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INTRODUCTION

This book introduces the Philosophy of *Slow Design*, using examples of existing *Slow Design* products as well as new *Slow Design* concepts. The driving question is: 'How to use *Slow Design* to create sustainable products?'. As product attachment is an important element of the answer the book will also tackle the connection between *Slow Design* and product attachment that would support creation of more sustainable products.

The idea for this book appeared during the course of a master's thesis at the Technical University of Delft, in cooperation with Philips Research in Eindhoven. The method employed is based on the SlowLab's of Amsterdam *Slow Design* principles, developed by Carolyn F. Strauss and Alastair Fuad-Luke.

In addition to providing an introduction into *Slow Design* and an overview of the existing *Slow Projects*, the goal of this book is to inspire designers and other creative professionals to apply the seven main *Slow Design* principles to their products. The application of these principles is demonstrated using two electronic products currently available to the consumer.

The first example is a Philips tea maker to which all seven *Slow Design* principles have been applied in order to generate new concepts that can culminate in a *Slow Product**. This process can be summarized as a *Slow Re-design*.

The starting point for the second example was a wish to create an entirely new juice machine from scratch. In this case no specific juicer was used as the basis for a redesign. The *Slow Design* principles were applied in order to create a whole new juicing experience for the user.

* See following page for a more detailed explanation of the concepts of *Slow Design* and *Slow Product*.

SLOW DESIGN

What is *Slow Design*? Is it about designing things at a snail's pace?

This question rises quite often in conversations about *Slow Design*.

The answer is actually "no": *Slow Design* is not about forcing people to do things at a lower speed or about being less productive. Instead it is a design philosophy that aims at supporting people in doing things at the right time and the right speed, in order to give them time to understand and reflect about their actions. [Hornore, C (2004)] *Slow Design* Products are designed to support social, cultural and environmental, sustainable design.

Alastair Fuad-Luke defined this as follows: 'The guiding philosophical principle of *Slow Design* is to re-position the focus of design on the trinity of individual, socio-cultural and environmental well-being. Slower human, economic and resource flow metabolisms are integral to the principle of well-being.' [Fuad-Luke, A., 2004]

The goal of a designer should be to create products that are understandable and at the same time provide the opportunity for discovery. If the user invests time to understand, observe and reflect about the interaction with the product, this goal is archived.

A good example of a product that is an antithesis of a *Slow Product* would be a fully automatic coffee machine, found in many offices. Only one button has to be pressed and few seconds pass before a hot drink appears in a cup. The user is not involved in the process and cannot see what happens during the short moment when the beverage is being made, either nervously waiting or engaging in a separate activity. A *Slow* coffee machine would involve the user, by, for example, making the process more transparent and enjoyable to observe or by actually physically engaging the person.

Slow Design supports people in leaving multitasking and moving towards a more conscious use of products, with an additional benefit of a more sustainable product usage.

What is *Slow Design*?
Is it about designing at
a snail's pace?



SLOW DESIGN PRINCIPLES

Carolyn F. Stauss, founder of the SlowLab of Amsterdam, and Alastair Fuad-Luke both started to define the term *Slow Design* and to explore this topic approximately 10 years ago. In 2008 they published the paper 'The *Slow Design* Principles - A New Interrogative and Reflexive Tool for Design Research and Practice', describing the following six *Slow Design* principles they have developed, with which they wanted to '... posit a new evaluative tool to encourage design practices to orientate towards social, cultural and environmental sustainability under the rubric of '*Slow Design*'.'

REVEAL | EXPAND | REFLECT | ENGAGE | PARTICIPATE | EVOLVE
(www.slowlab.org)

During interviews and creative sessions of the maser's project it became clear that rituals are important element of the process slowing down, relaxing and reflecting. **RITUAL**, thus, became the seventh *Slow Design* principle. Based on these seven principles the concepts for the book were developed. After exploring each principle, a combination of the essence of the given principle and the product goal became the inspirations for the concepts. As the SlowLab's definition of the principles can be at times somewhat abstract, you will find descriptions of all the principles, with some extra information, referring more to a product design approach (on the right, highlighted in **green**).

RITUAL

Embracing ritual beyond the commodified time of industrial production. These designs offer diverse expressions of ritual and different time experiences. **Using rituals to create a better user experience**

REVEAL

Slow Design reveals spaces and experiences in everyday life that are often missed or forgotten, including the materials and processes that can easily be overlooked in an artefact's existence or creation. **Creating awareness, uncovering the essence of a product.**

EXPAND

Slow Design considers the real and potential 'expressions' of artefacts and environments beyond their perceived functionality, physical attributes and life spans. **Give a bigger picture: zoom in (what is it made of) and zoom out (where does it come from).**

REFLECT

Slow Design artefacts and environments induce contemplation and 'reflective consumption'. **Provide time for the user to think about his actions, visualize processes and create narrative products.**

ENGAGE

Slow Design processes are open-source and collaborative, relying on sharing, co-operation and transparency of information so that designs may continue to evolve into the future. **Do-it-yourself concepts; the user becomes a designer; The user is active in the creation of the product.**

PARTICIPATE

Slow Design encourages users to become active participants in the design process, embracing ideas of conviviality and exchange to foster social accountability and enhance communities. **Create design opportunities so that the user can re-design and re-configure the product. The user is active during the use of the product.**

EVOLVE

Slow Design recognizes that richer experiences can emerge from the dynamic maturation of artefacts, environments and systems over time. Looking beyond the needs and circumstances of the present day, *Slow Designs* are (behavioural) change agents. **Products are changing or growing over time.**

SLOW DESIGN EXAMPLES

All examples are defined by SlowLab as *Slow Design Projects* (Strauss, C. and Fuad-Luke, A. (2008))

REVEAL



GPS Drawing (Jeremy Wood)
'The GPS artist's project is an investigation of how technology enables us to identify and record new aspects of our journeys and of our surroundings. The project leverages 'digital mark making' using GPS satellite navigation technology to automatically record where an individual has been as a digital dot-to-dot line.'

EXPAND



How stuff is made (Natalie Jeremijenko)
'Natalie Jeremijenko leads an academic initiative for design and engineering students to trace the histories of everyday products, creating encyclopaedic entries that comprehensively expose the life of the products, from where materials are sourced to the labor conditions of those who manufacture them.'

REFLECT



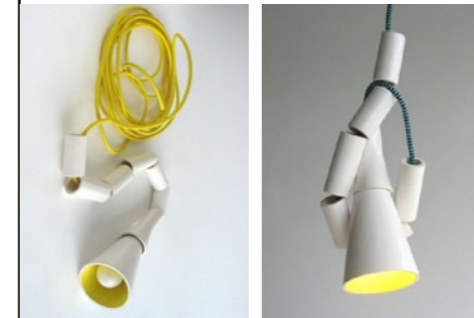
Life is Suite (Raw Nerve)
'The design collective created what we think must be the sweetest and slowest sofa in the world. Life is Suite is their loving revival of a run-down sofa. Members of the collective rescued the dilapidated piece of furniture and brought it into their studio, where over time they began to contemplate its former life.'

ENGAGE



Human chair (Martin Ruiz de Azua)
'A group of people sitting on each other's knees, propped one on top of the other in friendship and fragile dependency. With this simple project, Ruiz de Azua has given the precious gift of immaterial substance to our over-material world: a design 'object' that has no object unless people work together to create it in amity and fun.'

PARTICIPATE



Warm relationships (Judith v. d. Boom)
'The designer strives to bring human relationships to fruition within the processes of manufacturing her own ceramic designs. She goes 'below the surface of plain production' in her product development to explore 'warm relationships' with manufacturers, that includes design workshops and poetry readings with factory workers.'

EVOLVE



'Eco-Cathedral (Louis Le Roy)
'For more than thirty years, Louis Le Roy has been working on an enormous structure in a meadow at the Friesian settlement of Milledam in the Netherlands. There, on a two-hectare site, he piles up with his bare hands paving bricks, paving stones and other discarded street rubble while allowing nature to proceed about him unhindered.'

WHAT SLOWS PEOPLE DOWN?

People aged between 20 and 60 years old were asked the question **'What slows you down?'**

The conclusion of these interviews is that quite diverse activities have a 'Slowing effect' on people.

Physical movement such as sport, stretching, walking or gardening were mentioned quite often. On the other hand, **no physical movement**, such as relaxing in a comfortable position or meditating, was mentioned, as often, as being active. Furthermore, having a structured daily routine or **ritual**, such as preparing food, tea/coffee or going shopping, was considered slowing down. Some people mentioned that **focusing** on details, making music or reading a book slows them down. **Drinking coffee or tea**, or listening and making **music** were most often mentioned as ways to relax during work. The sentence **'...doing something else** than what I'm doing right now' appeared quite often. This might explain the contradiction that physical movement and no physical movement are relaxing in the same way.

On the right you can find some examples of the answers to this question of what slows people down.

'Music is very important. Listening to music and making music. I play the drums. I don't have to slow down very often, but doing sport relaxes me, because it clears my mind. Also making to-do-lists relaxes me. Striking the points through gives me a good feeling.'

'Focusing on details slows me down, for example editing photos. When I do that I forget time. Or fixing a bike helps me also do forget time... always when I want something to be perfect.'

'Gardening and playing football is mentally relaxing. Also sitting in a comfortable chair, turning around and enjoying sun shine through the window.'

'Structure in my daily activities helps me to relax. Even stressful days feel more relaxed if they follow routines like preparing and eating food and rituals before I go to bed.'

'Sport to reduce stress: running, cycling, tennis, inline skating. In the evening reading a book and at work drinking coffee with colleges.'

PRODUCT ATTACHMENT

The key elements of product attachment were defined with the help of literature research and through a creative session. The goal of the session was to gain insights into the why, when and how the participants become attached to objects as well as into what makes a product special to them. The way product attachment or emotionally durable design can be created has been discussed in a variety of papers. Russo, Chapman, Hassenzahl, Savas, Mugge, Van Nes, Schifferstein and Krieken, in particular, were helpful in understanding this process. While some of the authors differ in their views on hierarchy there are several elements that they all seem to agree on.

Based on the literature research and the creative session's results seven key elements for product attachment were defined:

MEMORIES: Positive and negative experiences a person connects with the product.

TIME: Important changes over time, such as the different stages in product to person relationship. It is also a key element because of the connection between the amount of time a person spends with a product and the temporal increase in its value.

SELF EXPRESSION: Gives the user the possibility to feel unique by owning a product, for example, by personalizing it.

GROUP AFFILIATION: Social interaction, sharing and expression of the fact a person is part of a certain group

KEEP USER INVOLVED: The user's full attention is needed while interacting with the product

FUNCTION: The functionality of the product has to satisfy the needs of the user

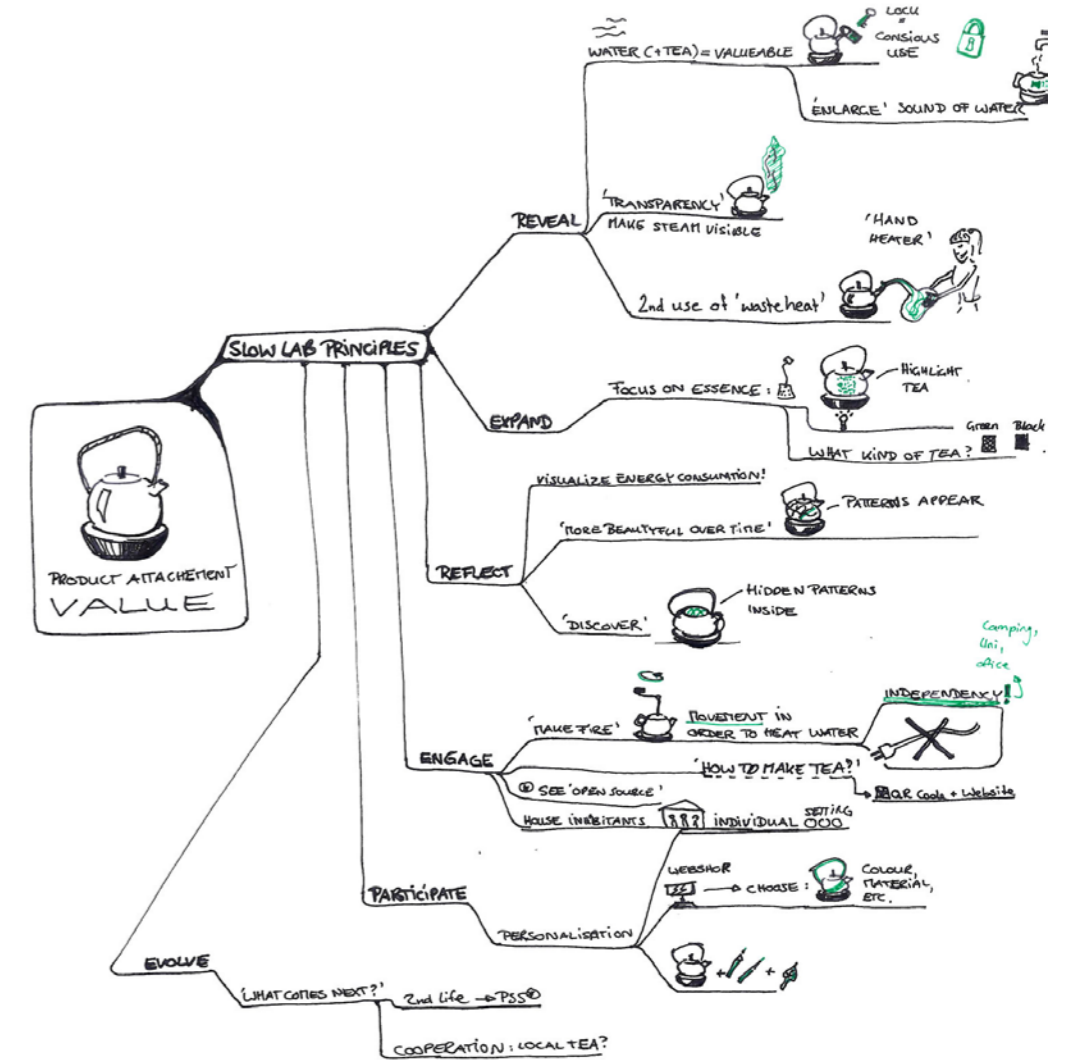
The 'key points of product attachment icons' can be found on the the left, under the heading, on the *Slow Design* idea pages. The colourful icons indicate which key point is represented by this concept.



IDEATION METHOD

A method which was used to generate the ideas for this book was Mind Mapping. A Mind Map is a graphical representation of ideas and aspects around a central theme, showing how these aspects are related to each other. This tool helps in systematically unpacking abstract thoughts and notions. It can be compared with a tree with branches leading to the thoughts and aspect of the theme. Mind Mapping is an technique for developing intuitive capacity. (Tassoul, M. 2006 and Buzan, B. 1996). The elements of a given Mind Map are arranged intuitively according to the importance of the concepts, and are classified into groups, branches or areas, with the goal of representing semantic or other connections between portions of information.

In the case of this book the central theme was either the Tea Maker or the juicer. The first branches were the seven Principles of Slow Design. Starting from the description of each principle and having the product qualities in mind, the ideas were generated. On the right an example of one of the Tea Maker Mind Maps is shown.



