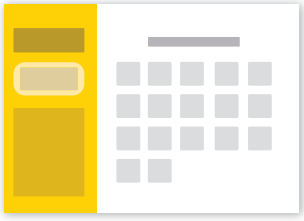
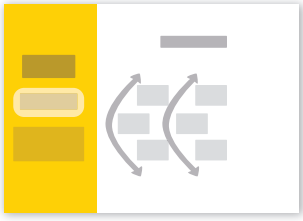
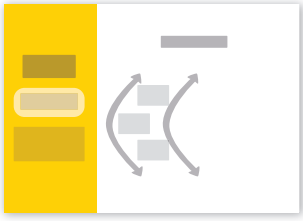
APPENDIX

A mental model approach to design

The development of a new framework on design for behavioural change

TUDelft | Graduation thesis | Ward van Hoeven



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B: Recruitment flyer

This flyer was used to recruit participants on the street for the interviews.

C: Interview protocol

This was the guide for interviews. It starts off with general questions, becoming more specific to inquire the interviewee's beliefs about certain concrete topics.

Protocol:

- "Ik zal mezelf even voorstellen. Ik ben Ward, ik ben 25 en ik ben aan het eind van mijn studie industrieel ontwerpen, en ben nu bezig met mijn afsluitende project. Daarvoor doen we ook dit interview.
- Ik ga zo wat vragen stellen, en dan wil ik graag jouw mening horen. Je hoeft dus niet te zeggen wat je denkt dat een "goed" antwoord is. In ben puur geïnteresseerd in hoe jij het ziet, hoe dat ook is. Als het helpt kan je dingen ook tekenen wanneer je iets uitlegt. Dat hoeft niet mooi te zijn, maar is om jouw te helpen om het voor mij duidelijk te maken. En als je iets niet weet, dan hoor ik dat ook graag.
    - OK to voice record for own reference?
- **CE in general**:
    - Tell me about CE…
        - How can something be circulated in CE?
            - Biological vs. technical materials (composting vs. reuse, repair, remanufacture and recycle)
- **Plastics within CE:**
    - Tell me about plastics within CE…
    - Where does plastic come from? (100m years, petroleum, by-product of fossil fuel)
    - What happens when plastic packaging is no longer of use?
        - How is it discarded
            - What happens to it over time? (landfill/incineration)
                - What is the effect of this?
                - What are biodegradable plastics and bioplastics?
            - How does recycling work?
                - How are different things separated in a recycling plant?
                    - Are there different types of plastics?
                - How are plastics eventually used again?
                - Do you think there will be an infinite reuse of resources?
- **Participant's behaviour**
    - Do you pay attention to behaving in a certain way with plastics? Green strategies concerning plastic packaging? Why? How?
        - Do you (not) buy certain products? Why? How?
        - Do you use plastic bags/bottles? Why? How?
        - Do you re-use plastics? Why? How?
        - How do you dispose of plastic packaging? Littering, PMD separating? ?
        - How do you decide what should go in which bin? What can and what cannot go in PMD?
            - How do you usually discard: Chips bag? Black burger packaging? Styrofoam? Oranges net? Plastic bottles?
            - Are you always confident in deciding?
            - Do you clean packaging?
        - Does your behaviour have an impact? Do others behave "good"?
            - Why? (on all questions above)
            - How does this work? (on all questions above)

- Concerns
    - "How concerned are you for the environment? (1 to 10)"
    - NL: "Hoe bewust ben je over het milieu? (1 tot 10)"
        - Why? What is the problem?
            - Global warming, too little resources, pollution, …
                - How does this work?
- Specific MMs of interest to check:
    - Ocean plastics
        - How does it end up there?
        - What happens with it? How long?
        - Is it harmful? How?
    - Tell me what you know about microplastics
        - What is it? How is it formed? What are the effects?
- Participant info:
    - Age, education level

D. Interviews

The transcripts were analysed, leading to insights and a mental models map per participant.

D.1 Insights per participant

Participant #1

Motivations:

- Only wants recycle and act green if it's not too much effort.
- Money is an incentive to act green.
- Acting green is done because she believes (MM) that others will copy her behaviour.
- She is unsure about whether recycling actually helps (because it takes a lot of energy). Therefore, she doesn't want to spend a lot of effort.
- Concern: Future generation/her future kids
- Concern: Global warming

Main good/bad/missing MMs:

