



Shopping Cart of the Future

International Design Project Fall 2018



POLITECNICO
MILANO 1863



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**UNIVERSIDADE FEDERAL
DE SANTA CATARINA**

Produce a more versatile personal shopping, able to travel longer distances.

- Affordable (production cost < \$50)
- Storage volume (at least 2.5 ft³)
- Weight capacity of 45 kg

Mission

International collaboration is key to think out of the box and innovate our product



Seleziona tutte le caratteristiche e gli attributi del design che ti potrebbero interessare nella progettazione di un carrello per la spesa.

- Compatibile con scale e ascensore
- Facile da trasportare
- Pieghevole

Customer Needs

Understand our market, what do they want ?

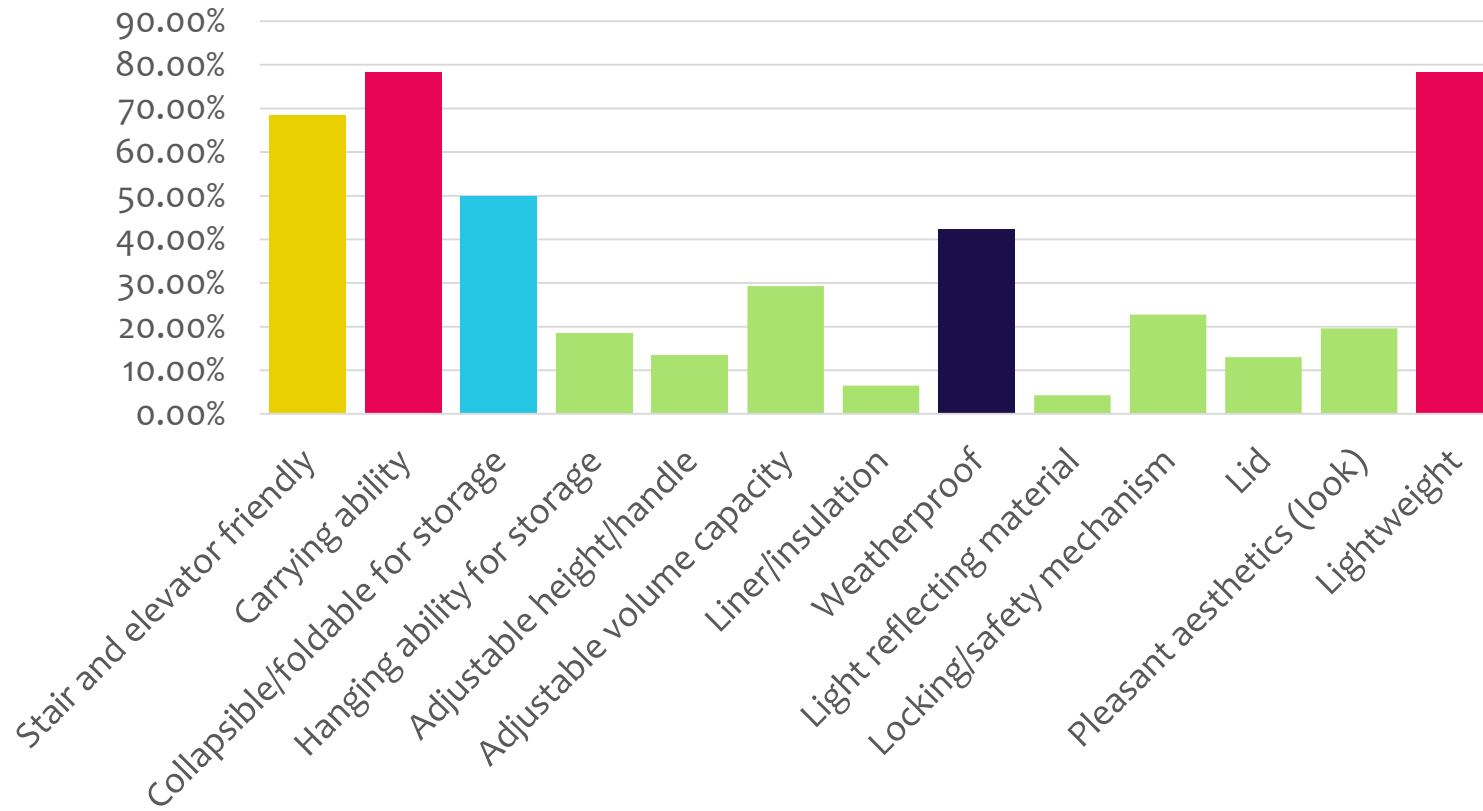
Urban adults living in cities

- Easy to use
- Lightweight
- Waterproof
- Foldable
- Stair and elevator friendly
- Aesthetic

