



The water kettle that gives older people their independence back

Florien Verduyn





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INTRODUCTION

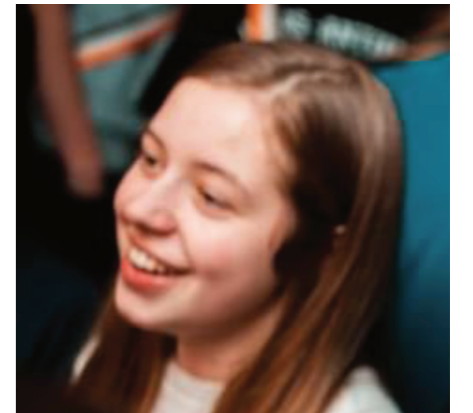
Designer

Hi there! My name is **Florien Verduyn** and I'm studying Industrial Design at Ugent University. I am passionate about design and I'm constantly learning and growing in my understanding of the principles, techniques, and technologies used in the field.

For my first project, I designed a **water kettle** that helps older people who have arthritis. I was responsible for conceiving, prototyping, and refining this design to meet the needs and preferences of the target audience.

Arthritis is a degenerative joint disease that can cause pain, stiffness, and difficulty with movement and dexterity. In that way I mainly focussed on designing a water kettle that is easy to use and handle, and that minimizes the need for impractical or painful grasping or reaching movements.

Hopefully, this water kettle can actually **help** people so they regain their independence.

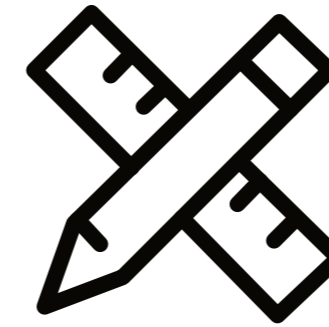


Project overview

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Design and prototype a user friendly and sustainable product

Main criteria



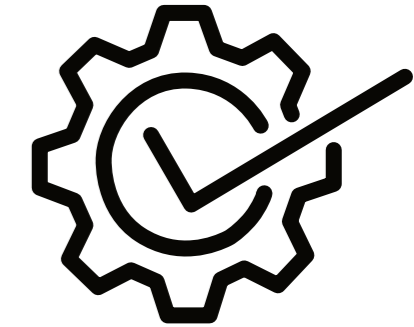
Design



Feasibility



Sustainability



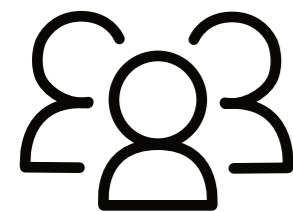
Usability

Moodboard



Target audience

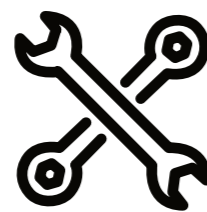
Context



Seniors (60+)



Cooking, hot drinks



External energy source



Kitchen, living room, bed room,...