- She puts most responsibility for environmental action (against global warming) at businesses and the government. The government should regulate businesses and the population by providing incentives and restrictions.
    - She should be made aware of the responsibility and influence consumers can have
        - Cars, heating, etc. (consumers) also have an impact on global warming
        - Laws from the government take very long to come through and will not be extreme enough, because there are a lot of counter-motives (economic, lobbies, …) = complexity of sustainable policy (should be shown)
        - Monetary incentives can be circumvented. E.g. tax on thrash makes people dump it in nature. "Selling" thrash to be processed in other countries, make them dump it in the ocean. Tax on unsustainable practices will lead companies to move elsewhere.
- Plastics is seen as being bad for global warming. She is not sure how, but this is because it is related to oil.
    - Explaining that plastics is a by-product of gasoline, can enforce this negative association.
- She is concerned for global warming. But she is not aware of the loss of resources.
- She thinks poor countries will get in trouble first. There should be a MM that shows that effects also happen close to them (psychologically proximal).
- She is unaware of waste incineration, and the accompanying CO2. Furthermore, she is unaware of how CO2 is the input for plant remains that get formed to oil.
    - Communicating the circle of C02, back to CO2 and the timescale of both sides could be beneficial.
- She feels like recycling is not effective, since it also takes a lot of energy.
    - A new MM could explain that this is just the start of recycling, and that it may become more efficient once the system is optimized and the scale is enlarged. Then, participating now is an investment in a more efficient recycling future.

Participant #2

Motivations:

- The effect of an environmental action should be worth the sacrifice. If it's a lot of work (like eating vegan, or going to the "milieustraat"), she rather contributes by something else (eating vegetarian).

Main good/bad/missing MMs:

- She thinks that businesses have a bigger impact, and that they put it all on the consumer.
    - New MM: political consumption, that consumers have an influence on businesses.
- She thinks that the actions of an individual have very little impact.
    - New MM: butterfly effect
- She thinks that PMD is often put together with general thrash in municipalities because recycling is too expensive or there is not enough capacity (plants).
    - New MM: Businesses pay a fee for every package to recycling plants

Participant #3

Motivations:

- Wil gerecyclede dingen, maar alleen als ze niet veel duurder zijn
- Het is een balans tussen effort en effect. Als hij denkt dat het veel oplevert dan wil hij ook relatief veel moeite doen.

Main good/bad/missing MMs:

- Missing: How plastic is made from Oil
- Hij weet niet dat verschillende soorten plastic worden gescheiden in de recycling plant.
    - Daarom heeft hij niet de juiste redenering waarom chipszakken er niet in mogen
- Hoeveel moeite recyclen kost bepaald of mensen het doen
- Hij doet wel groen, omdat "als iedereen er zo over denkt, dan werkt het"
- Alle beetjes helpen, als iedereen dat doet
- Goed: CO2 uitstoot bij productie van stoffen, en dat is minder bij recyclen
- Goed: Kost veel energie om grondstoffen van ver weg te halen
- Plastic vergaat in 50 jaar in oceaan → veel langzamer
- Missing: Algen produceren veel zuurstof en die worden aangetast.
- Goed: Hij denkt dat plastics ook op het strand in NL aanspoelen. (proximate)

Participant #4

Motivations

- It's wasteful to throw goods things away. Other people have less and would like it.
- Doesn't know what and how to recycle
- Does not know about the consequences of not recycling
- Recycling is a hassle, and she has too little space for a separate bin
- Concern: Doesn't care much for emissions, mainly financial motivations to save gas.
- Concern: Health is important to her

Bag/good/missing MMs:

- Animal feed uses the same things that vegans eat
- Disbelief of global warming by humans → should explain MM of greenhouse effect

- Good: Better quality affords longer use and less waste
- Bad: Plastic garbage collection trucks drive around half empty
- Bad: Only fleece sweaters can be made from recycled plastic because the mix cannot be separated
- Missing: Recycling plastic saves resources and energy (and thus potentially money)
- Wrong: Plastic stream is only plastic bottles
- Electric cars may not be very good yet, but there is a transitional phase. Now, electricity is mainly from fossil fuels (which is generated more efficiently than in a car's engine), but will be from sustainable sources.
- Missing: Plastic is bad for algae → oxygen
- Missing: Microplastics are formed by disintegrating plastics in the sea.

Participant #5

Motivations:

- People make money and have a job because of recycling. That's mainly why he participates. Otherwise, these people won't have anything to pick up
    - Environmental benefit is just an extra
- It is possible to recycle… Then why not do it? That would just be lazy.
- Saving money is a motivator (to prolong use). If it then is better for the environment, he likes it. But also, he is willing to pay a little extra if it is better for the environment.
- He does not want to be controlled by the consumption culture.

