

Graduation project Maaïke van Selm

Designing for **climate adaptive behaviour  
change in IJsselmonde, Rotterdam**

A research through design project to inform  
design for transitions

## Project Introduction

This project is a graduation project for the master Strategic Product Design of the Delft University of Technology, with a time-frame of 100 working days. Based on the personal interest to design for (sustainable) transitions, a case-study in a transition context is carried out in commission of gemeente Rotterdam, and used to inform the transition design practice.

### Gemeente Rotterdam

#### Global goal, local challenge

World wide, greenhouse gas emissions have to be reduced to zero by 2050, in order to limit global warming to 1.5\*, the indicated maximum rise of temperature before the effects of climate change make our planet unlivable (Intergovernmental Panel on Climate Change, 2018). It is international agreed to reduce world wide greenhouse gas emissions in the Paris Climate Agreement (2015). Based on this international agreement, the national Dutch Climate Agreement is created (presented June 28th 2019).

The first sector mentioned in the Dutch Climate Agreement (2019) is the build environment; this sector is responsible for 40% of the Dutch greenhouse gas emissions:

*"We are on the cusp of a sustainable transformation of the built environment and of the adaptation of the 7 million homes and 1 million buildings we have built [...] We have chosen a structured approach, tackling one district at a time. **The municipalities play a crucial role in this regard**"*

*"It can be done effectively, provided that we tackle the issue in a structured manner and improve all relevant conditions, as well as **take a broader view of the sustainability task ahead** and include the circular economy as a key component. Perhaps the most important aspect is that we realise that the most significant challenge we face in this endeavour is not a technical, financial or administrative challenge, **but a social challenge. It's about people**"*

Accordingly, Gemeente Rotterdam is working on the sustainable transformation of the build environment. Currently, in the district IJsselmonde.

#### Local challenge, question

There is however, little knowledge on how to realise the sustainable transformation of the built environment. Gemeente Rotterdam is participating in the European initiative Triple A. Triple A is an initiative "for local authorities who are seeking to support homeowners to reduce emissions in their homes" (Triple A, 2019). According to triple A, providing Awareness and Access should lead to Adaptation of low-carbon technologies by home-owners, which in turn should lead to reduction of energy consumption of households and the reduction of greenhouse gas emissions.

In line with the Triple A strategy, the Duurzaamheidswinkel (information store on sustainable living) in the local shopping mall Keizerswaard, and the website [duurzaamrotterdam.nl](http://duurzaamrotterdam.nl) are created. Both the Duurzaamheidswinkel and website include other topics on sustainable living - this is in line with the national guidelines to combine this sustainable transformation of the home-environment with a broader view of the sustainability task ahead.

As noticed by the municipality, the Duurzaamheidswinkel and website are not winning over the IJsselmonders, at the pace they would like to see. This leads to the question of the municipality: in addition to the Duurzaamheidswinkel and website, **what else can we do to realise the sustainable transition of the build-environment, and life-style, in IJsselmonde?**



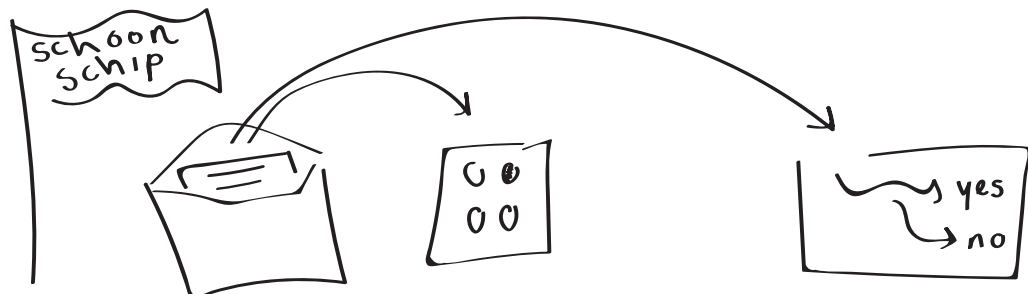
**“Koop dan zelf een zonnepaneel”**

## Project result

The three sprints of this design process, resulted in the design proposal Schoonschip Week for Gemeente Rotterdam: an organised declutter week, with provided facilities and an opening challenge. This event is based on the personal relevant topic health for IJsselmonders. It combines this topic with the climate adaptive category belongings. The expected effects of decluttering are: increased mental well-being due to a feeling of security, order and control on the direct environment, and reflection on belongings. If this reflection on belongings (why do I have this?) leads to a reflection on consumption (why have I bought this?), decluttering could result in climate adaptive behaviour: adaptation of consumption patterns. When this is the case, IJsselmonders might experience climate adaptive behaviour in a positive way (conscious consumption is personal relevant and beneficial: it results in an organised personal environment and saves money). It is expected that this positive experience, leads to receptiveness of climate adaptive behaviour.

## Design

The design proposal for the Schoonschip Week consists of two elements: an event, and an opening challenge. The design of the event is based on the stages for festival design (de Kat Angelino, 2018), and for each stage ideas are created. Next, the opening challenge is designed, with help of the safety frame control (Desmet, 2019). This opening challenge is created for two reasons: first, to catch the attention of IJsselmonders and to introduce the Schoonschip Week. Second, to lower the threshold for participation through a try-out challenge. Gemeente Rotterdam can use this design proposal to further development to carry out the event.