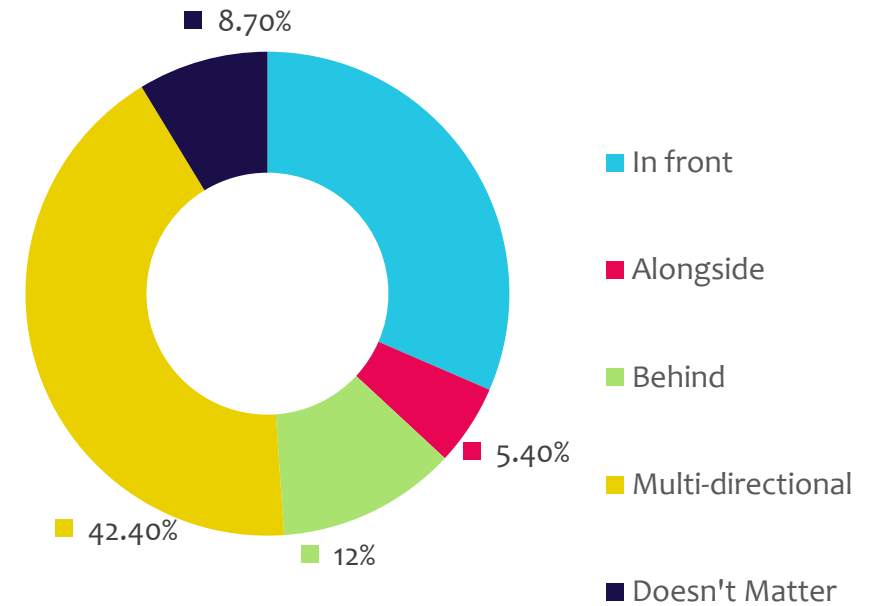
Survey Results

From our 92 participants

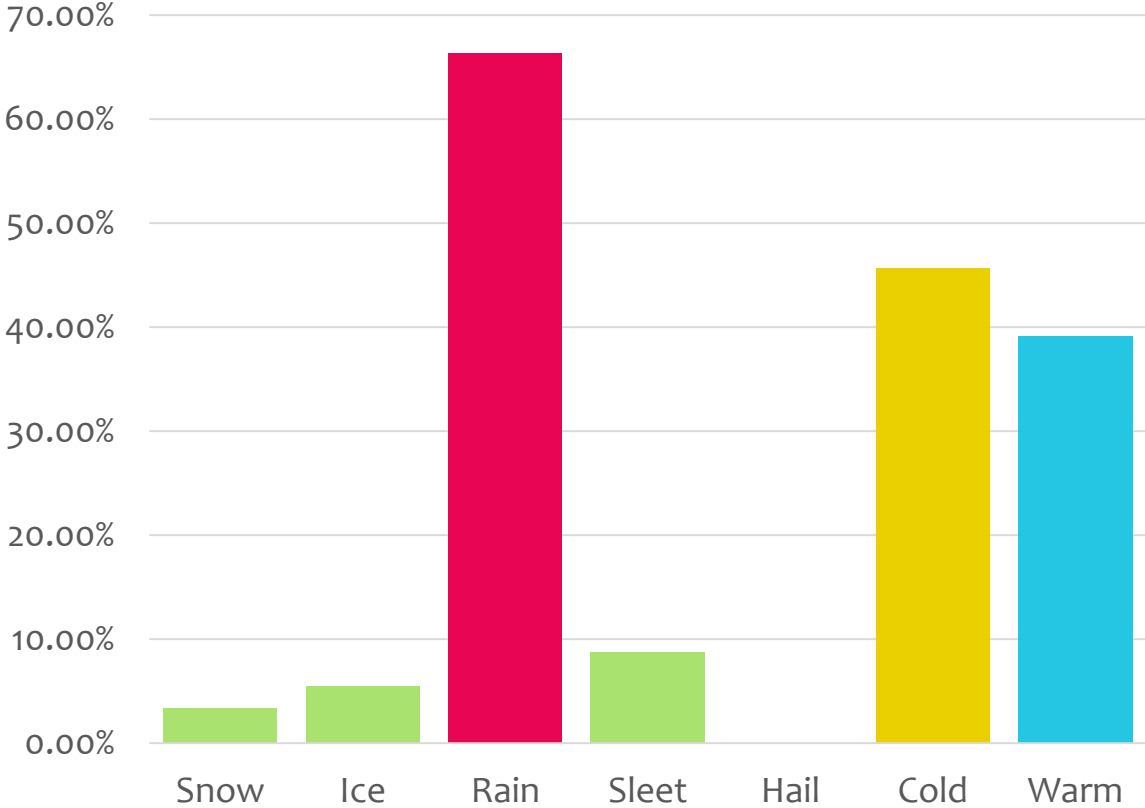
Design features and attributes



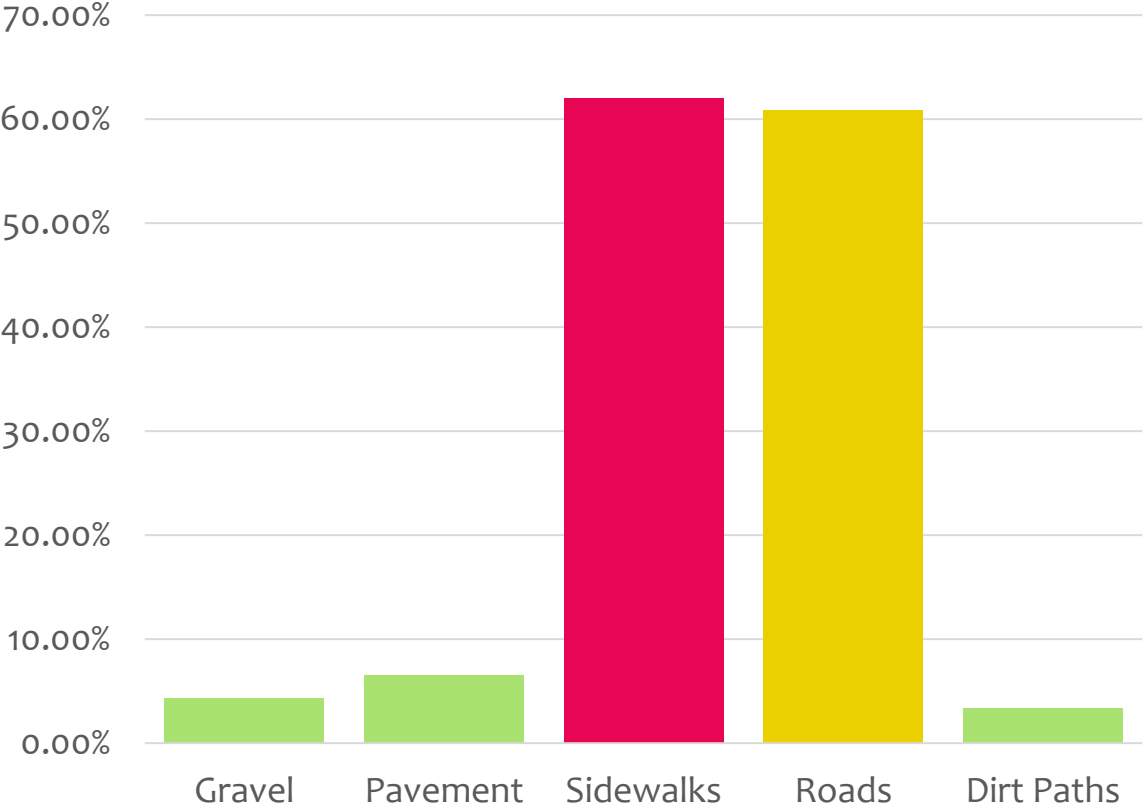
Control of the Cart



Weather Conditions



Terrain



Solutions to the requested features and materials

- 360 ° rotating wheels and Triple-Wheels
- Rubber tires
- Use of aluminium
- Locking mechanism to store easily
- Bag made of trap