Good/bad/missing MMs:

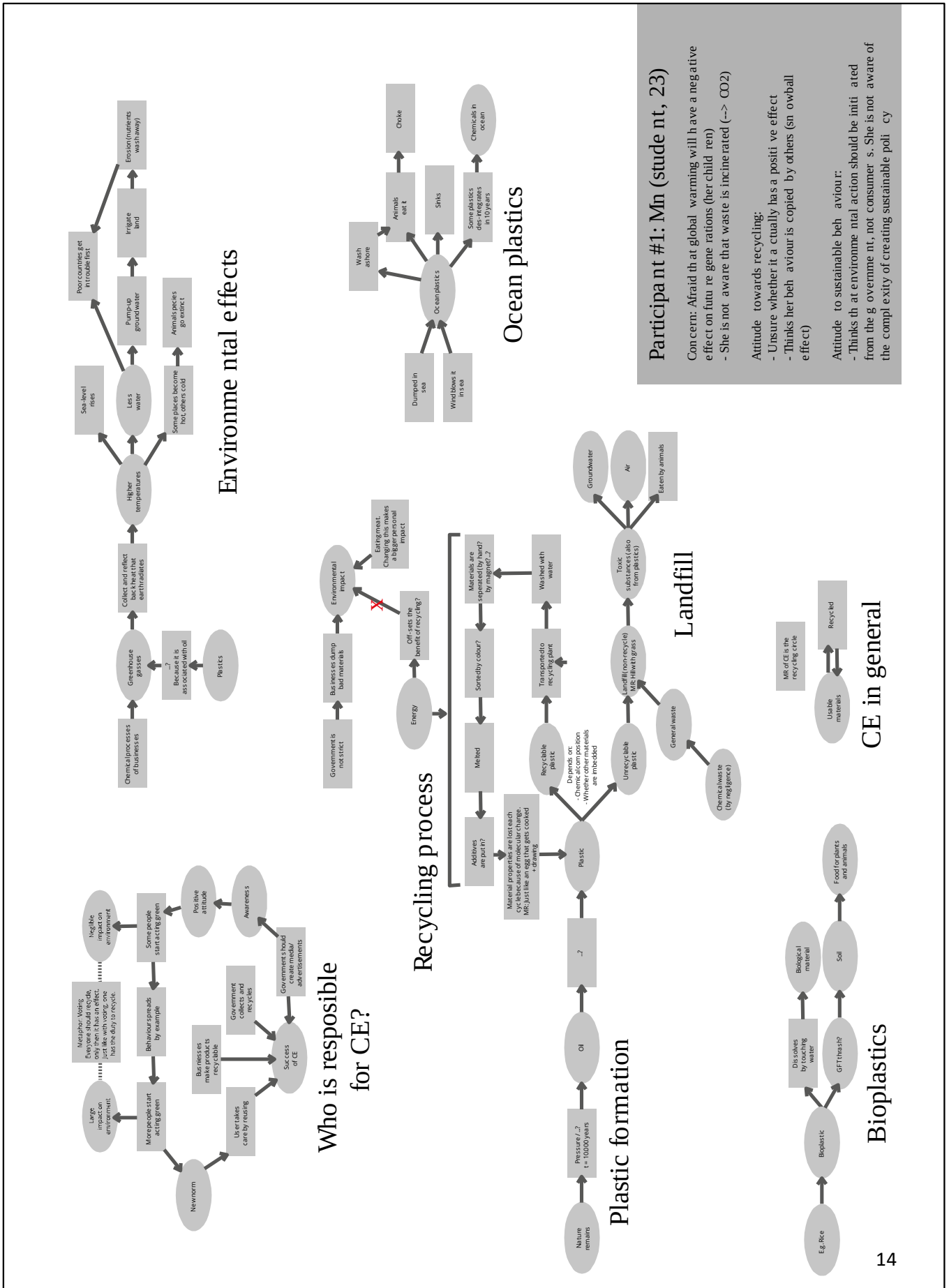
- He does not have a correct CE definition. He thinks it is about the economy in general.
- He is aware that energy is lost if things are built (and this energy is lost when it is broken down)
- He does not know that plastics decompose into microplastics
- He does not know that the RIVM also communicate to citizens
- He is aware of how the consumption culture happens
- He does not know how oil is formed
- He thinks that a lot of smart people are working on recycling, and he has quite some trust that they will improve recycling in the future.
- He does not know what exactly should go in PMD.
- He thinks the main issue is not running out of resources, but that using it has a negative impact now.
- The proximity of the impact of climate change is high: In 3rd world countries mainly. But also close, e.g. health risks like eczema.
- There is a (political) balance. Some parties are pro-environmental action, but this costs money. Other parties are contra, and they make sure there is enough money. Also, some people don't participate in the consumption culture, and some do. Then, the economy will function.

