kosten-kommunen-jaehrlich-700-millionen-euro/>

## **WWF 2023:**

### **Pre-publication on "One Year of Reusable Offering: What Has Changed?"**

Retrieved January 2024 under:

<https://www.wwf.de/fileadmin/fm-wwf/Publicationen-PDF/Plastik/Ein-Jahr-Mehrwegangebotspflicht-Erste-Ergebnisse-der-WWF-Marktanalyse.pdf>

## **WWF 2023:**

### **Reusable in German gastronomy**

Retrieved January 2024 under:

<https://www.wwf.de/fileadmin/fm-wwf/Publicationen-PDF/Plastik/WWF-Erhebung-Mehrweg-in-der-deutschen-Gastronomie.pdf>

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