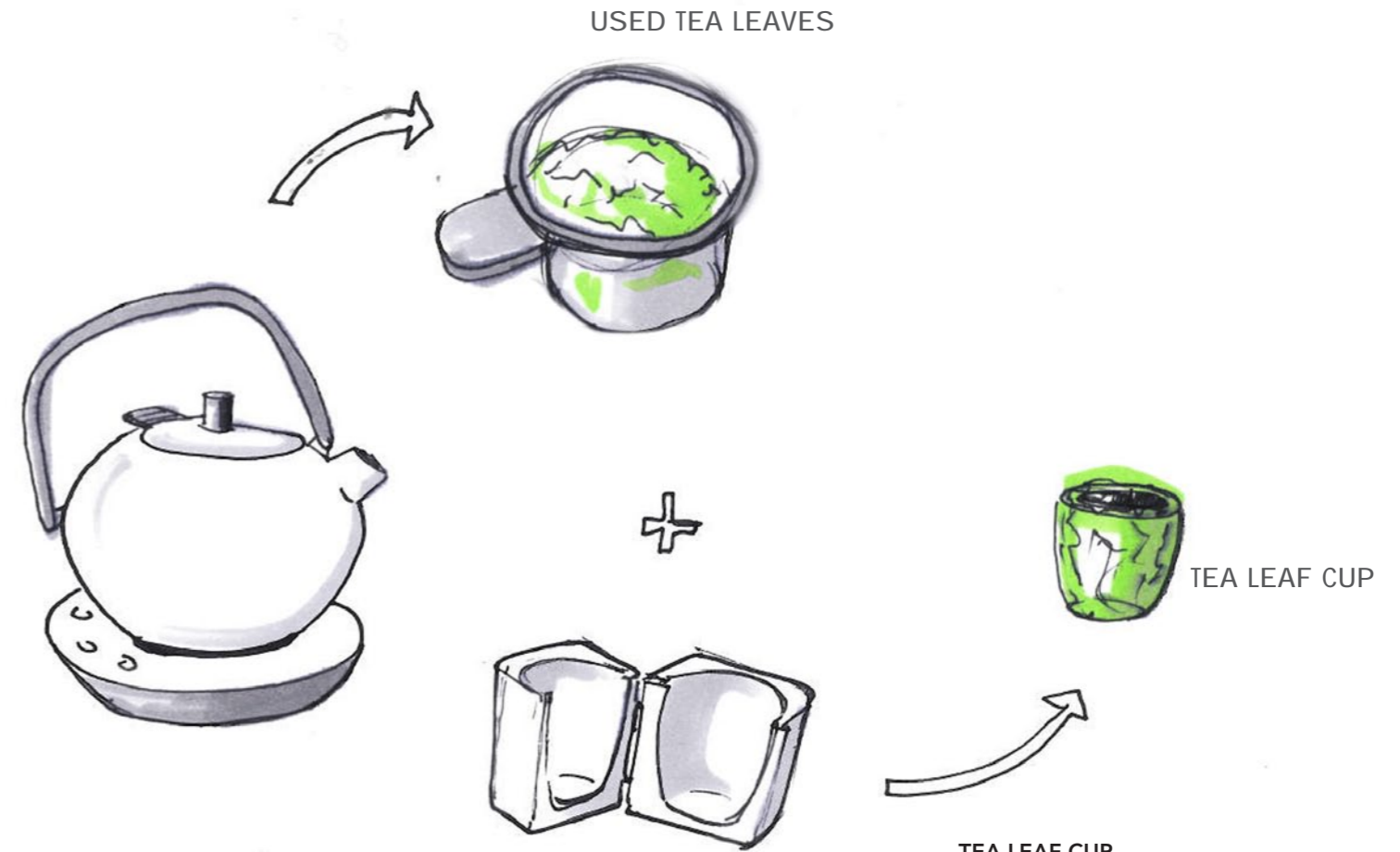
SLOW DESIGN IDEAS FOR THE TEA MAKER



PHILIPS TEA MAKER

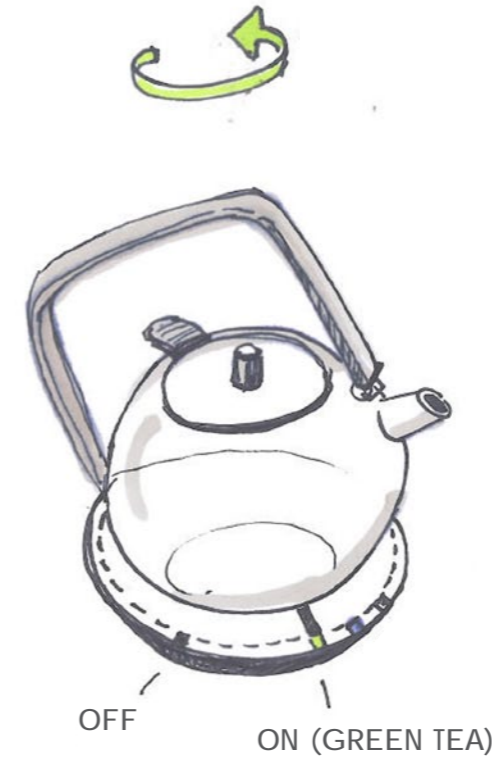
The Philips tea maker is a water kettle and a tea pot in one. The right water temperature and brewing time for each tea can be selected with the help of different, predefined settings. The device makes a sound once the water is boiled, as well as giving a light feedback when the brewing process is finished. This product was used as a starting point for discovering the ways the *Slow Design* Principles can inspire the concepts that support and improve the *Slow Experience* with the Tea Maker.

EVOLVE



TEA LEAF CUP
Why are used tea leaves considered waste if they could be reused, e.g. to create a cup out of the old tea leaves. In time the user will own a growing collection of different cups, all unique, each a memory of a particular tea time.

REFLECT

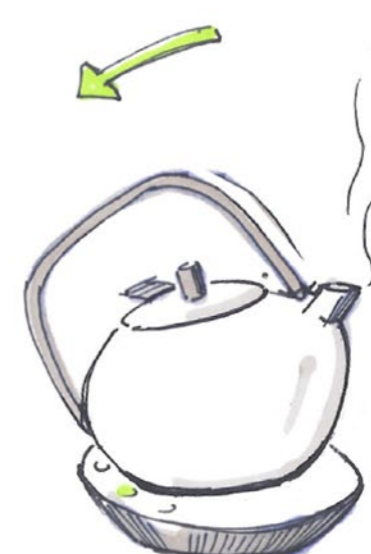


TEA TIMER
In order to visualize the various boiling times, the tea kettle can be turned on like an egg timer and moves, second by second, back to its original position.

REFLECT



OFF – READY TO USE



ON – WATER IS BOILING



WATER IS READY

THE BIG SWITCH

No need for an on/off button because the whole kettle is, in fact, one big switch, which can be pushed in order to activate the Tea Maker. The product's positions reflect the stages in the tea making process.

REFLECT



OFF

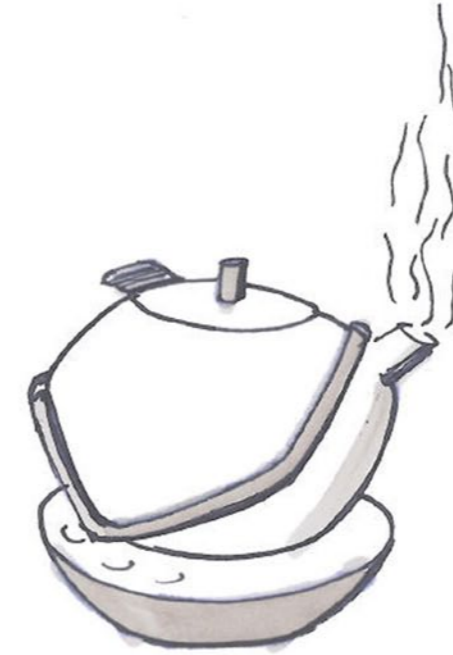


80 DEGREES = TRANSPARENT

TURN TRANSPARENT

The hotter the water gets the more transparent the kettle becomes. This concept reflects time as something tangible and provides a backstage view.

REFLECT



WATER IS BOILING

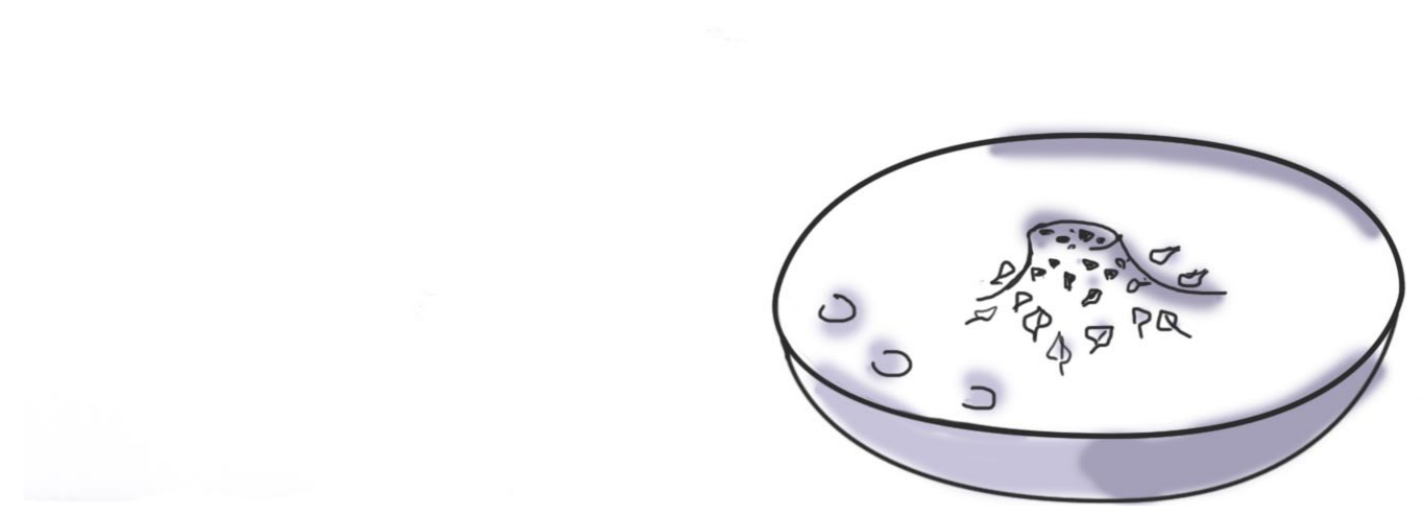
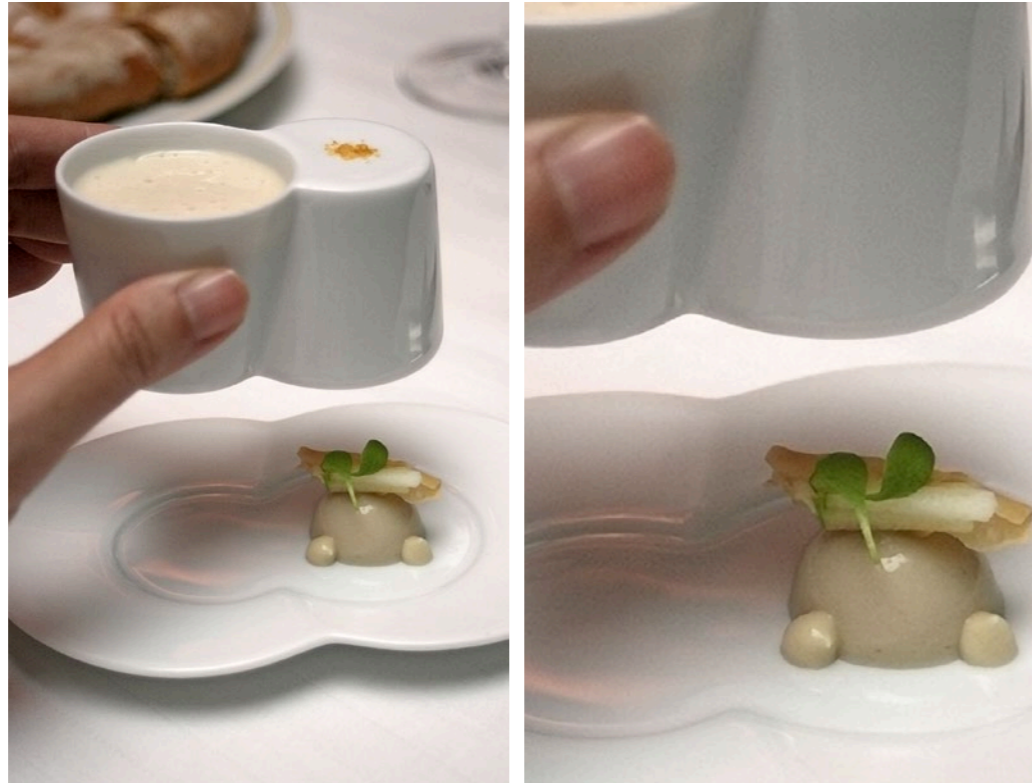


WATER IS READY

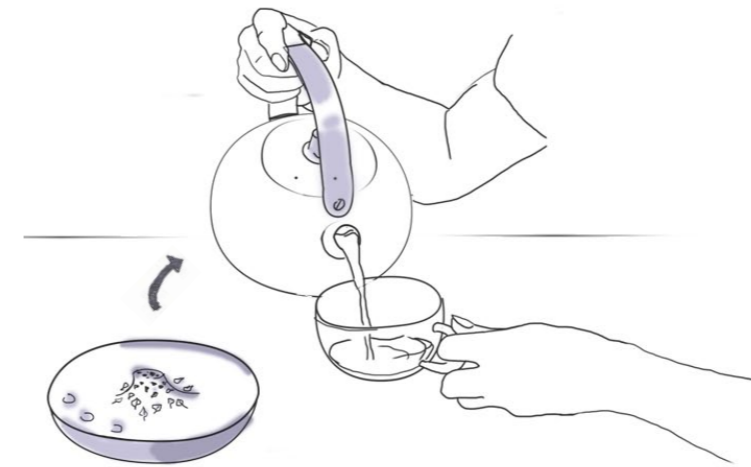
STAND-UP HANDLE

'Stand-up handle' is a clear way to visualize if the water in the Tea Maker is hot or cold. Once the water boils, the handle turns, moved by the water pressure, into a position that makes it easy to pick up the tea pot. In this way the handle 'tells' the user that it is ready.

REVEAL



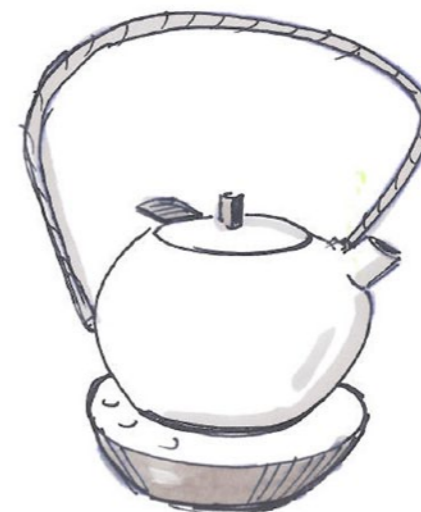
CHANGING PATTERN, EXAMPLE:
TEA LEAFS



DISCOVER

This concept is about discovering something visually appealing and surprising under the teapot. Each time the user picks up the teapot, he or she will find a different pattern around the heating element.

PARTICIPATE



SNAKE HANDLE

A flexible material of the handle provides the user with an opportunity to personalise the shape of the handle according to what he or she perceives as more useful, ergonomic, or decorative at that particular moment.