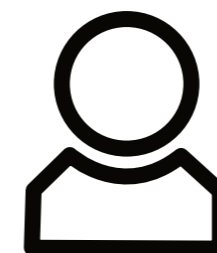


Pleasant talk with friends

Research

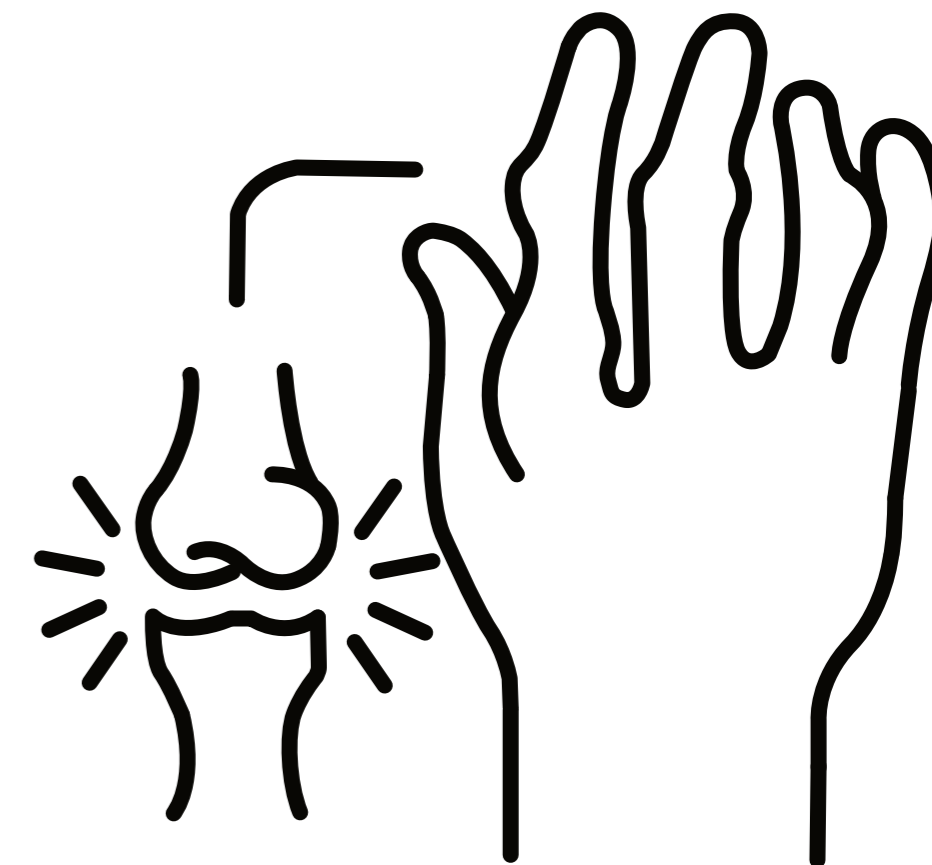
What?

Arthrosis or osteoarthritis is caused by wear and tear of the cartilage at the joints. It usually occurs because of aging or intense use of the joints during sports or other activities. Arthrosis can attack any joint, but it's usually present in the knees, hands, hips and neck.



Who?

Arthrosis affects an estimated 10% of the Belgian population in varying degrees of severity. It's more often diagnosed to elder people. Almost 80% of people over the age of 70 are affected by this.



Persona

“

I would like to have a product that is lighter and offers me more stability so I can make coffee by myself again.

Gerda Verstraete

- 86 years
- Retired
- Living together with her husband
- 2 children
- Lives in Menen

Frustrations

- Uncomfortable handles
- Too heavy
- Unstable
- Head transmission
- Too small buttons



About her

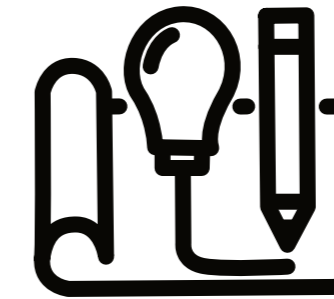
Gerda is retired and loves spending time with her friends. Unfortunately, she suffers from arthrosis, so it is difficult for her to raise heavy things and to execute tasks that require fine motor skills. Because of that, cooking and making coffee isn't that easy for her. Her husband is also less mobile so he can't help her either.

If she wants to pour hot water, she has a tendency to grab the side of the electric kettle with her other hand for more stability. This gives her not enough support and can be dangerous due to the hot parts.

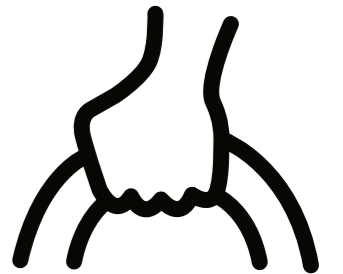
PRODUCT IDEATIONS

Goal

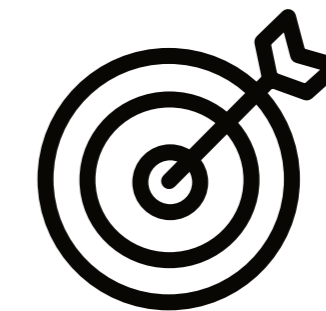
To create a solution that will help older people with arthrosis, this product ideation should consider the unique challenges and needs of this population. I made a lot of different prototypes to eliminate the pain points of a normal kettle, such as handles, the spout, switches and some extra details.



