

Reusable utensils

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement GA101037053



01 BASIC PROJECT INFORMATION

Project name	Reusable utensils
Partners involved	Brussels Airport Company Autogrill by Avolta Haval
Implementing airport / site	Brussels Airport
Period tested	Oct-Nov 2025
Project lead / contact	BAC

02 OBJECTIVE

What are we trying to solve or tackle with this project?

Gain operational experience how reusable cups can replace single-use cups in an airport terminal while remaining operationally workable for food and beverage units, passengers and logistics teams.
The project addresses waste reduction, EU single-use plastics pressure, passenger acceptance and return behaviour.

Success criteria (optional):

Reduce single use cup waste and replace by durable alternative
Measure impact of deposit on return rates
Capture passenger experience and feedback
Gain operational experience for full scale return system

03 APPROACH (HOW WE TESTED)

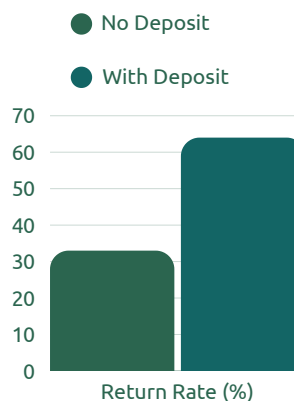
Test set-up & method

Single-use cups were replaced by reusable cups in two food and beverage units in the Terminal A at Brussels Airport for two months.

Customers were informed on this shift to re-usable cups, which includes the 'how to return the cup'.
Used cups are collected, transported and washed off-site, and returned to the F&B units in the regular logistics flow.

During the trial return rates were monitored, and a passenger survey assessed acceptance, hygiene concerns and willingness to pay.
The trial ran in two food and beverage units over two phases: one month without deposit and one month with a deposit fee.

Data & measurement



KPIs:

Impact of deposit on return rate
Passenger Experience (survey)
Waste savings: each single use cup creates 12g waste

Risks & mitigations

Passenger feedback was positive overall
Main concerns are with hygiene and more clarity in communication

Adding deposit had a positive effect on return rate, additional actions will have to be taken to have a self sustaining system.

Logistics flows are not adequate for full circular process.

Limitations

The 64% return rate is a major improvement but below the roughly 85% threshold considered self-sustaining. The PoC covered only two F&B units and two months, so full-scale economics and logistics still needs additional validation.

04 RESULTS & IMPACT

Key results

The reusable utensils project showed that reuse is feasible in the terminal but depends strongly on return behaviour and communication. Return rates increased from 33% without deposit to 64% with deposit.

Passenger feedback was generally positive, though hygiene and process clarity remain concerns. Because reusable products require more material and energy upfront, the current return rate is still below the estimated 85% self-sustaining threshold.



05 RATINGS (QUICK ASSESSMENT)

Deployment Approach

How standardised is the solution: can it be deployed off the shelf, or does it require extensive customization?

Off The Shelf  Custom-Built

Investment Magnitude

From low-cost deployment to major investment.

Low Investment (less than €10k)  High Investment (more than €15mio)
OPEX ☐ CAPEX

Sector Readiness

From non-existing or emerging standards, regulations, and certification pathways to fully established industry practices.

Emerging Framework  Established Framework

Innovation Maturity

How does the solution score in terms of maturity, from low TRL experimental/pilot-stage to high TRL market-ready.

Experimental  Market-Ready

Operational Impact

Does the innovation deliver targeted improvements or rather drastically transform processes and/or operations.

Incremental Improvement  Transformational Change

Notes

A deposit clearly improved returns, but 64% is not yet enough for a self-sustaining system. Passenger acceptance is promising: survey feedback was positive, with hygiene concerns and willingness to pay a €1.6 deposit. Scale-up needs robust logistics, permits, partner roles and communication.

06 NEXT STEPS / RECOMMENDATION

Recommendation:

Adapt and continue: keep testing reusable cups, but improve return rates, logistics and communication before scaling terminal-wide.

Next steps:

- 1) Refine deposit and return process to target higher return rates.
- 2) Define partner roles, permits, washing and logistics.
- 3) Build a scale-up business case using waste reduction, passenger feedback and cost data.