RITUAL



WATER IS BOILING



TEA IS BREWING



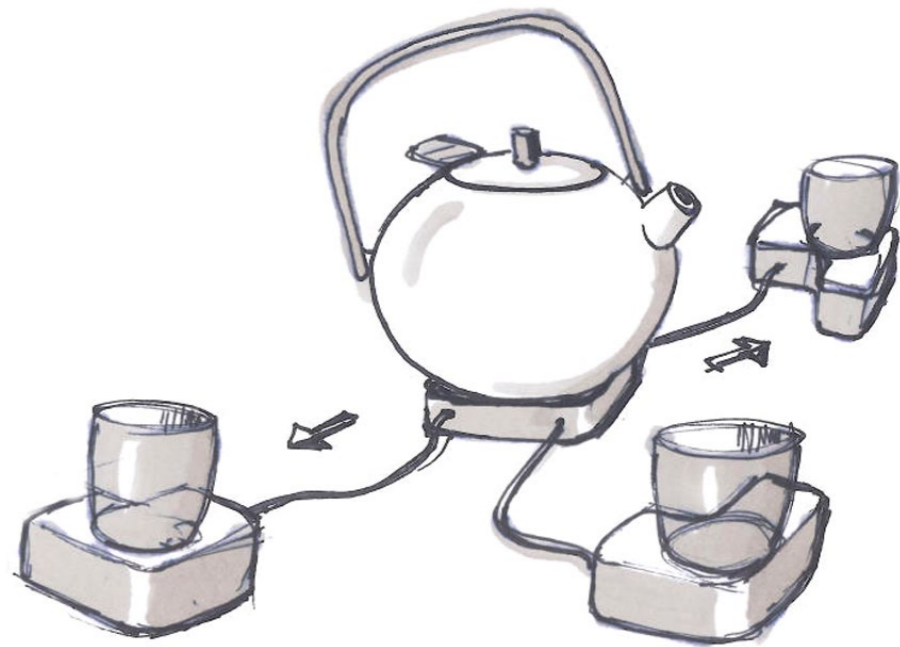
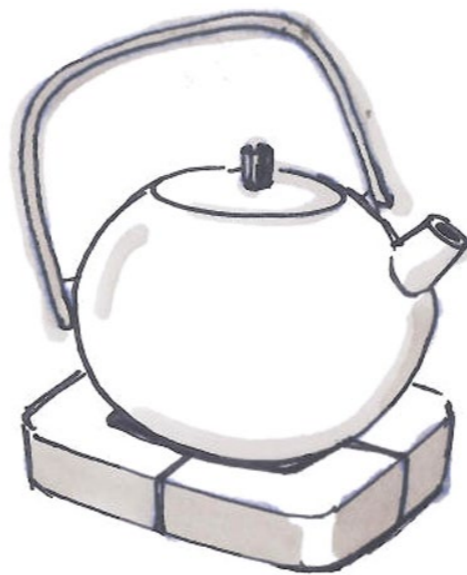
TEA LEAVES ARE
READY TO BE TAKEN
OUT OF THE WATER



LIFT TEA LEAFS

When the tea is brewed the user usually has to take out the tea leaves and dispose of them in the trash or find a place to put the dripping filter. Within this concept the user is able to, with an easy movement such as turning, flipping or twisting, lift the tea leaves out of the water. They will be collected under the lid.

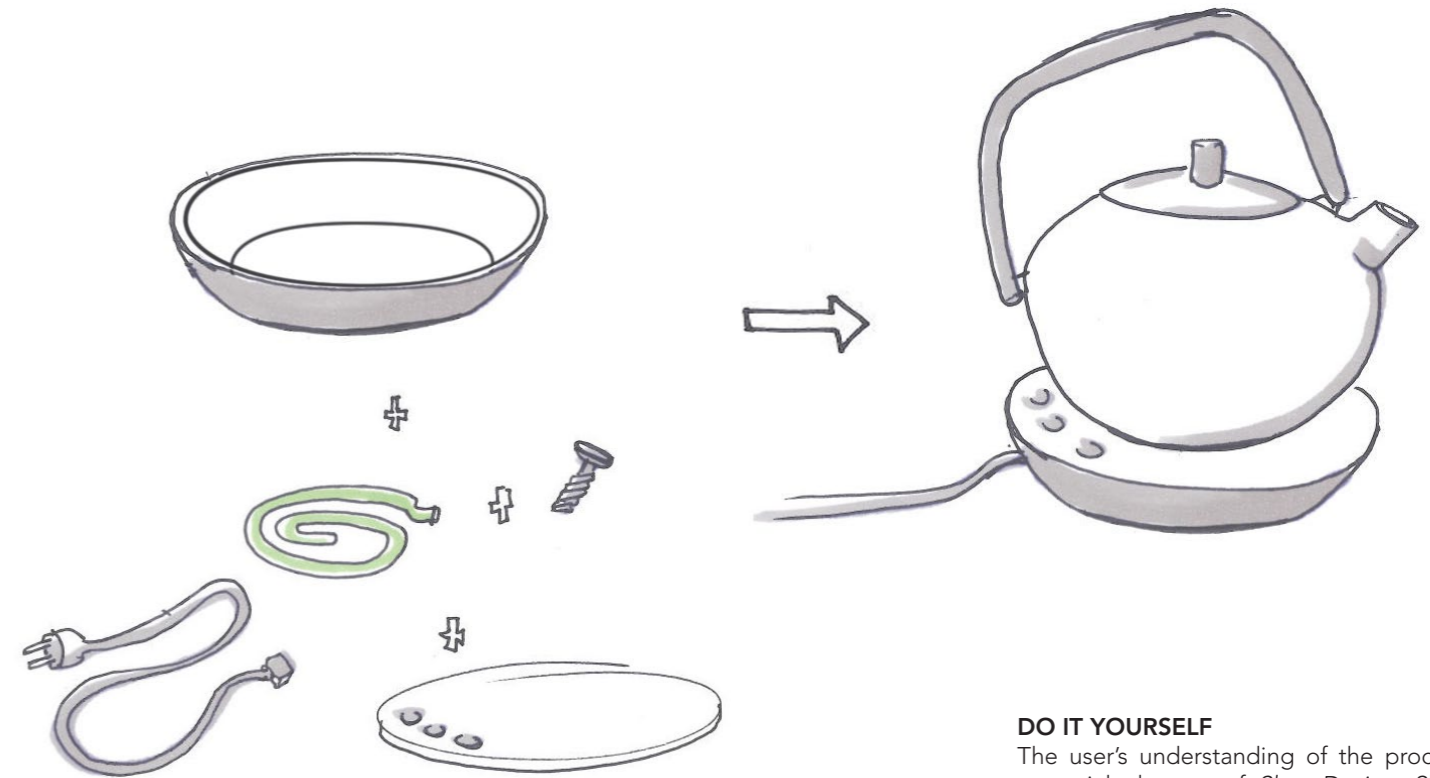
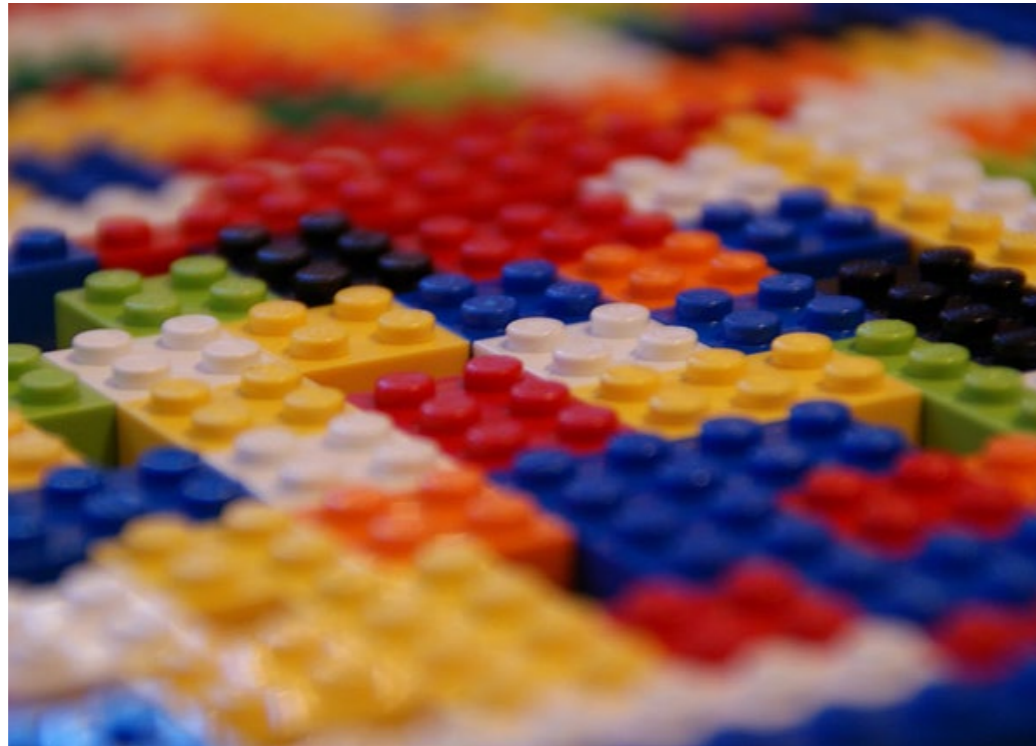
RITUAL



SHARED HEAT

The host can share not only the tea with the guests, but also the heat. The heating element of the Tea Maker can be divided in four extra parts, with everyone joining the tea ceremony being able to use the heat to keep the tea in his or her cup warm.

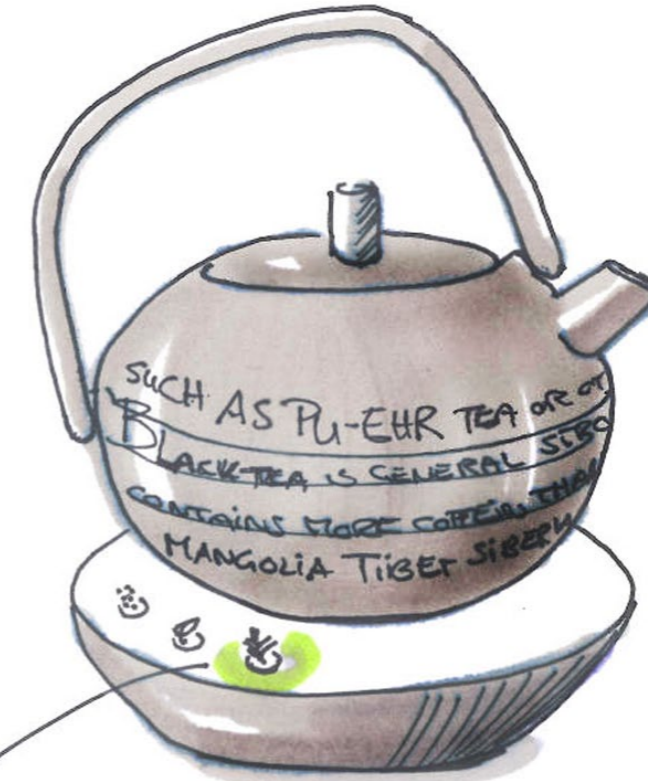
ENGAGE



DO IT YOURSELF

The user's understanding of the product is a crucial element of *Slow Design*. Sharing product knowledge, e.g. on the company's website can be one part of it. The 'do-it-yourself' concept is based on the idea that a product, which comes in separate parts and has to be assembled, supports a better product understanding. The time and effort invested in the assembly increases the product attachment towards the Tea Maker.

EXPAND

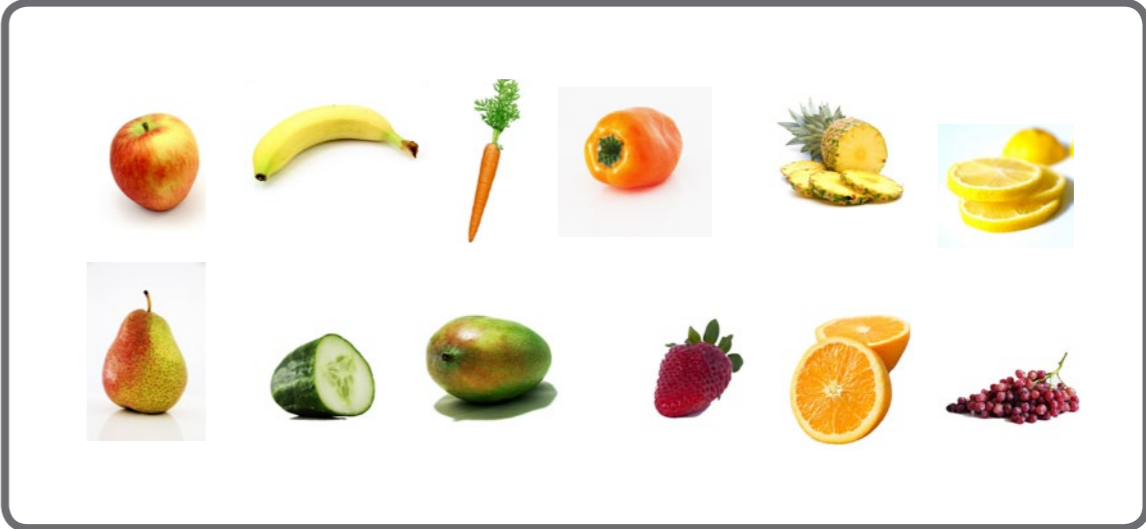


BLACK TEA

HISTORY OF BLACK TEA

The *Slow Design* Principle 'expand' is about giving a 'bigger picture', e.g. how things are done and where they come from. Within this concept, the story and history of the chosen tea appears slowly on the surface of the teapot and informs the user about the beverage he or she is drinking.