One potential design feature for a water kettle geared towards people with arthrosis is a lightweight and ergonomic handle. To ensure the stability, I added an extra handle. This would make it easier for people with limited hand strength or mobility to hold and pour the kettle.

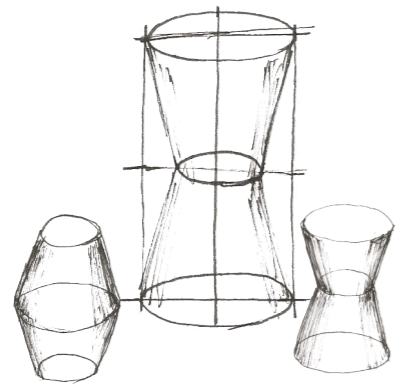
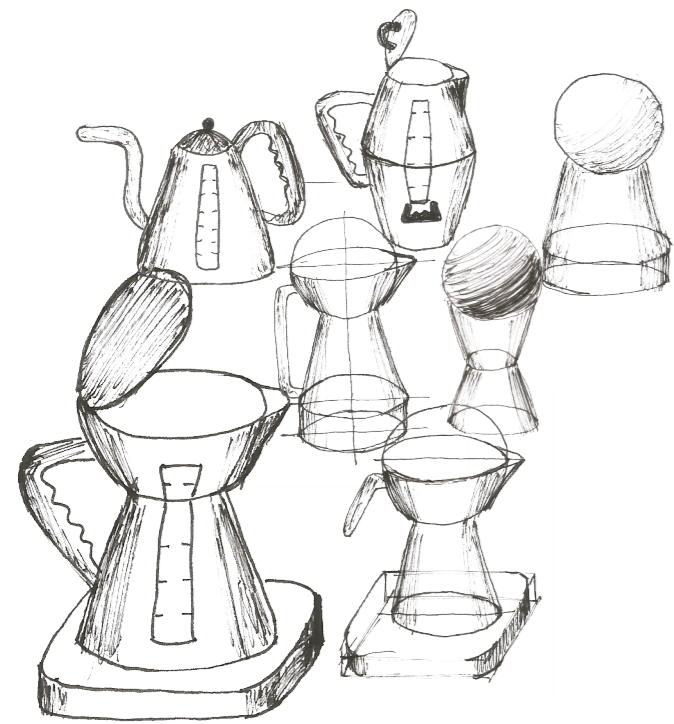


Another important consideration is the spout of the water kettle. It should be designed to allow for a smooth and controlled pour, to minimize spills and accidents. That's why this spout has a narrow and elongated design.