### Priming suggestions

- personal paper invitation (including stamp-book, which leads to the trigger, and infographic to support consideration)
- physical promo in IJsselmonde
- digital promo for neighbourhood/ street whatsapp

### Trigger suggestion

- a savings action that results in, for example, free drinks at the declutter market. The stamp-book for the savings action is sent to IJsselmonders, together with the personal invitation

### Consideration

- this is a thought process of individuals; but can be supported by for example an infographic. The infographic for consideration is sent to IJsselmonders, together with the personal invitation

### Feasibility

Organising the Schoonschip Week is considered to be feasible: it requires a permit (of the municipality), market stands (with volunteers or social initiatives such as charity shops), promotion and participation - nothing high-end or that is not done before.

### Viability

The Schoonschip Week is also considered to be viable: it would be organised by the municipality, and carried out by the Duurzaamheidswinkel. It is indicated there is budget, time and enthusiasm to do so!

### Desirability

In both sprint 2 and 3 the Schoonschip Week was evaluated positive and IJsselmonders indicate to participate, so it is considered to be desirable.

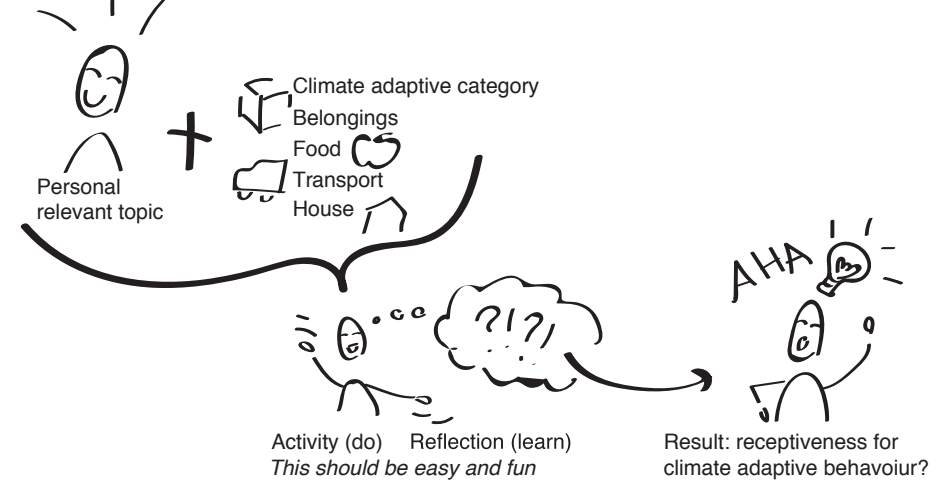
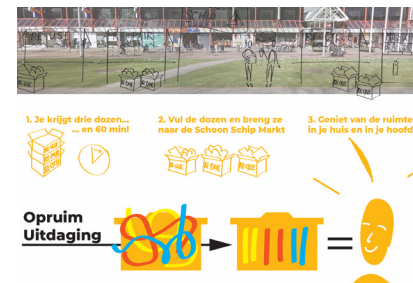


Figure 15: solution mechanism

## Recommendations

Based on the evaluation in sprint 2 and 3, two main recommendations for further development are found:

- *Explore how to involve elderly.* There are many elderly people living in IJsselmonde, and as mentioned by some IJsselmonders during the evaluation of the Schoonschip Week, it is important to take this into consideration. *An idea could be to use a buddy-system, that links elderly IJsselmonders to younger IJsselmonders. This would also bring an extra social dimension into the concept*
- *Explore how to facilitate reflection.* In sprint 3, it is found that the step from decluttering to reflection is not naturally made by IJsselmonders. Though this finding is strongly influenced by the prototype method, the desired effect of this design intervention relies on reflection. Thereby, it would be wise to facilitate this reflection. *An idea could be to use "influencers" during the event, to ask questions about the experience, the effect of decluttering and provoke evaluation*



### Action

- Opening declutter challenge with time-limitation and clear assignment



### Discovery suggestion

- Facilities at Keizerswaard for a period of time (1-2 weeks), so IJsselmonders can use them in their own time

### Concluding the design phase

In the Dutch Climate Agreement, it is already mentioned that the sustainable transformation of the build environment is mainly a social challenge. It is not unexpected, but surprising, that *making things easy is not enough for IJsselmonders to adapt climate adaptive behaviour, as found in sprint 1. This led to the insight, that before adapting climate adaptive behaviour, receptivity to climate adaptive behaviour has to be created - in a personal relevant way.* Based on this insight, the design intervention Schoonschip Week is created. It aims to create receptiveness for climate adaptive behaviour among IJsselmonders from a personal relevant, unexpected angle: at first, it seems a personal relevant activity. After reflection, it is learned that climate adaptive behaviour can also be personal relevant and beneficial.

The positive evaluation of IJsselmonders on this concept, indicates the idea resonates with IJsselmonders. However, if it is able to reach the aimed effect (receptiveness for climate adaptive behaviour), needs further research and development. Exploration of the indicated recommendations, and more in-depth prototyping, are the first steps for further development.

"uit onverwachte hoek"

"Zullen we dit anders even opruimen?"

**"Koop dan zelf een zonnepaneel"**

Waarom?