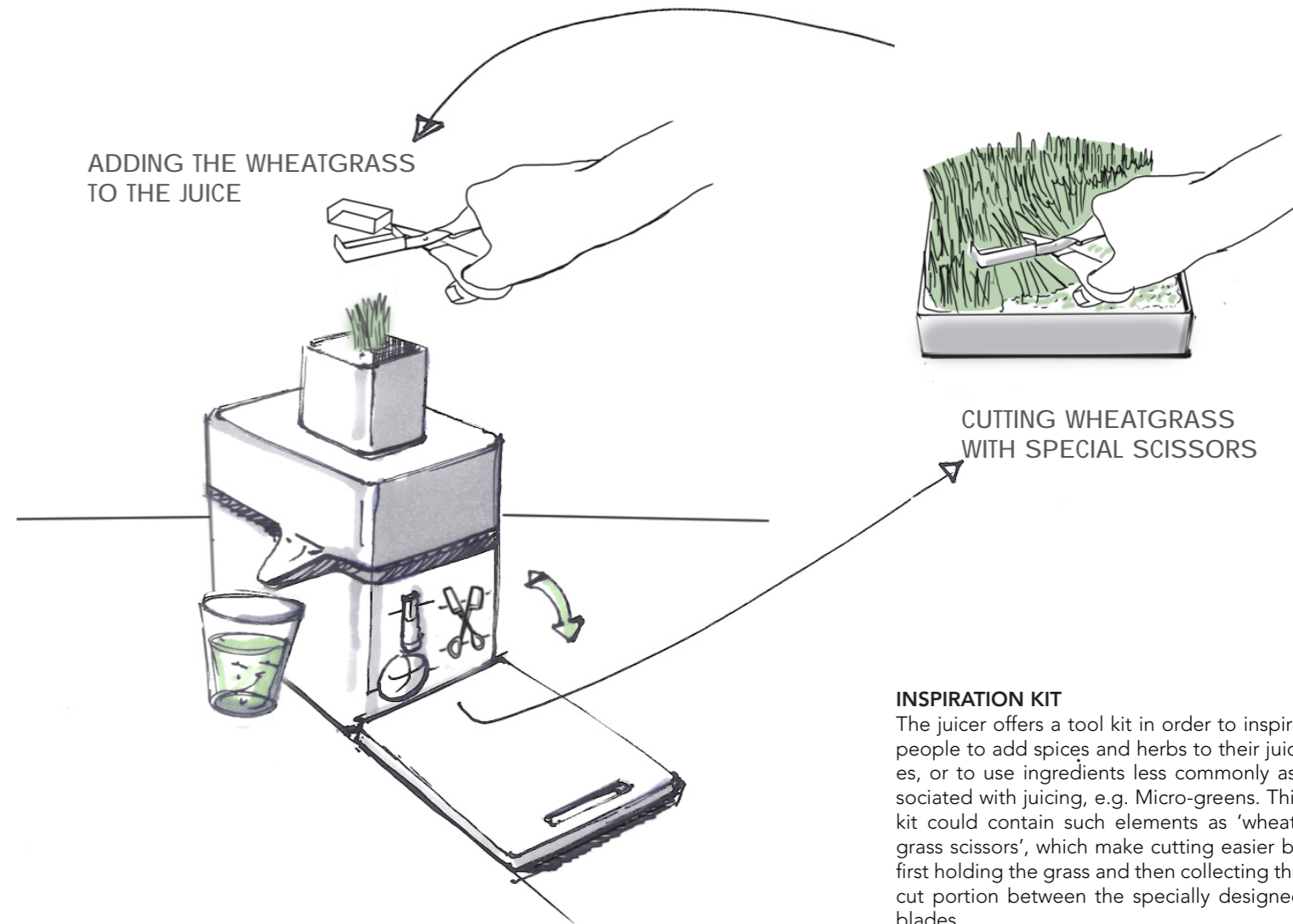
SLOW DESIGN IDEAS FOR A JUICER



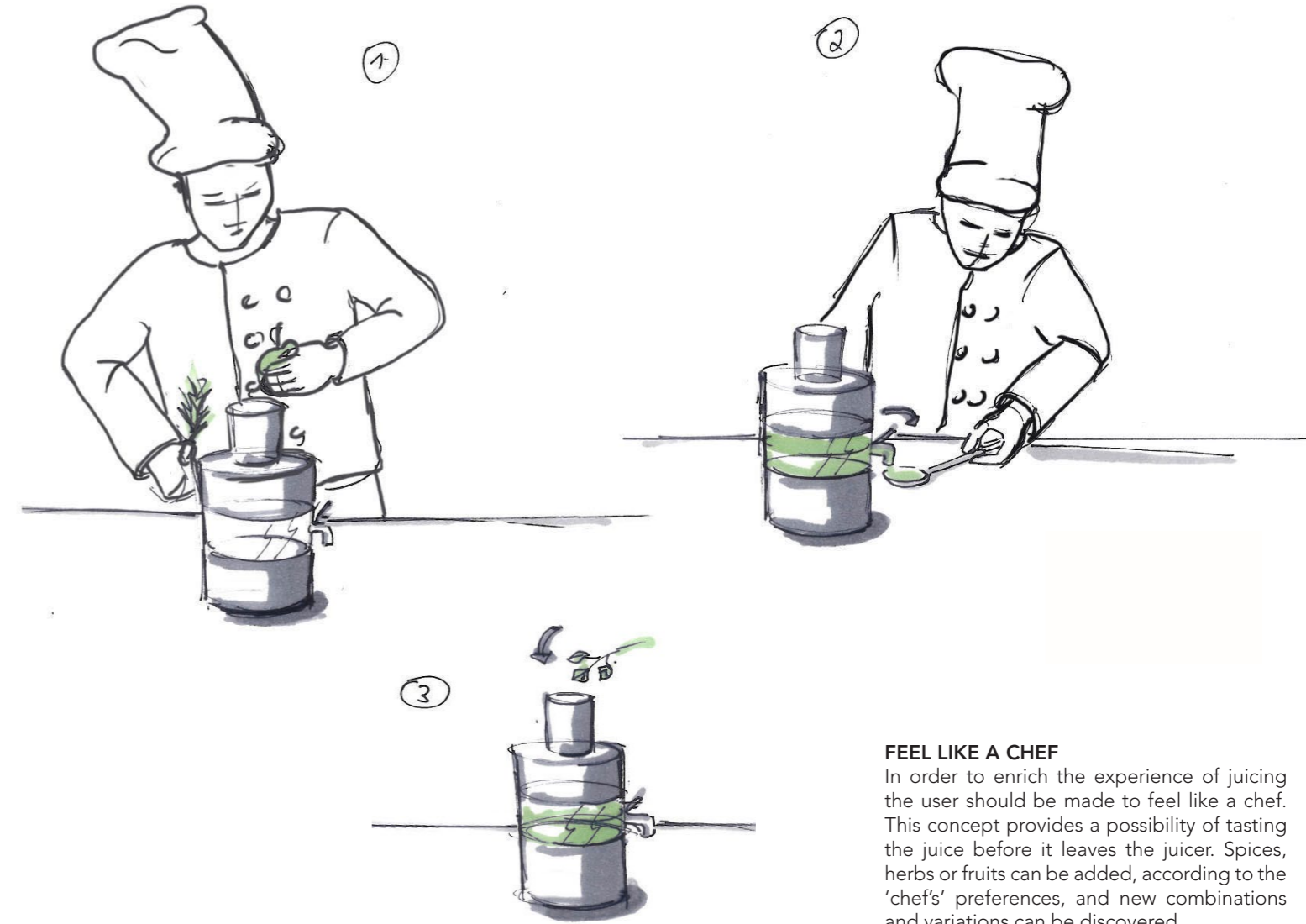
The aim of this *Slow Design* idea generation was *Making Juice out of Fruits or Vegetables*.

Some of the concepts were developed during a creative session at Philips Research in Eindhoven.

PARTICIPATE

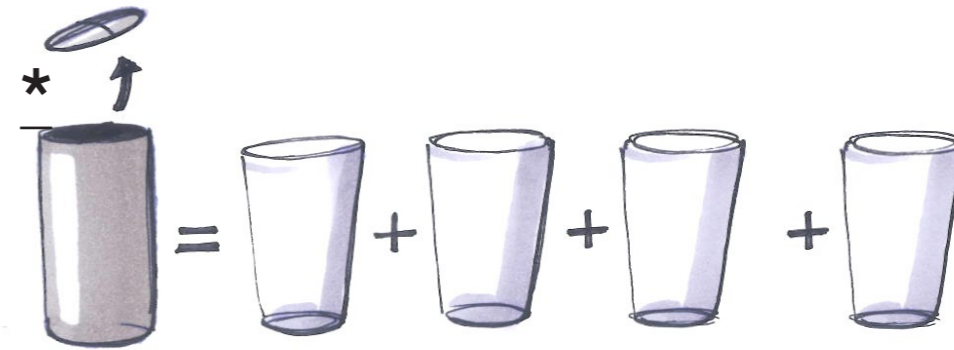
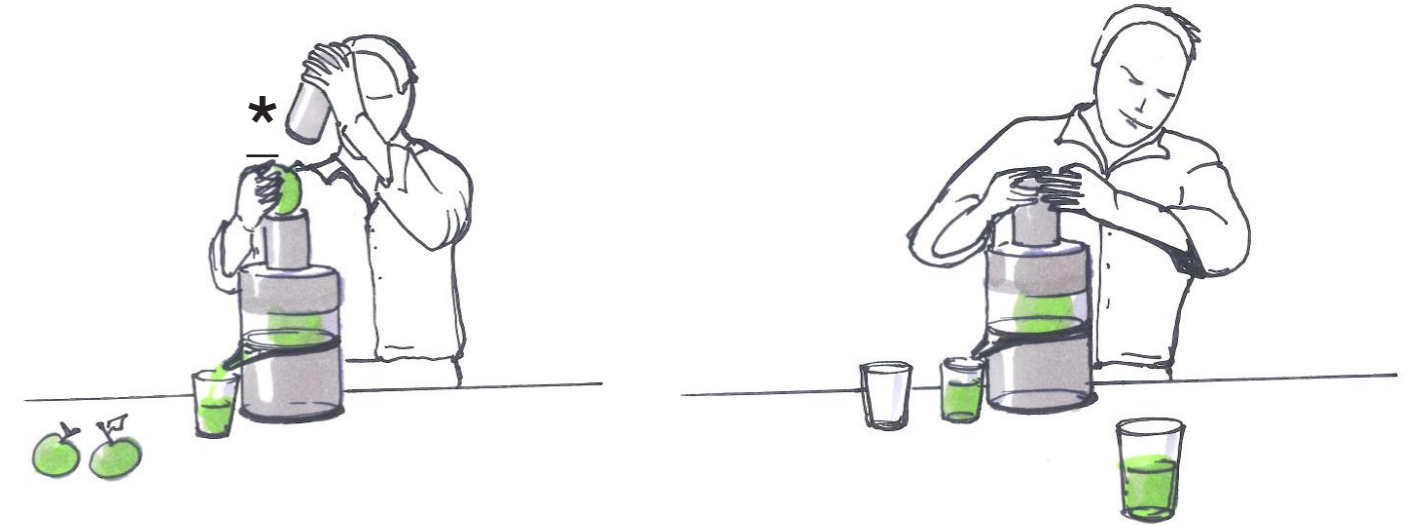


REVEAL



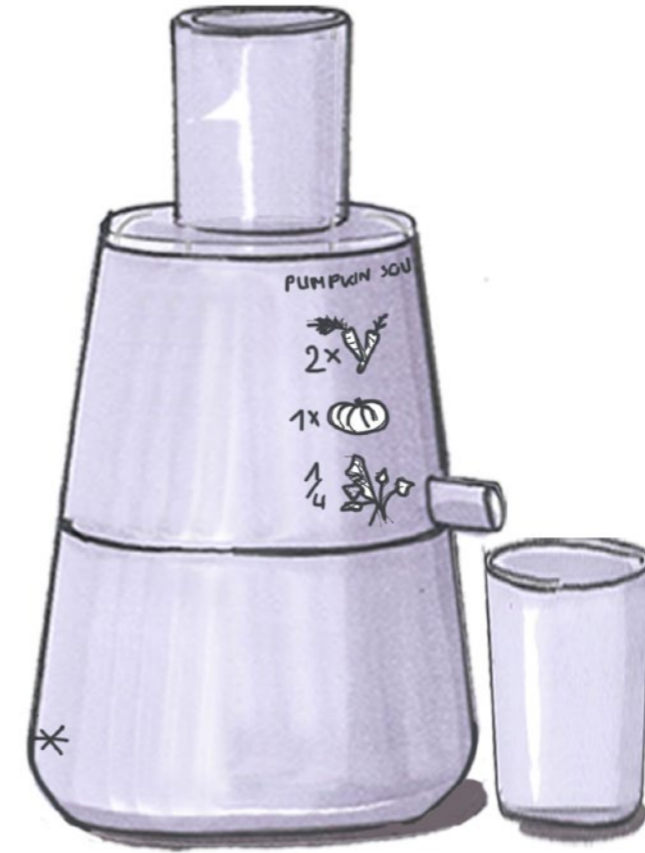
FEEL LIKE A CHEF
In order to enrich the experience of juicing the user should be made to feel like a chef. This concept provides a possibility of tasting the juice before it leaves the juicer. Spices, herbs or fruits can be added, according to the 'chef's' preferences, and new combinations and variations can be discovered.

RITUAL



1 = 4
The idea behind this concept is to always have an extra cup available when juicing for friends and family.

RITUAL



* GPS SENSOR FOR:

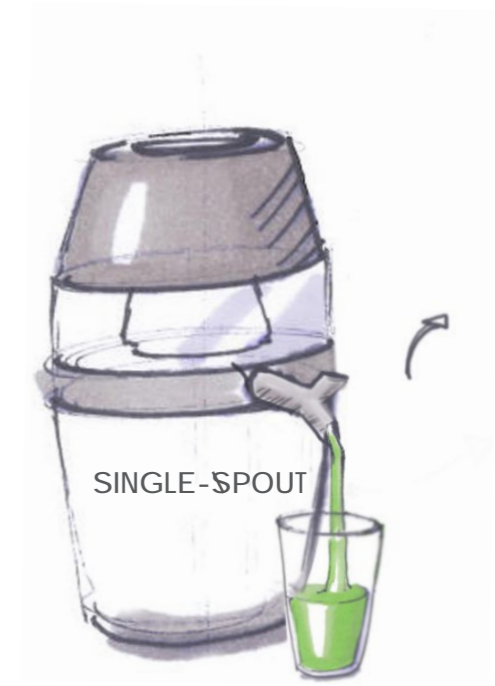
LOCATION: NETHERLANDS

DATE: 30.10.2011

LOCAL & SEASONAL JUICE

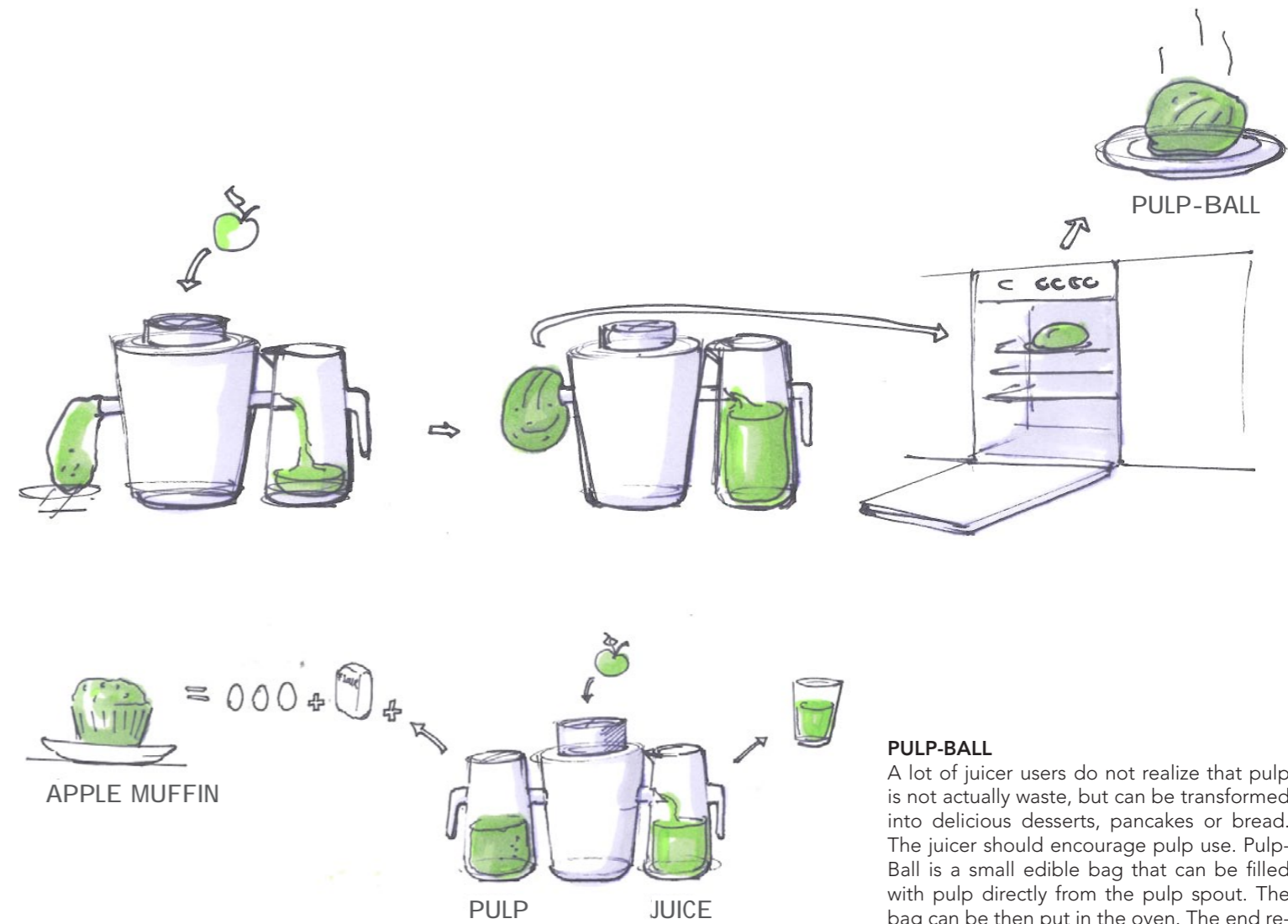
The Slow Movement started in 1986 with the Slow Food idea, which, among other things, motivates people to use local and seasonal food. Within this concept the juicer contains a GPS sensor, which provides information about the day and location of the juicer. In this way the device can suggest juice recipes containing seasonal fruits or vegetables.