Source of information:

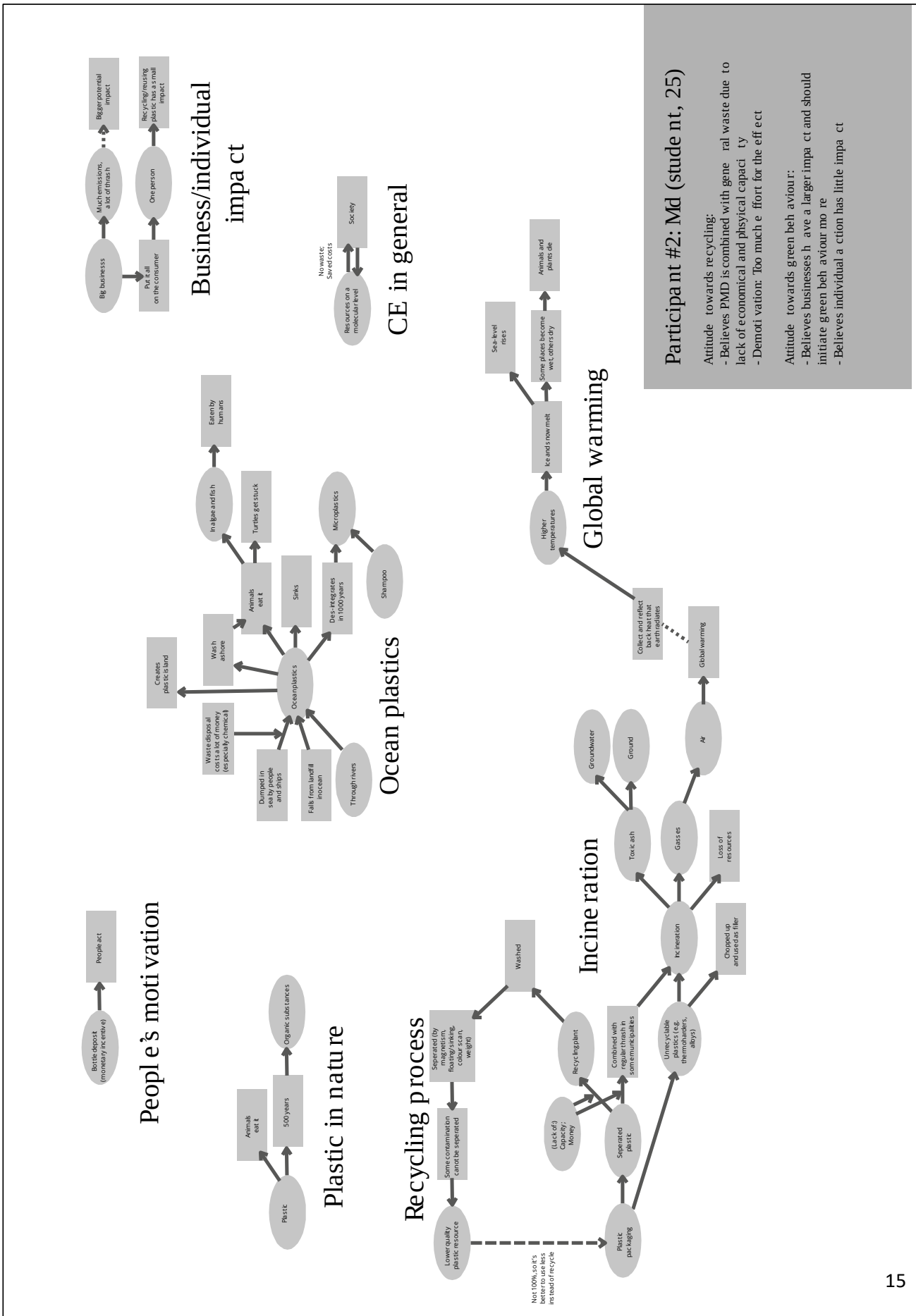
- He uses his own (or stories of) perceptions to make conclusions. E.g. he sees less flies on his headlights, which connects to bad chemicals in the air. He goes on a holiday to the same beach often. Lately, there is way worse weather and more plastic on the beaches.