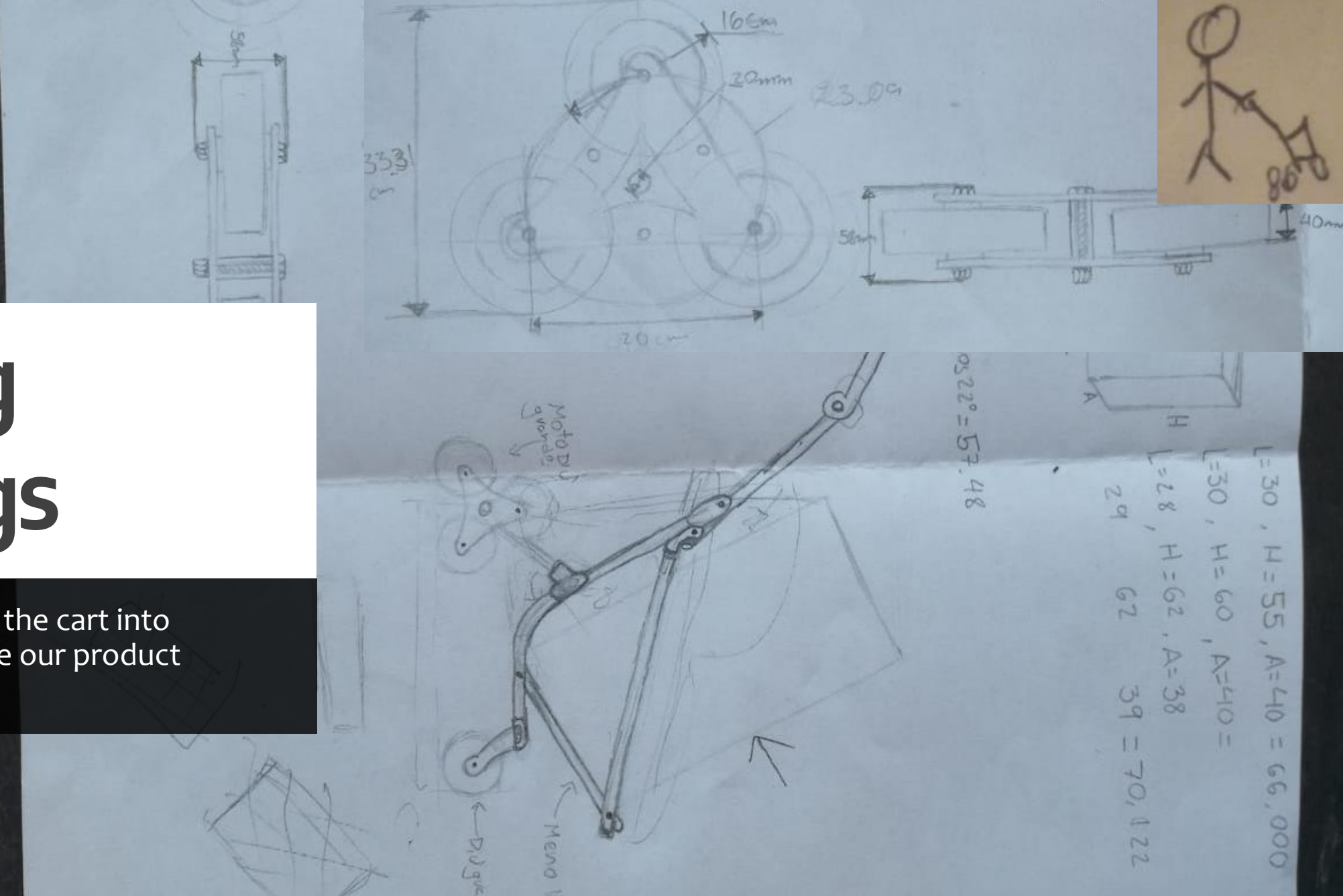
A background image showing several colorful pipes (red, yellow, green, blue) stacked together. The pipes are of various diameters and are arranged in a way that creates a sense of depth and color contrast.