RITUAL



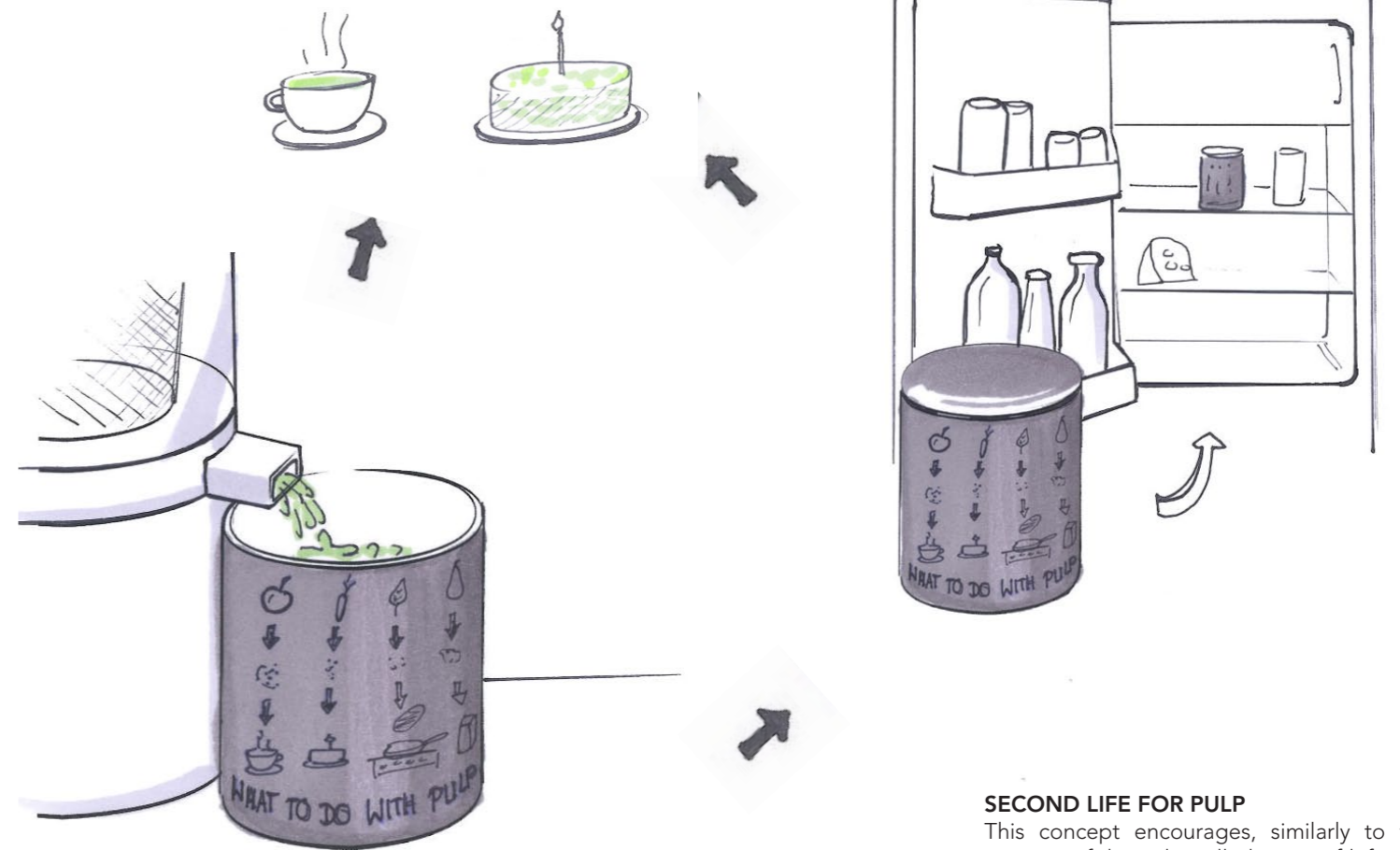
TURN AND SHARE
The twin-spout encourages sharing of the juice at the exact moment when it leaves the juicer. Turning the spout 90 degrees changes a single-spout into a twin-spout.

REFLECT



PULP-BALL
A lot of juicer users do not realize that pulp is not actually waste, but can be transformed into delicious desserts, pancakes or bread. The juicer should encourage pulp use. Pulp-Ball is a small edible bag that can be filled with pulp directly from the pulp spout. The bag can be then put in the oven. The end result is a cake-like Pulp-Ball.

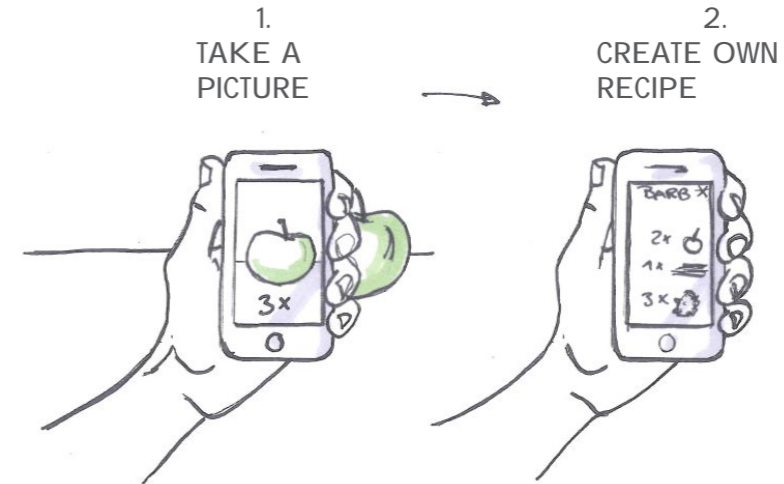
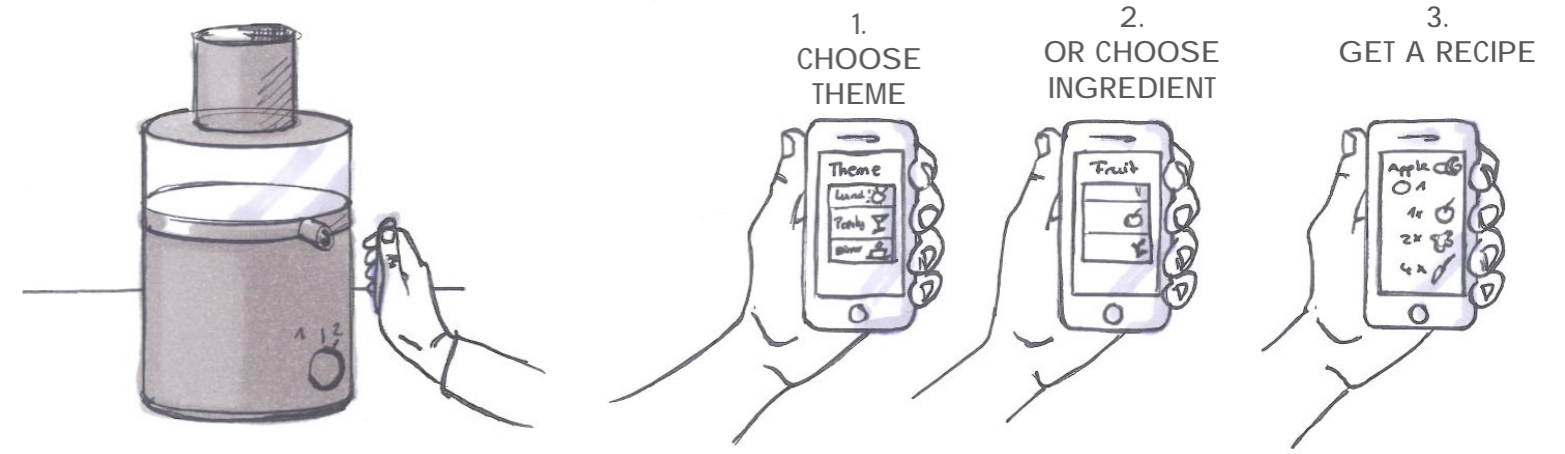
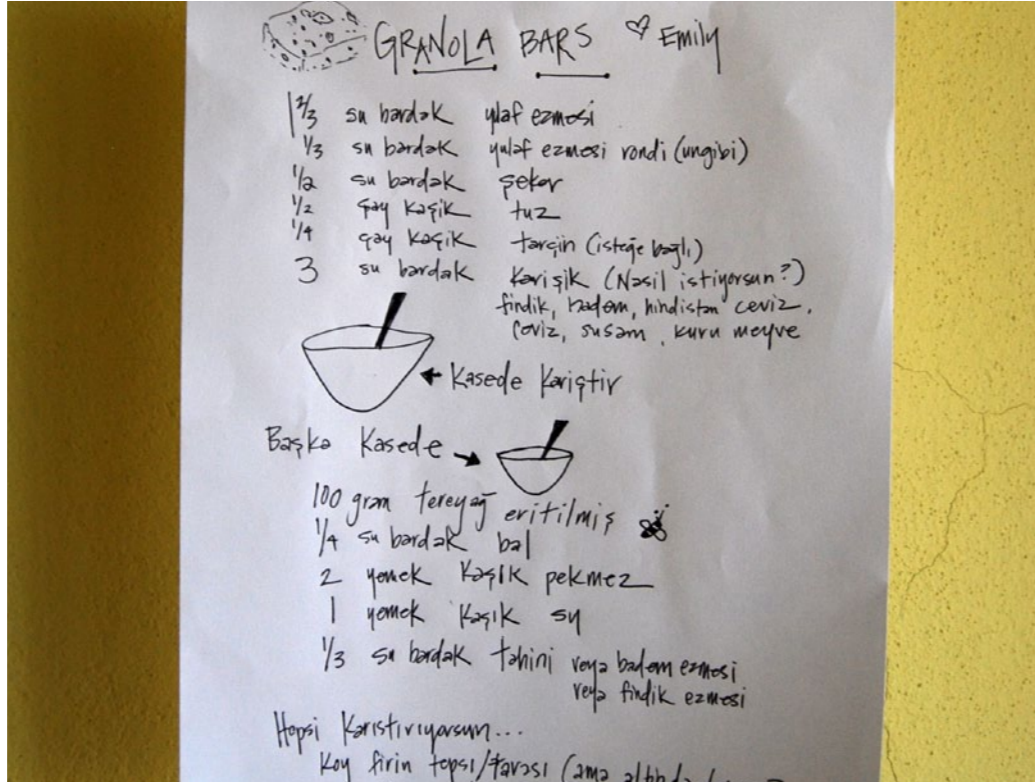
EXPAND



SECOND LIFE FOR PULP

This concept encourages, similarly to the concept of the Pulp-Ball, the use of left-over pulp. The pulp container is covered with icons, indicating what is possible with each type of pulp.

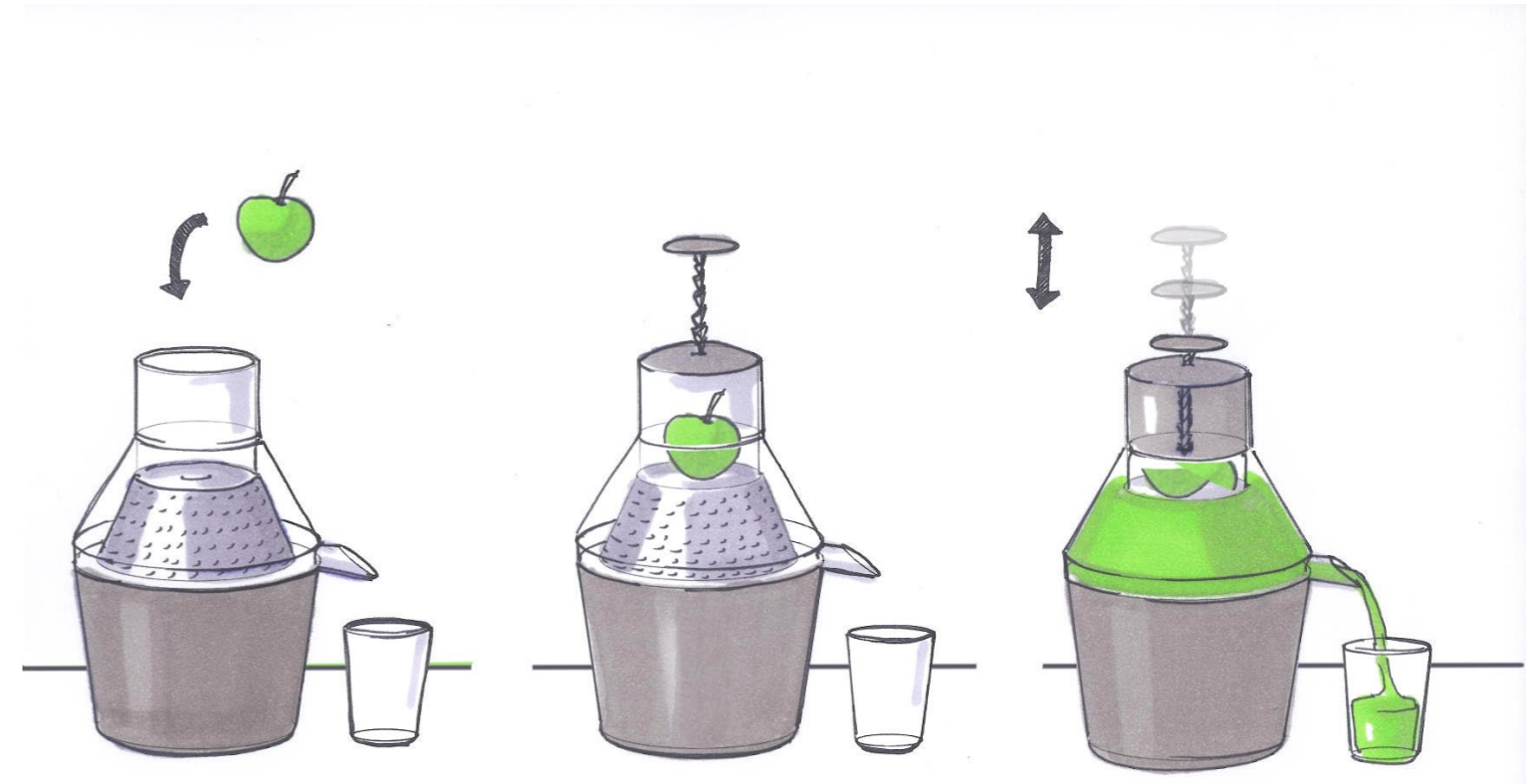
PARTICIPATE



DISCOVER, REMEMBER & SHARE

This Smartphone App helps to find recipes appropriate for the particular user's taste. They are sorted into themes, such as 'party', 'dinner', 'breakfast', or by ingredients, such as 'apple', 'mint', 'carrot'. Another feature of this App is, if the user is happy with a particular, self-created, juice he or she can simply take a photo of the ingredients and store the recipe, for later use or to share with others.

PARTICIPATE



SPINNING JUICE

To keep the user physically involved in the juicing process, he or she has to move a spin up and down. In this way the necessary rotation is generated, without the aid of electrical power. The movement was inspired by the motion of a metal spinning top.

ENGAGE



WRING LIKE A WET TOWEL

The user wrings the soft and flexible feeding tube of the juicer thus pressing the fruit closer to the blade. The working metaphor here is of wringing the juice out of the fruit as in wringing out a wet towel.

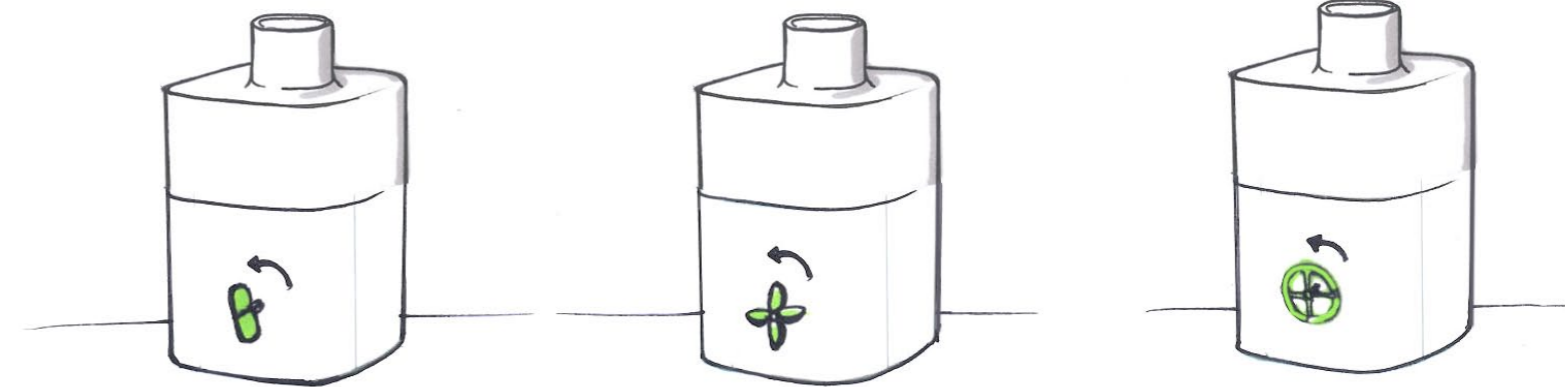
PARTICIPATE



KNEADING JUICE

Within this concept, similarly to 'wringing the juice out', the user is physically active while feeding the juicer. A soft, pillow-like lid contains a small opening where the ingredient can be placed. The next step involves 'kneading' the ingredients like dough towards the blade or gear.