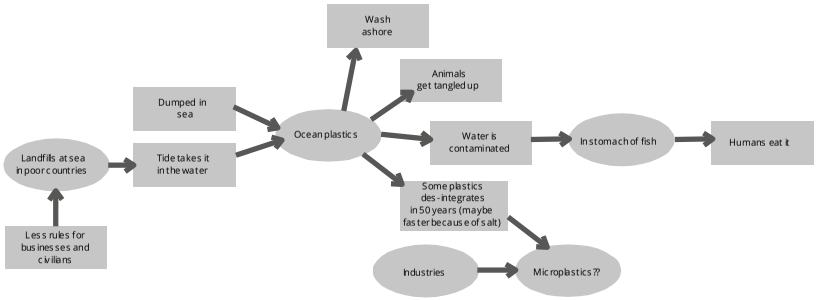
D.2 MM maps per participant

Participant #1



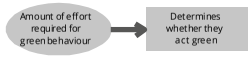
Participant #2





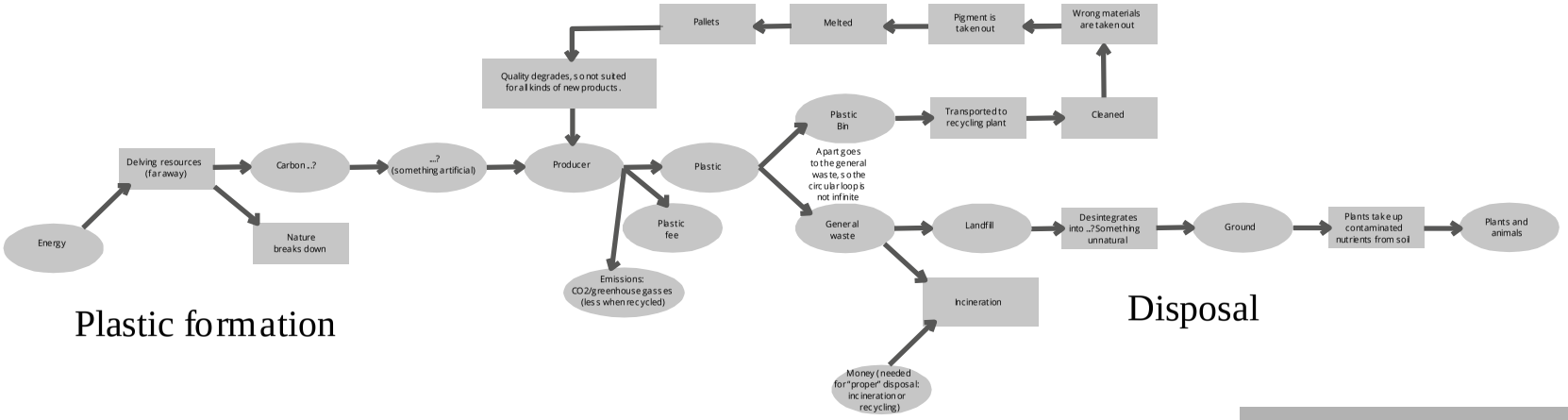
Ocean plastics

Impact



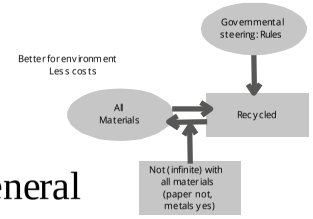
People's motivation

Recycling process



Plastic formation

Disposal



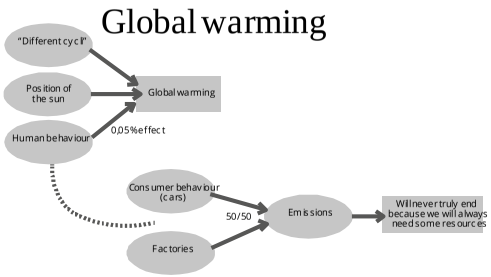
CE in general

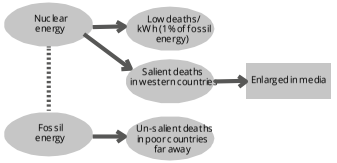
Participant #3: D (student, 19)

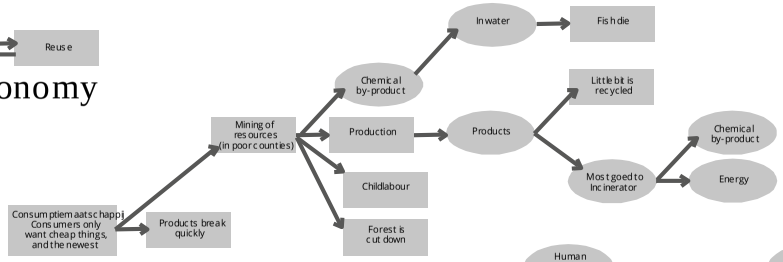
Attitude towards recycling:
- Is keen on recycling, unless it takes much extra effort
- Believes the effect also occur on the NL (plastic on beaches)

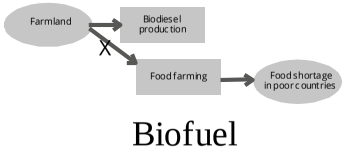
Is not aware of PMD being separated

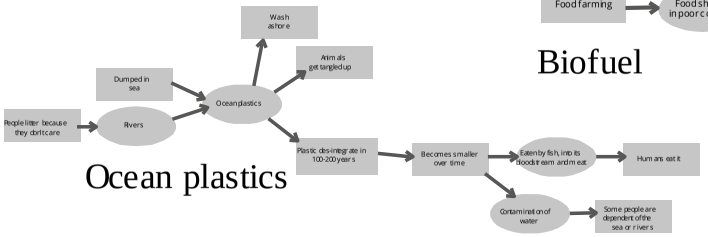
Attitude towards green behaviour:
- Believes in the snowball effect