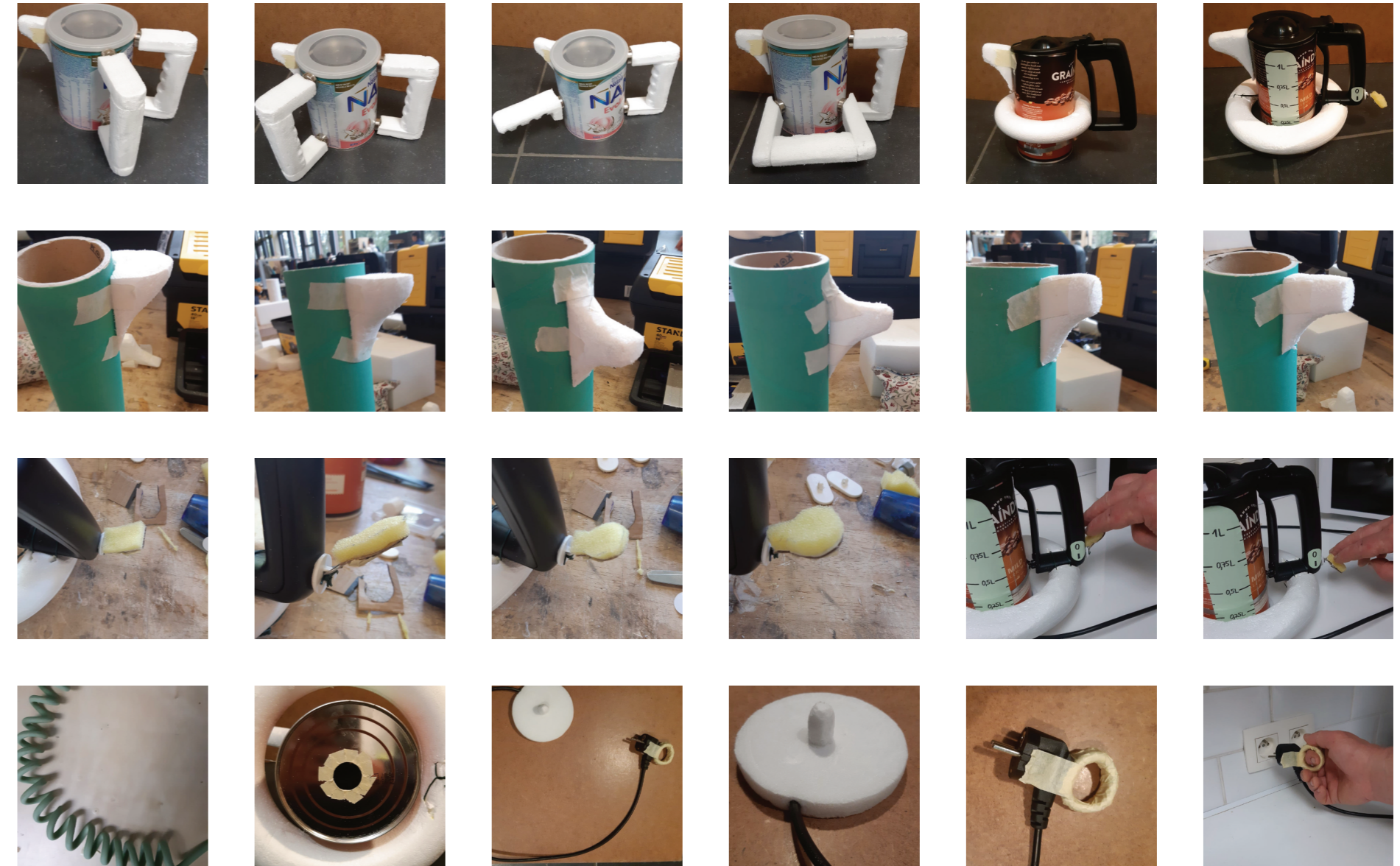


Overall, the goal of a water kettle designed for people with arthrosis should be to make the process of boiling and pouring water as easy and effortless as possible, while still maintaining high performance and durability.

Sketches



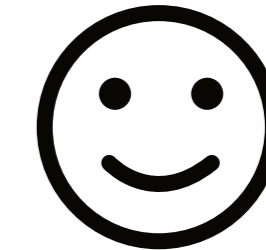
Some prototypes



FINAL DESIGN

Achievement

The process of making this kettle involved researching the needs of people with arthritis, coming up with ideas, creating conceptual sketches, and developing a prototype. Each of these steps were challenging, but when everything was successfully completed, it gave a great sense of accomplishment and satisfaction.



What I hope to achieve is to see people with arthritis use the product and hear how it makes their lives easier. If the goal of developing a user-friendly water kettle that meets the needs of people with arthritis is achieved, it would be a great source of achievement and fulfillment as a designer.





Thanks for your time!

Florien Verduyn