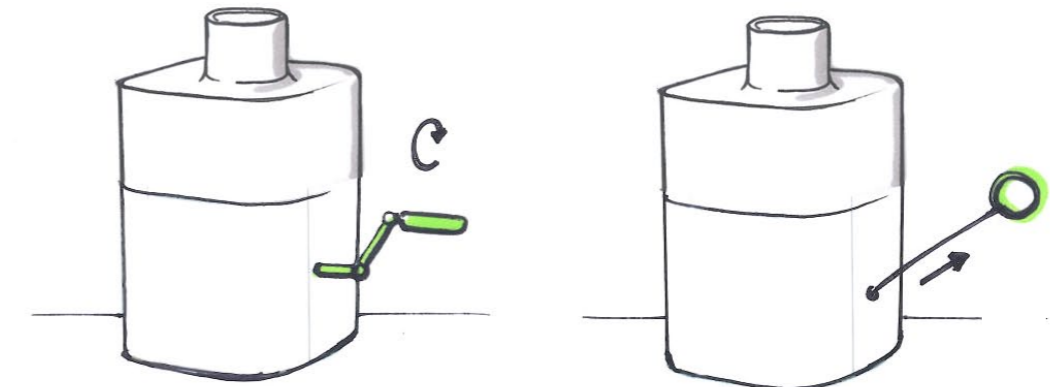
PARTICIPATE



TURN SCREW

TURN SCREW

TURN SCREW

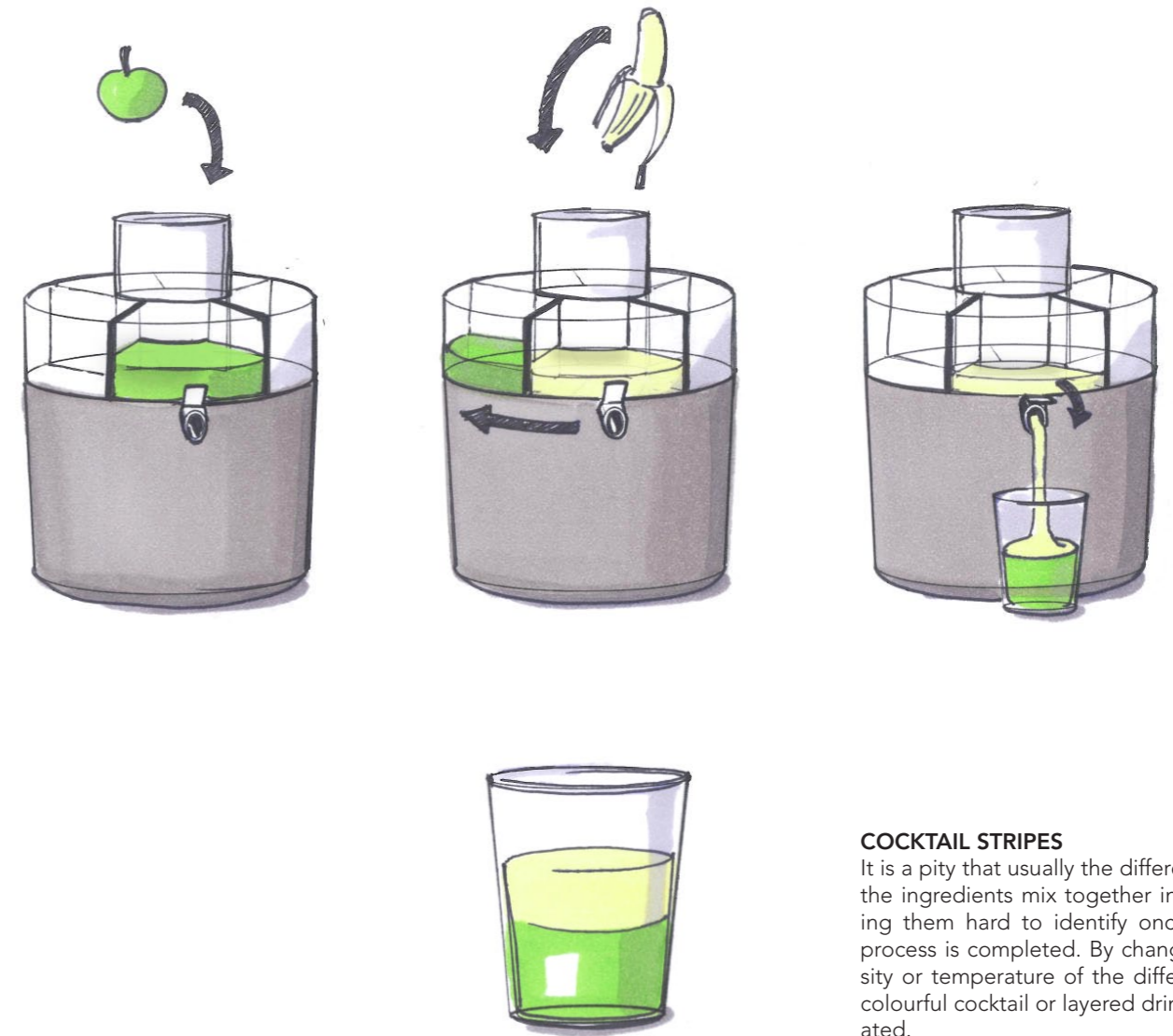


TURN CRANK

PULL STING

PHYSICAL INVOLVEMENT
In order to involve the user in the process more deeply, and to make the juicer independently powered, this concept presents different solutions for a human powered juicer.

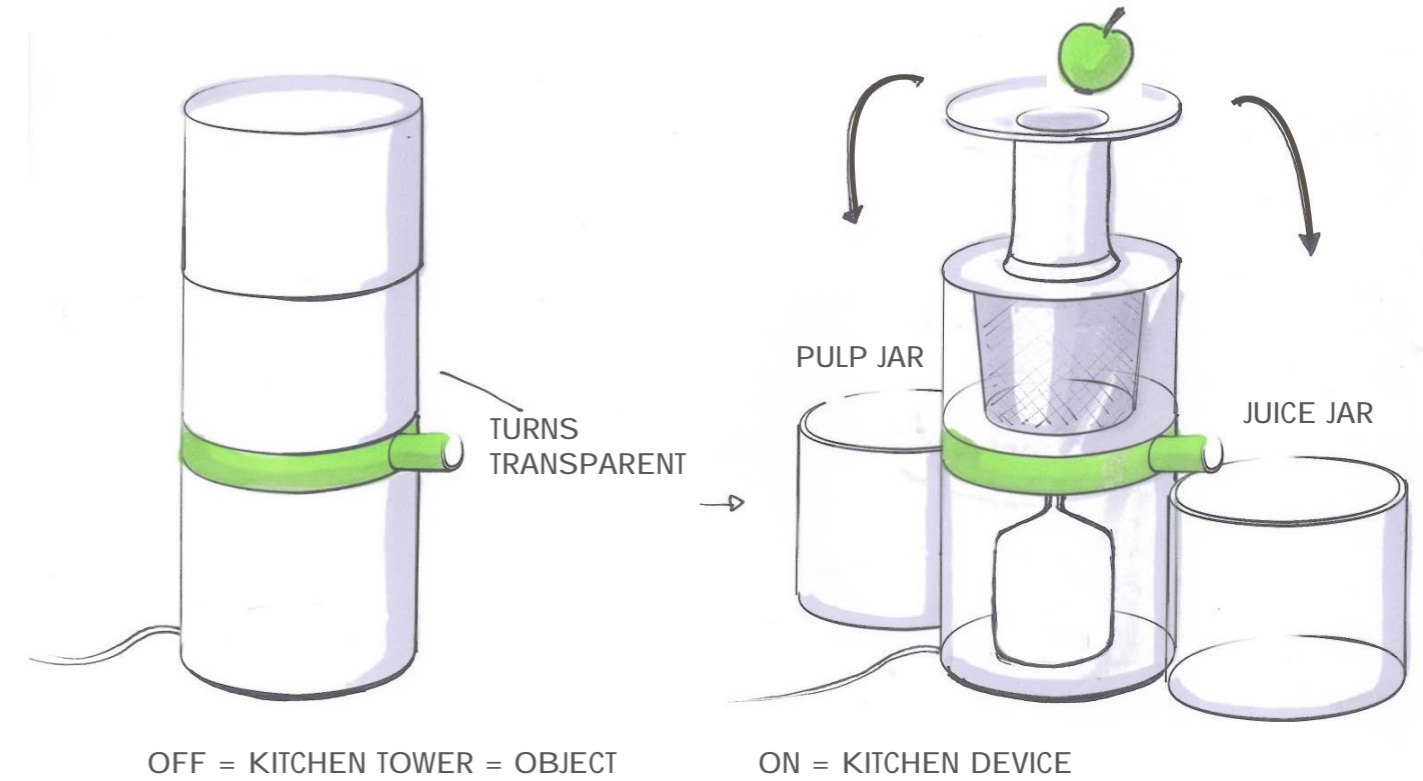
EVOLVE



COCKTAIL STRIPES

It is a pity that usually the different colours of the ingredients mix together into one, making them hard to identify once the juicing process is completed. By changing the density or temperature of the different juices, a colourful cocktail or layered drink can be created.

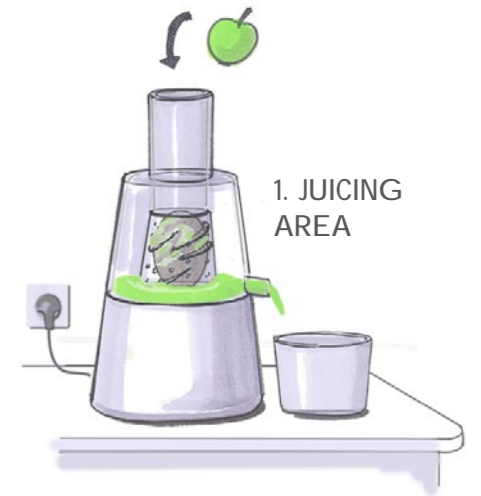
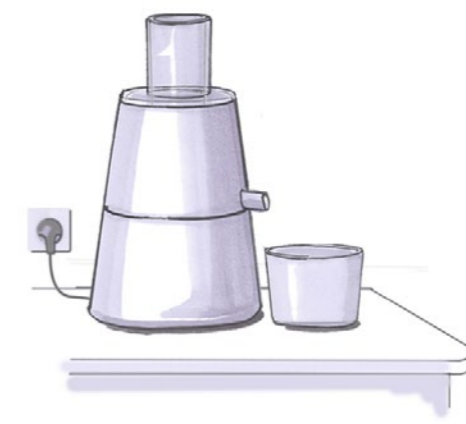
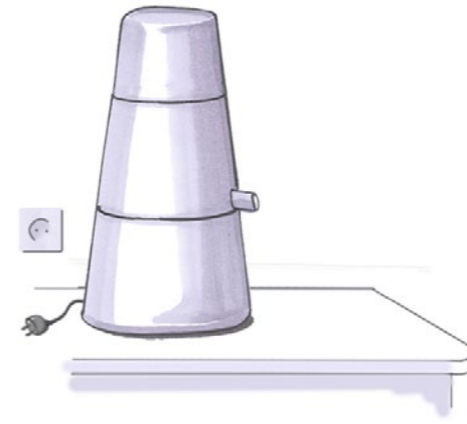
REVEAL



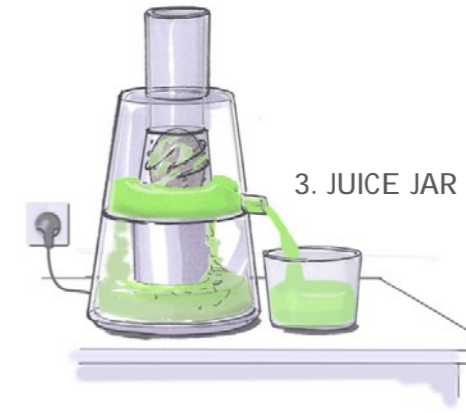
KITCHEN TOWER

To support solely in-kitchen use of the juicer, and eliminate the tendency to hide the device in a cupboard post use, this concept addresses the aesthetic aspect of the product. In order to use the juicer one takes off the juice and pulp jar. Once the device is switched on the motor block becomes transparent. The kitchen object becomes a kitchen device, revealing its function and internal structure.

REVEAL



2. PULP CONTAINER

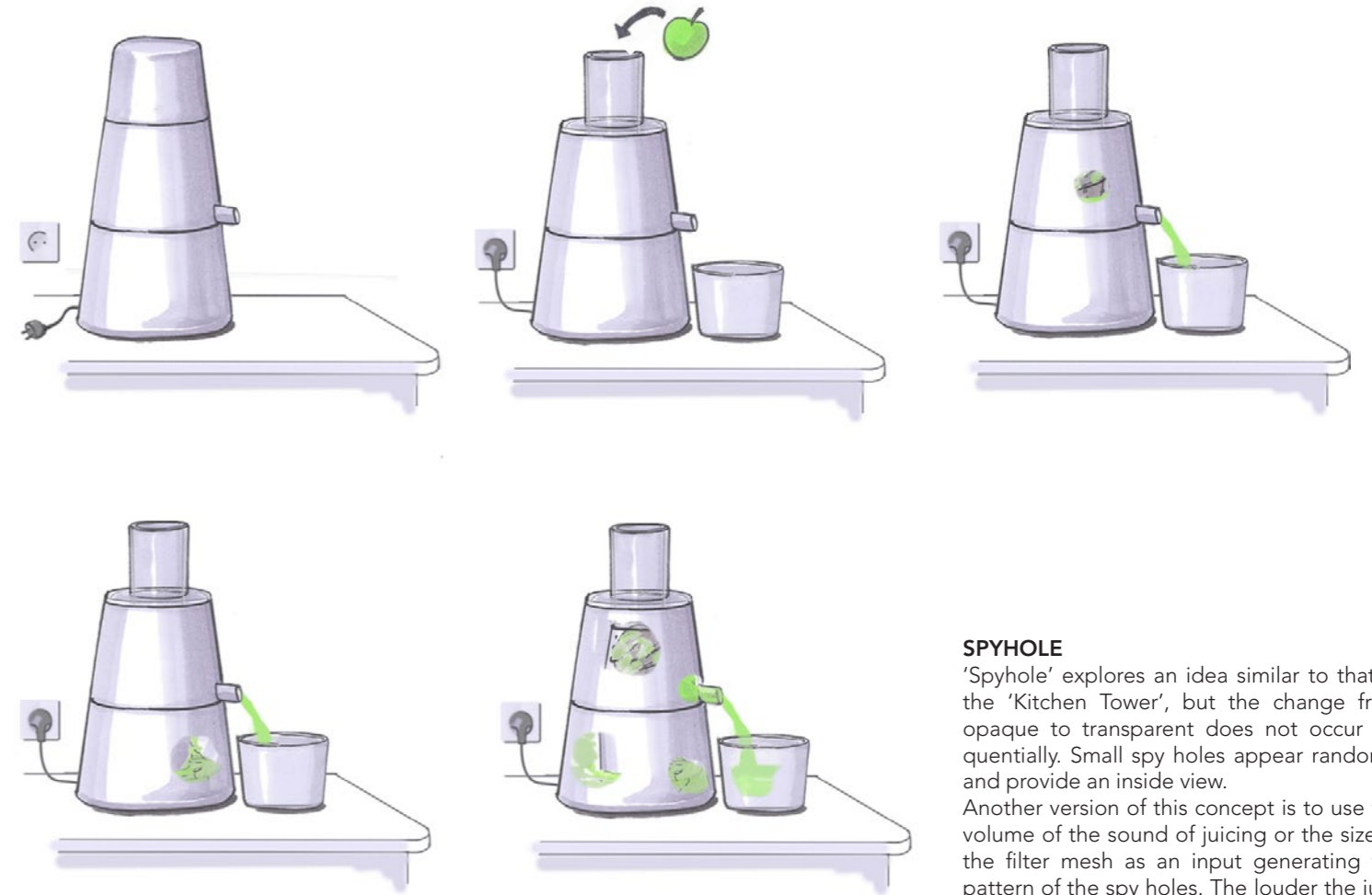


3. JUICE JAR

KITCHEN TOWER 2

Similarly to the previous concept, in the off mode the juicer is an opaque object. When switched on its parts slowly become transparent and reveal what is hidden behind the casing, first the auger jar, then the pulp container, and finally the juicing jar. After finishing juicing, device transforms back into a decorative kitchen object. Materials such as Smart glass could be used for this purpose.