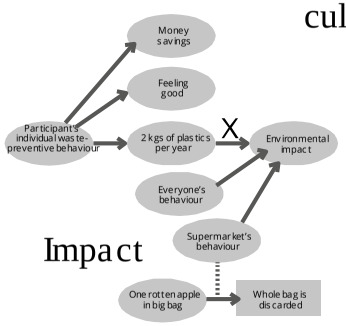


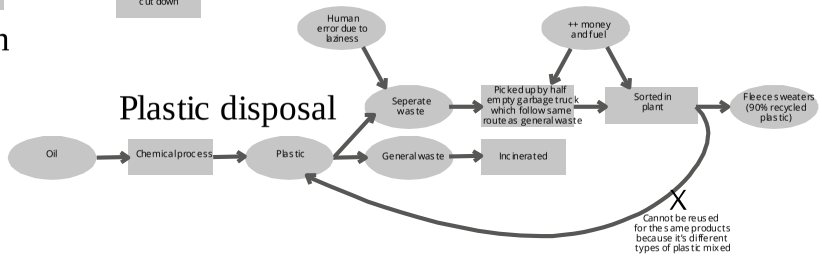


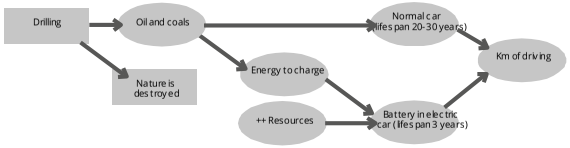


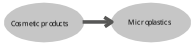










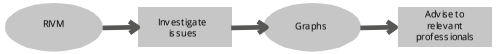


Participant #4: L (part-time shop employee, 33)

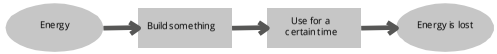
Concern: Cares mainly about money and her health, not about climate change.
- Disbelief about human's impact on climate change.

Attitude towards recycling:
- Thinks the recycled is not useful, limited use.

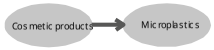
Does not know what can be recycled and how (thinks only plastic bottles can be recycled)



RIVM

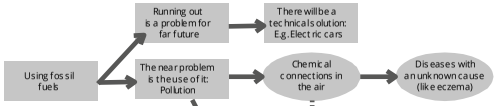


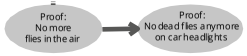
Energy for building

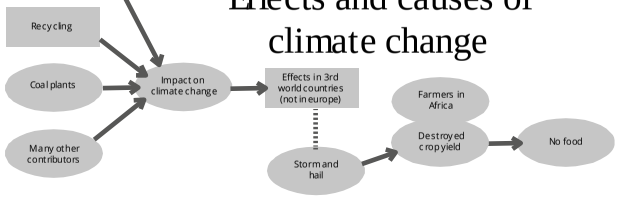


Microplastics

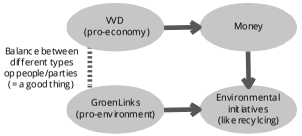
Fossil fuels problems



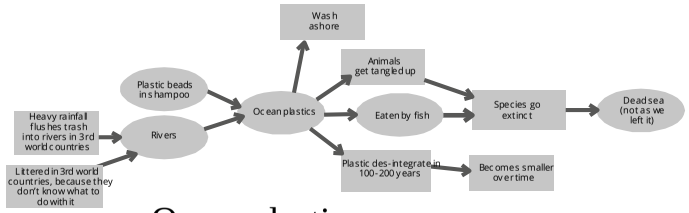




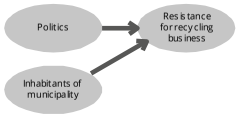
Effects and causes of climate change



Balance through differences

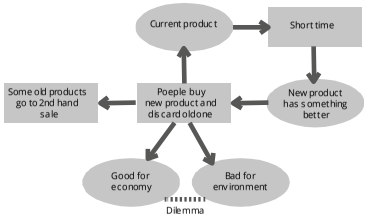


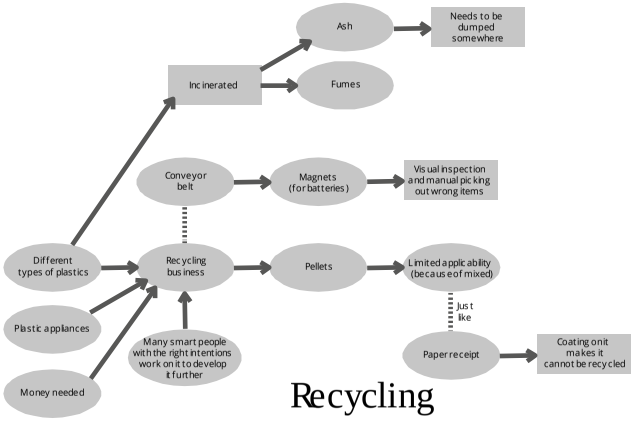
Ocean plastics



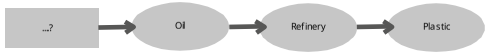
Resistance to recycling

Consumption culture





Recycling



Plastic formation

Participant #5: P (Part-time construction worker, 52)

