

Developing a Circular Cup System at Schiphol Airport

Project background

The global shift towards sustainability has spotlighted the environmental implications of disposable takeaway coffee cups, particularly their contribution to landfill waste and ocean pollution. This report delves into the pressing challenge of reducing disposable cup waste at Schiphol Airport, especially in light of the impending Dutch regulations effective from 1 January 2024, which prohibit establishments from offering disposable plastic cups for on-site consumption.

Faced with new regulations, How to create a feasible, viable, and sustainable cup system that passengers are willing to use and aligns with business interests at Schiphol Airport?



CupMates: Journey to a Zero-Waste Future

Cupmates provides a reusable cup service enriched with gamification for airport passengers, offering a smooth and captivating experience. This concept imagines the cup as a fellow passenger named **Mx.Cupmate**, setting out on an eco-aware journey through the airport, blending metaphors with game elements. When customers start using the Cupmates cup, it's similar to **assisting Mx.Cupmate in initiating their zero-waste journey at Schiphol Airport**. Each return box serves as a landing point for Mx.Cupmate, and the proper return behavior of consumers ensures a smooth landing for Cupmate. As a token of encouragement and commemoration, every consumer using the Cupmates service can scan a code to access a weblink, receiving a special sustainable electronic boarding pass of Mx.Cupmate. This can be shared on social platforms to commemorate their memories at Schiphol Airport.

How the system works: Customers receive cups with a branded cup sleeve embedded with RFID tags and pay an initial deposit. After use, consumers can conveniently return the cup to a smart return box equipped with an RFID reader hardware and electronic payment system. By simply swiping their card at this box, their deposit is refunded. The used cups are then gathered by the cleaning team and taken to a dedicated cleaning facility within the airport. Using professional dishwashers, the cups are thoroughly cleaned and subsequently redistributed to various airport stores.



Cup design



Smart return box

Promotional poster



Standeers



Billboards



Weblink accessed by scanning the QR code



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