REVEAL

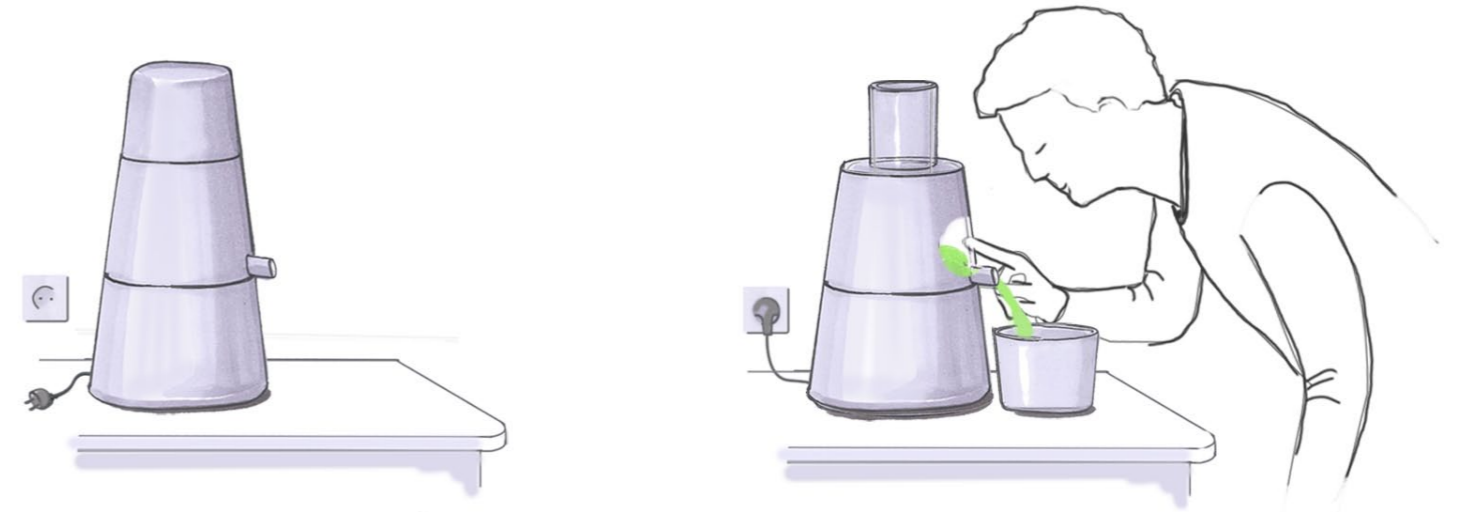


SPYHOLE

'Spyhole' explores an idea similar to that of the 'Kitchen Tower', but the change from opaque to transparent does not occur sequentially. Small spy holes appear randomly and provide an inside view.

Another version of this concept is to use the volume of the sound of juicing or the size of the filter mesh as an input generating the pattern of the spy holes. The louder the juicing process or the huger the filter size is, the more transparent it becomes.

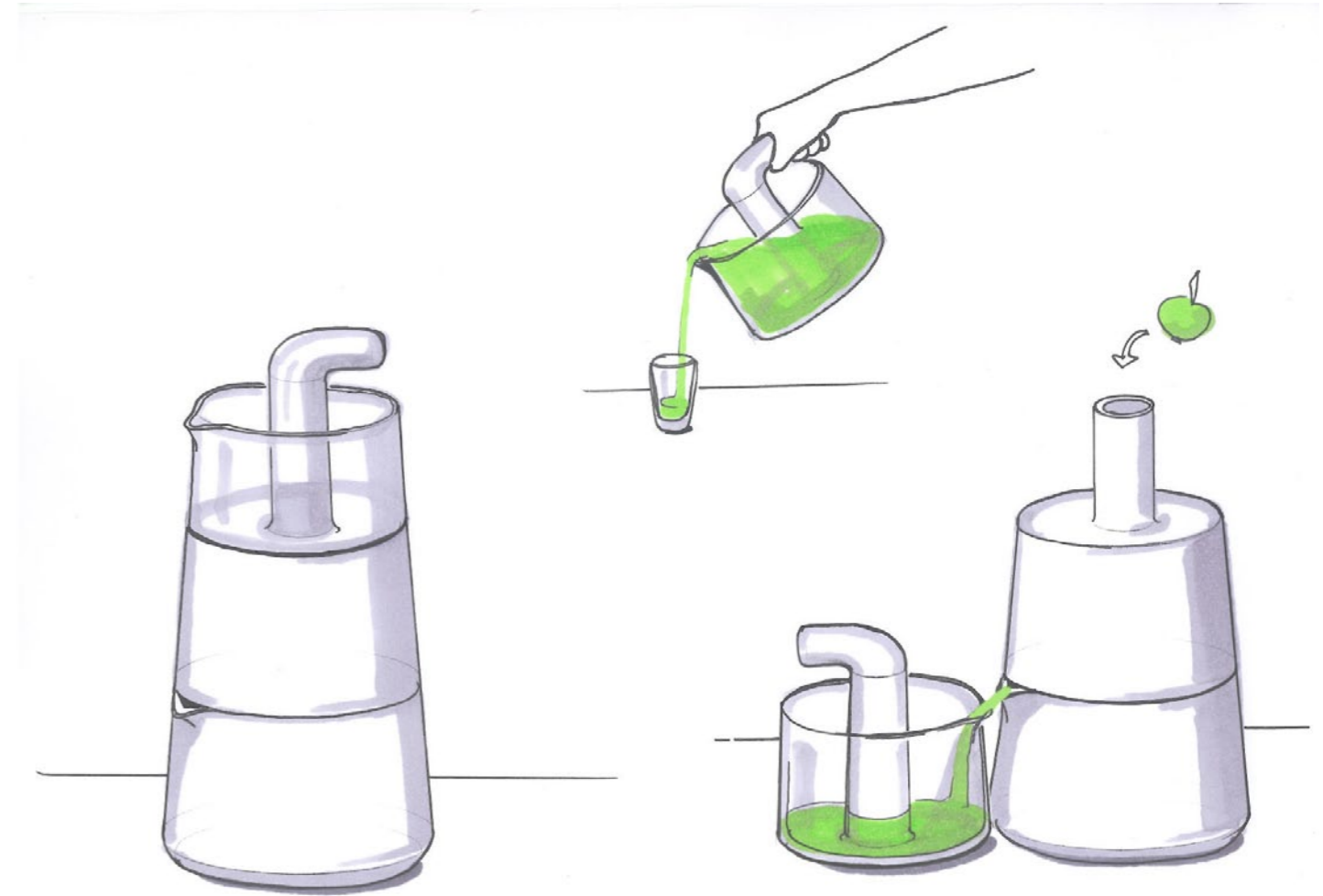
REVEAL



SPYGLASS INTERACTIVE

A third variation on the 'Kitchen Tower', was inspired by a finger drawing on a foggy car window, in order to see what was happening outside. The user can decide what and where he or she wants to see of the 'inner life' of the juicer.

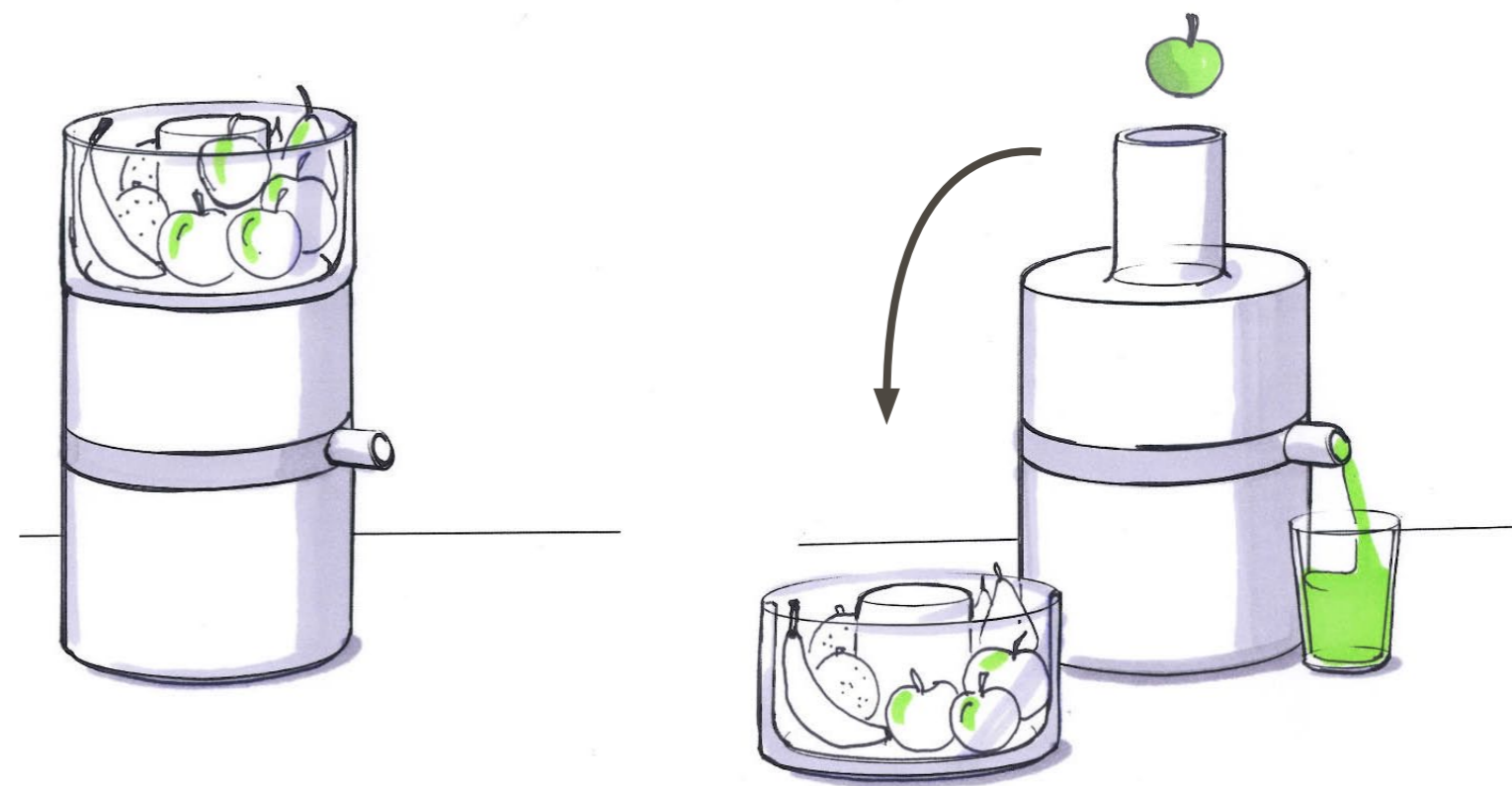
REVEAL



TOY TOWER

This concept is based on the previously described KITCHEN TOWER, but highlights the added value of making the assembling to a playful interaction.

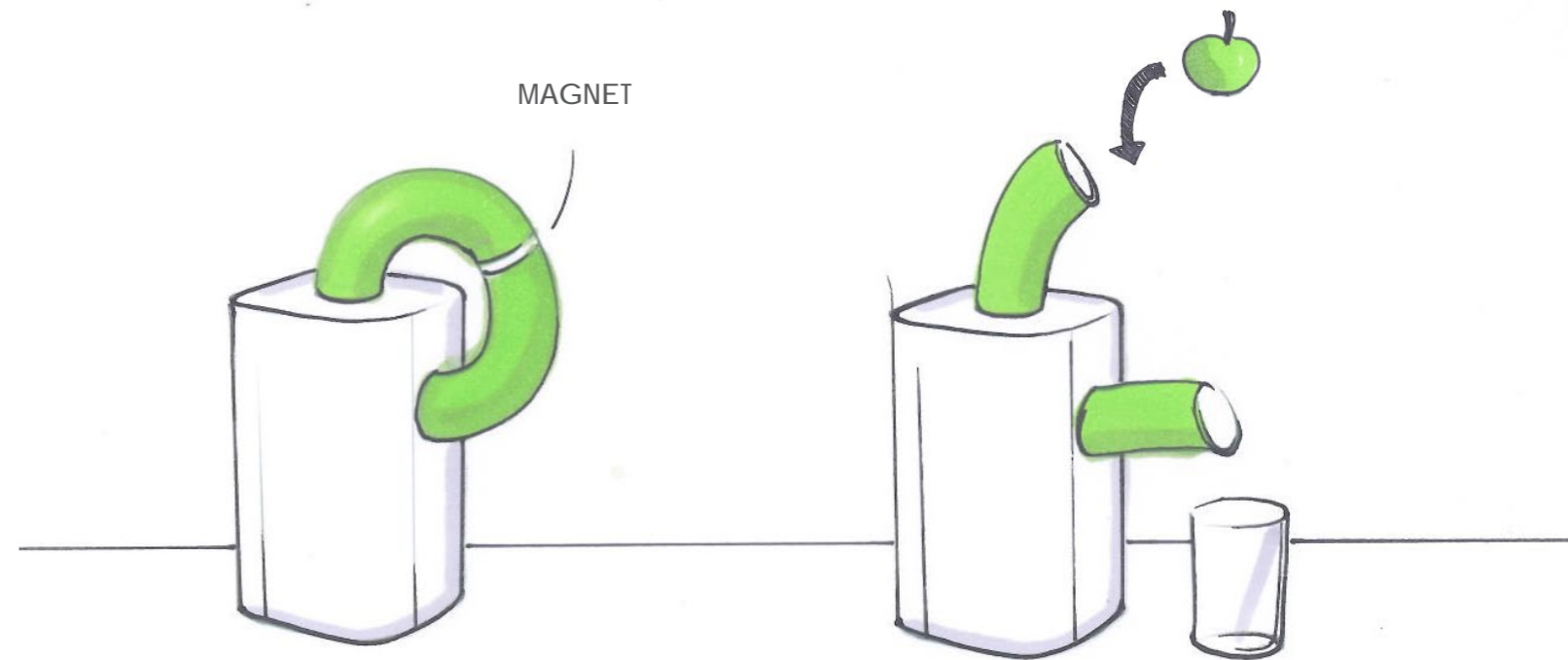
EXPAND



FRUIT BASKET

Another concept that supports the juicer's permanent place in a kitchen is a device that doubles as a basket for storing fruits and vegetable. This can also encourage users to prepare a glass of juice from the overripe fruits instead of throwing them away.