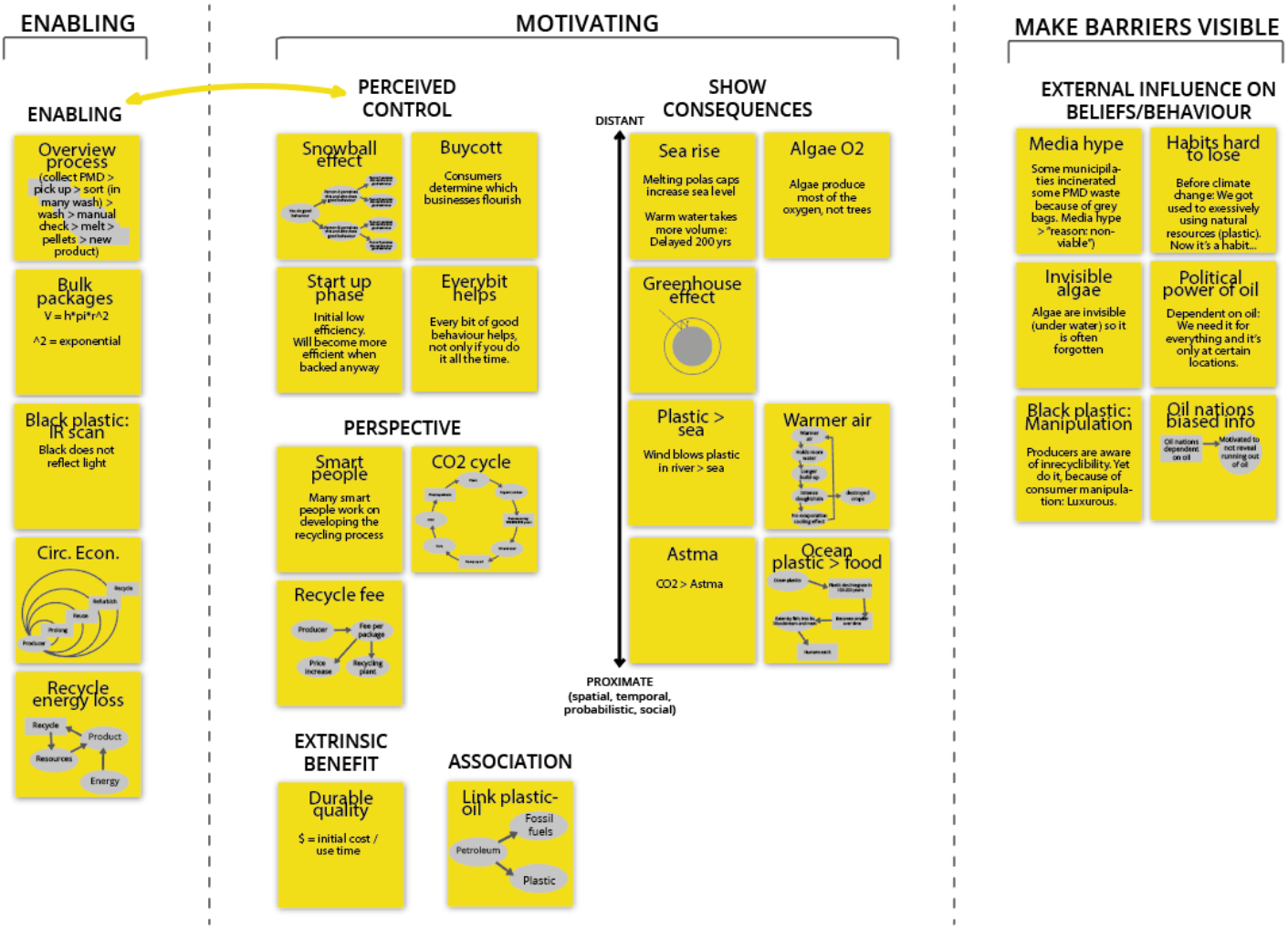
Attitude towards recycling:
- "Why not?" He thinks that if its possible and not too much extra effort, it would be lazy not to.
- He thinks many smart people work on recycling, so it must be well thought-out
- He does not want to be controlled by the consumption culture
- He is aware of the energy loss of recycling

Attitude towards green behaviour:
- He has seen climate change himself.

