

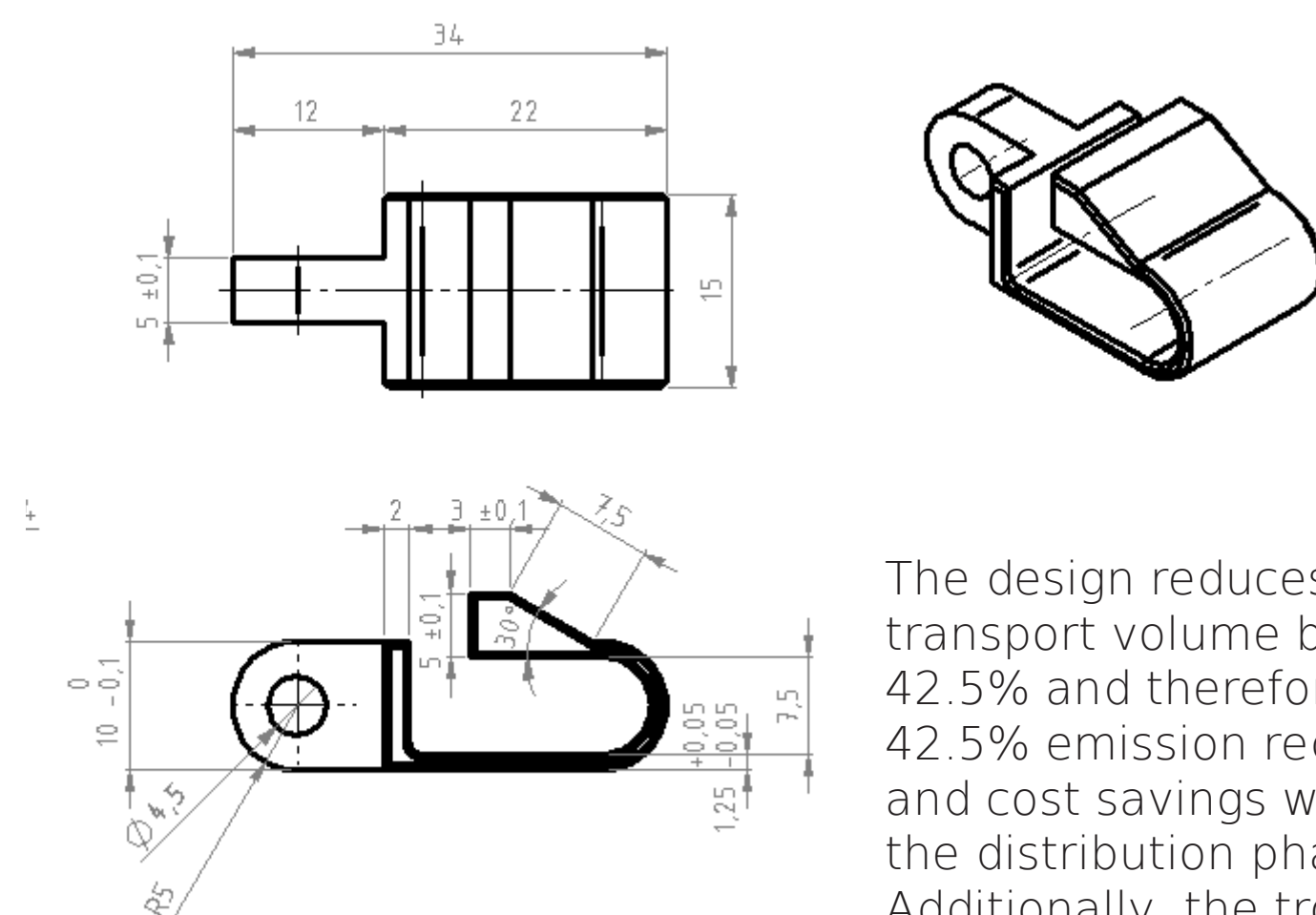
Reframing the Trolley

An innovative foldable trolley design that minimizes transport volume, cuts costs, and supports a more sustainable airline catering system.

Airline catering trolleys play a crucial role in in-flight service and logistics. However, current trolleys are shipped fully assembled, resulting in the inefficient transport of large volumes of air. This leads to high shipping costs and a significant environmental footprint, which conflicts with the aviation industry's growing focus on sustainability and cost optimisation.

Project goal

The goal of this project is to develop an innovative airline catering trolley design that can be transported as a flat-pack solution. This allows more trolleys to be shipped in the same volume, while maintaining strength, safety, and usability during assembly and operation.



Results

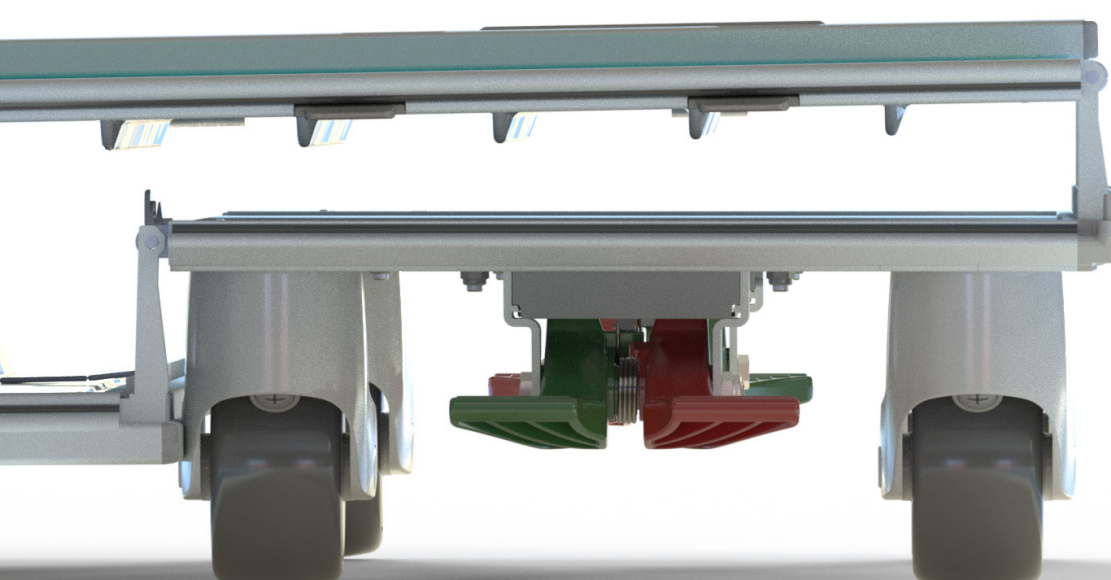
The final result is a re-engineered flat-pack trolley, based on the original Driessen trolleys that can be folded into a flat package, with the use of hinging snap-fit corner pieces. This simplistic design ensures that the trolley remains lightweight.

42.5%
volume reduction

The design reduces transport volume by 42.5% and therefore also 42.5% emission reduction and cost savings within the distribution phase. Additionally, the trolley can be manufactured using existing production facilities, enabling implementation without major investments in new equipment.

Advantages

The flat-pack trolley meets strict certification standards, is easy to assemble without tools in under five minutes, remains airtight and lightweight, and fits standard galley dimensions. Its fool-proof design ensures safe and intuitive handling.



Wendy Pruppers
Flatpack Redesign Of The Airline Catering Trolley
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Integrated Product Design

Committee

Ir. R.G.H. Bluemink
Ir. E.J.J. van Breemen
S.L. Gomez
Company
Driessen Catering Equipment BV.