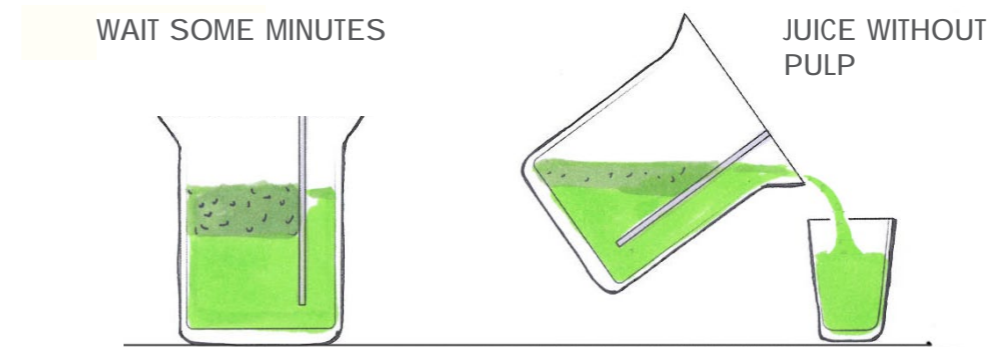
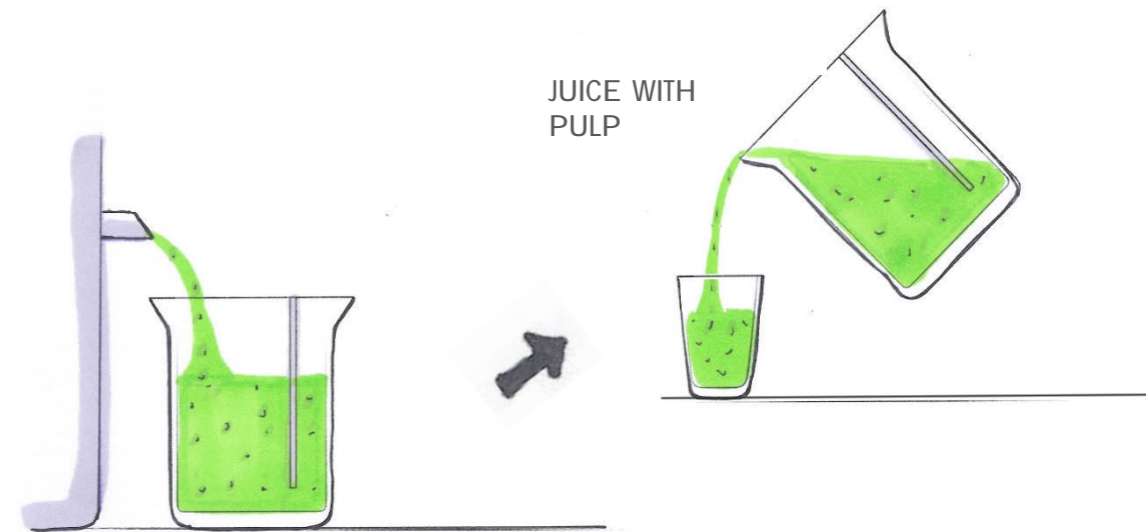
REVEAL



TUBE RING

The feeding tube and spout can be connected, clearly indicating the off mode. Once the user opens the tube ring the juicer is ready to 'be fed'.

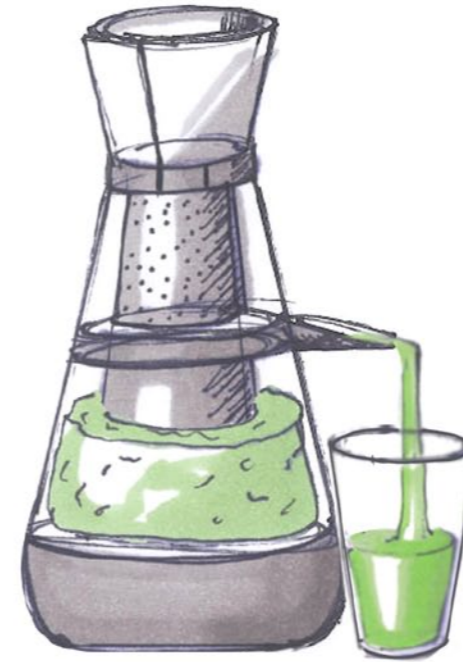
EVOLVE



SLOW PULP

A slow way to separate pulp from the liquid, as well as to provide the possibility to observe this separation, is to divide the juice jar into two compartments, with a thin wall containing a hole at its lower edge. If the user prefers juice with pulp the juice should be served right away. For pulp-less juice he or she simply waits a few moments until the pulp is floating at top of the larger of the two compartments.

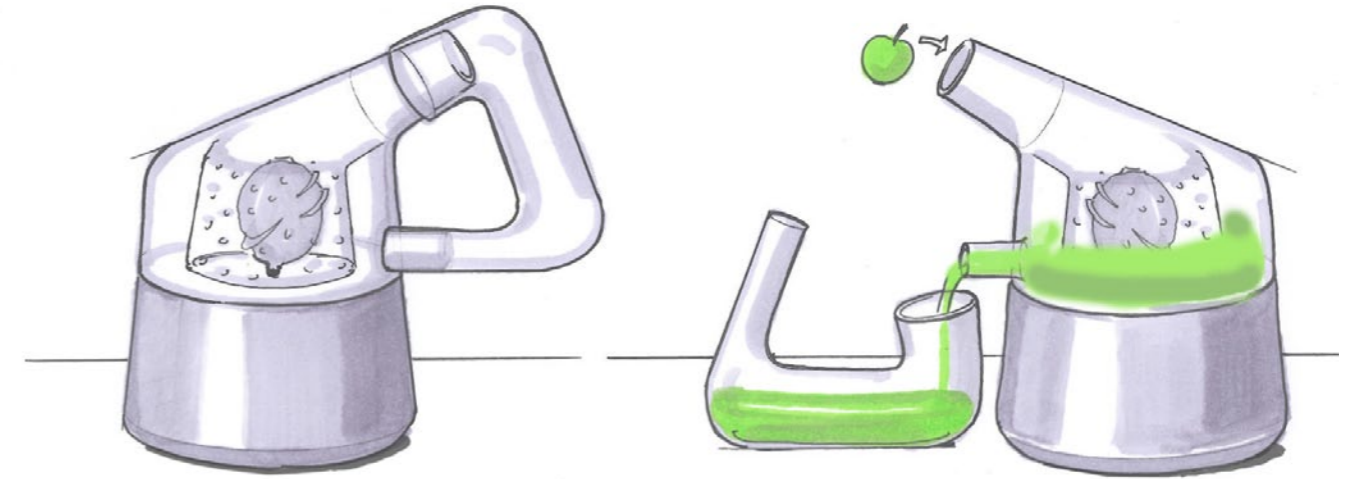
ENGAGE



CHOOSE PULP

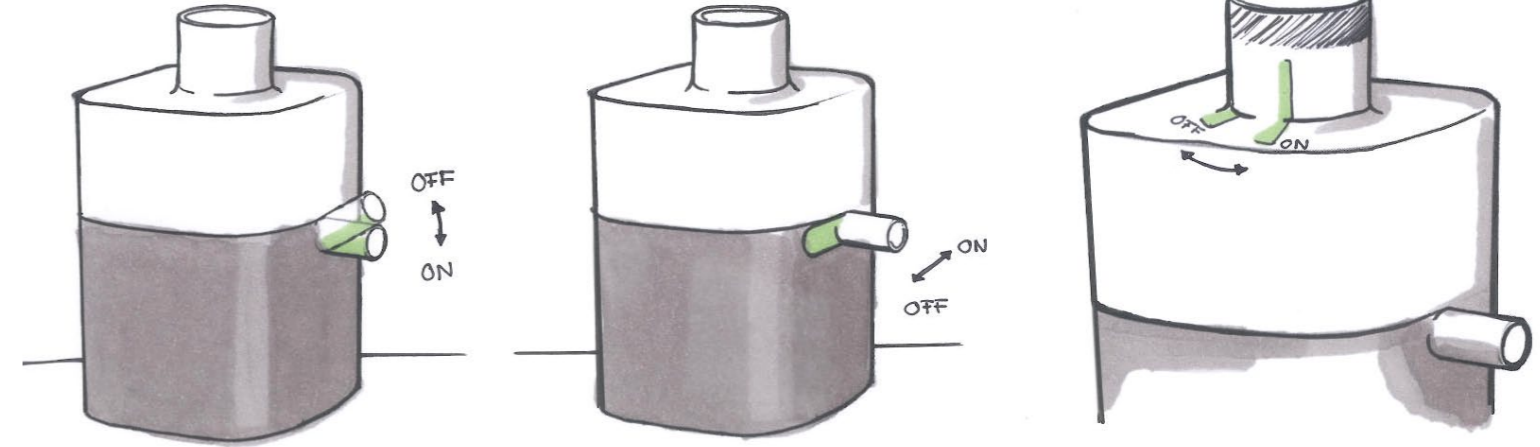
This concept is yet another way to regulate the amount of pulp the user wants to have in his or her juice. By selecting the size of the filter holes the amount of pulp exiting the juicer can be adjusted, turning the device into a juicer / blender combination.

REFLECT



CAREFULLY SERVING
The juice jar is made of a fragile material encouraging the user to handle it very carefully, taking the time and paying attention during serving.

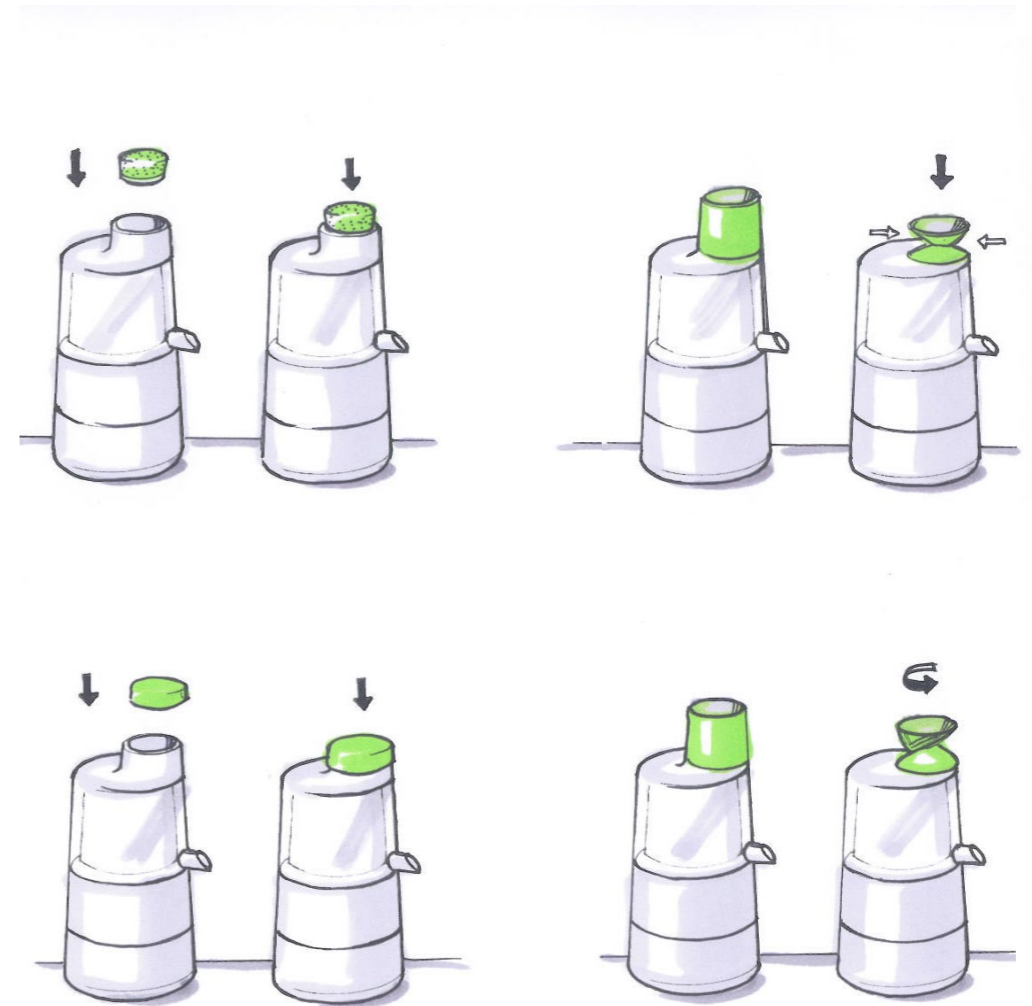
REFLECT



FUNCTION BUTTON

Most of the existing juicers have an on/off button at the lower part of the device. Instead of a switch, the user moves a part of the juicer, making the state of the machine clear. This alternative could look just like the concept on the left, where the spout indicates the readiness of the machine (horizontal) or its off mode (up).

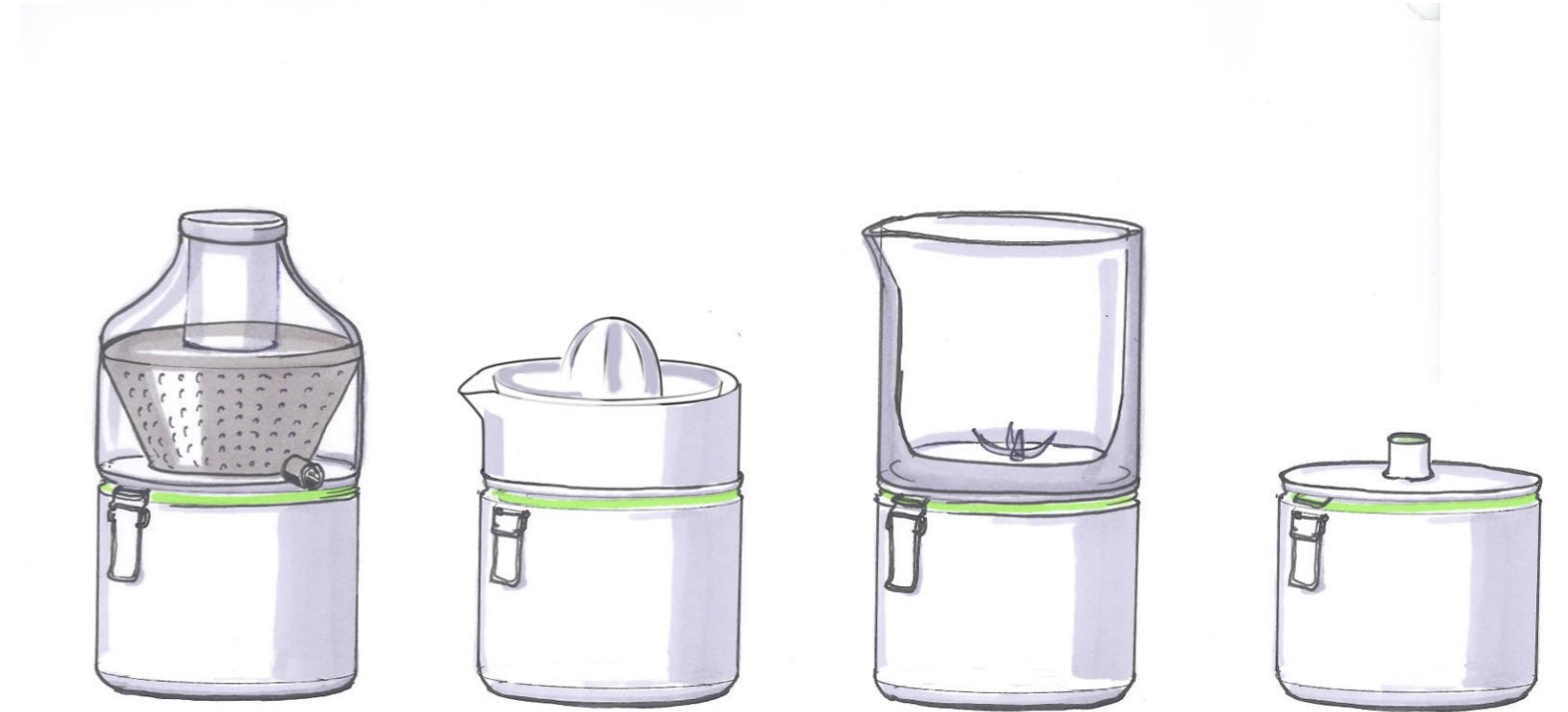
REFLECT



ENGAGEMENT AND CONTROL

This concept involves the user actively in the process by let him or her holding, pressing or turning the feeding tube in order to keep the motor running. Next to being involved, this interaction gives a feeling of control over the device. At the exact moment the user releases the hand, the device stops working. In all four ideas the feeding tube is closed while the motor is turning which means the auger can not be touched while spinning. This is an additional security feature.

REFLECT



JUICER + CITRUS PRESS + BLENDER
Three devices in one, where only one motor is necessary. The combined device becomes a universal 'juice machine', e.g. for smoothies, clear or pressed orange juice. In addition, the multi-functionality presents the user with three more reasons to keep the device in a visible place in the kitchen.

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ACKNOWLEDGEMENTS

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