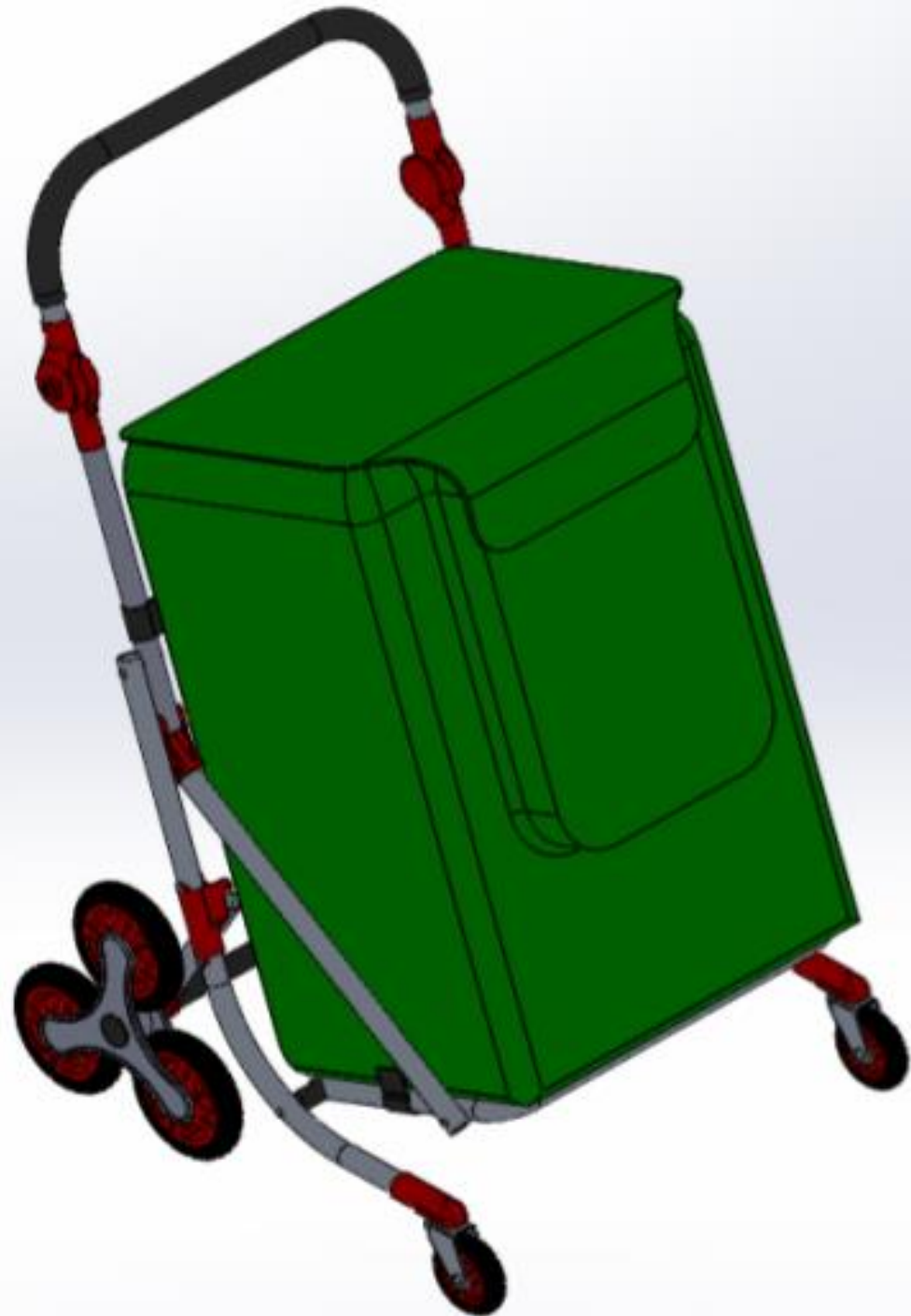
Design Approach

Hierarchy of the features and solving problems

Working Drawings

The evolution of shaping the cart into sketches to conceptualise our product

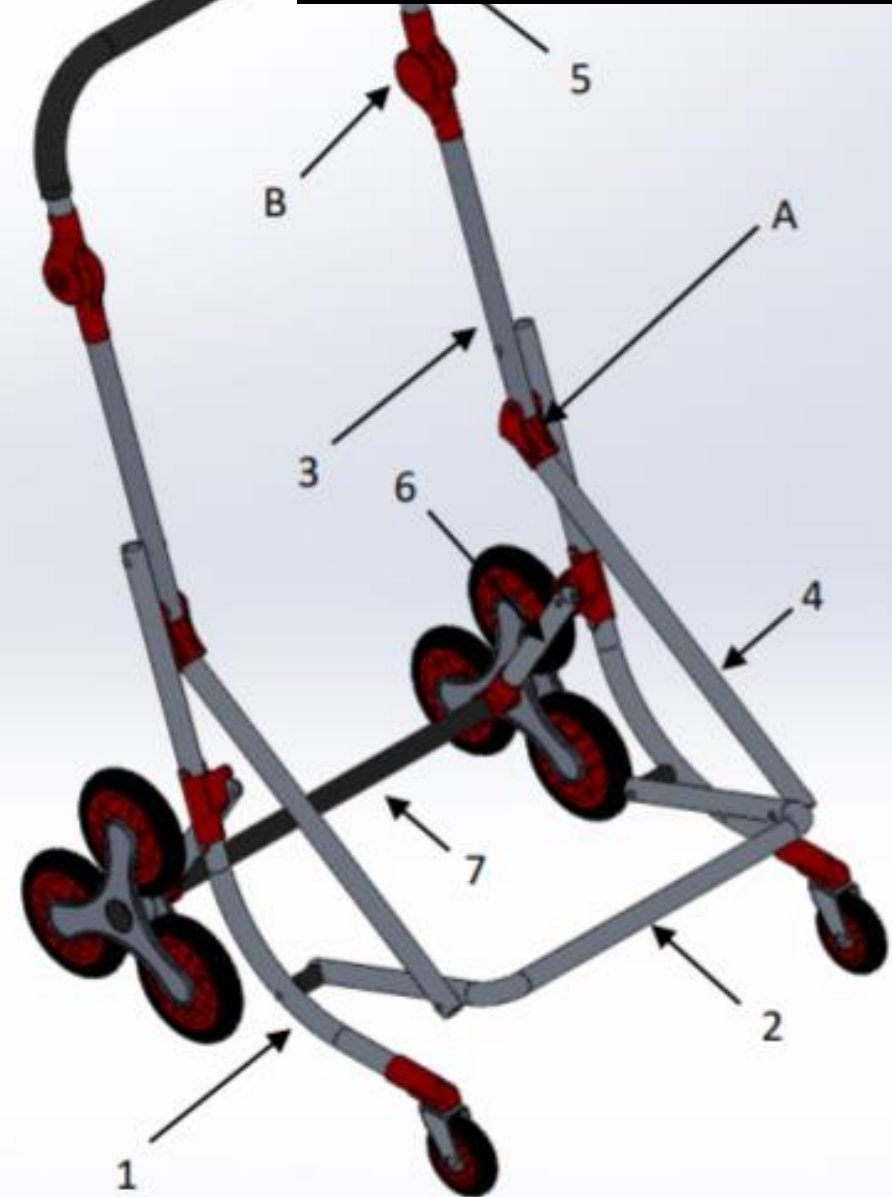
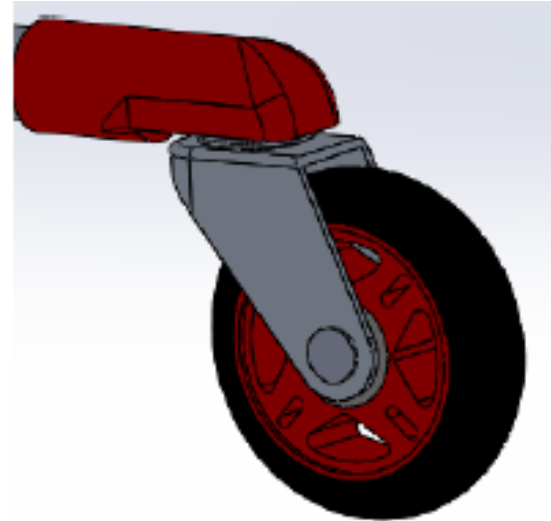
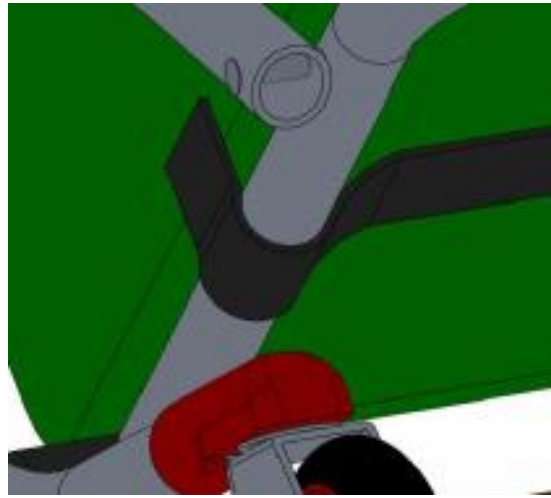




Prototype working mechanism and engineering analysis

Prototype of the cart using SolidWorks Assembly

Frame, Junctions and Wheels



Cost Analysis

ITEM	PRICE
Aluminium tubes	15 €
Front wheels	7 €
Rear wheels	13 €
Tarp	9 €
Joints and accessories	3 €
TOTAL	47 €



Thank You

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