E. Mental model clusters

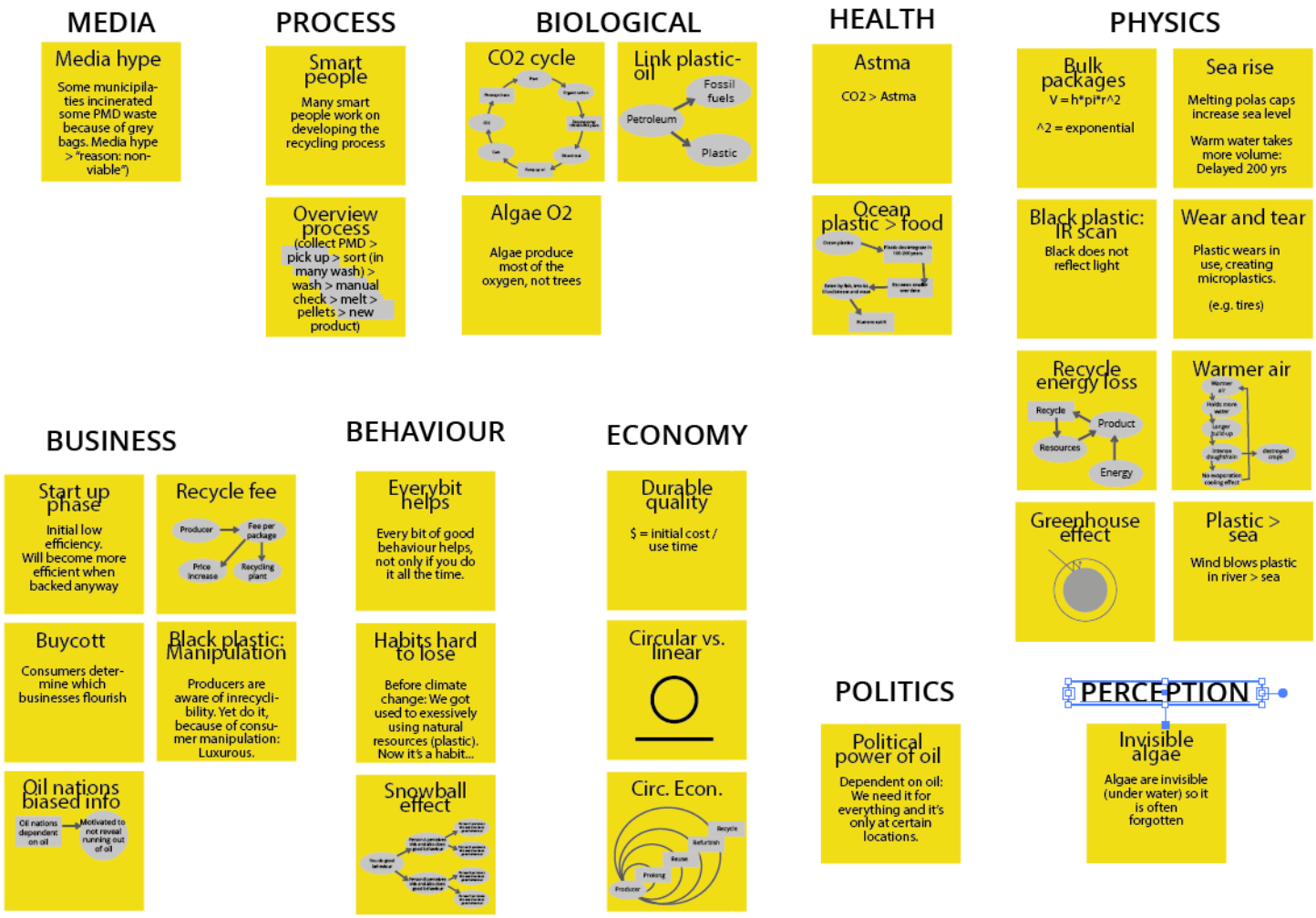
A selection of the collected mental models is clustered to find underlying types and dimensions. The initial clusters are found below.

E.1 Cluster 1:



- This clustering is on the link between a MM and behaviour.
    - Main distinction: Enabling vs. motivating vs. make barriers visible (first two from literature: TPB).
        - About barriers cluster: The MMs in here are not best characterised by being motivating, but more by communicating how people's beliefs and behaviours are influenced/biased.
        - About consequence cluster: Proximity is relevant (from literature).
        - About enabling and perceived control clusters: These are related: Enabling someone will likely also increase their perceived control and vice versa. They are placed in the cluster their emphasis is on.
- Relevance: A MM can be aimed at one of the different strategies. It differs per situation which is best: Perhaps the cluster that is lacking should be targeted (e.g. consequences if people don't know/belief them), or the one people are most sensitive to (e.g. extrinsic benefit like money, if that's a big concern for someone).

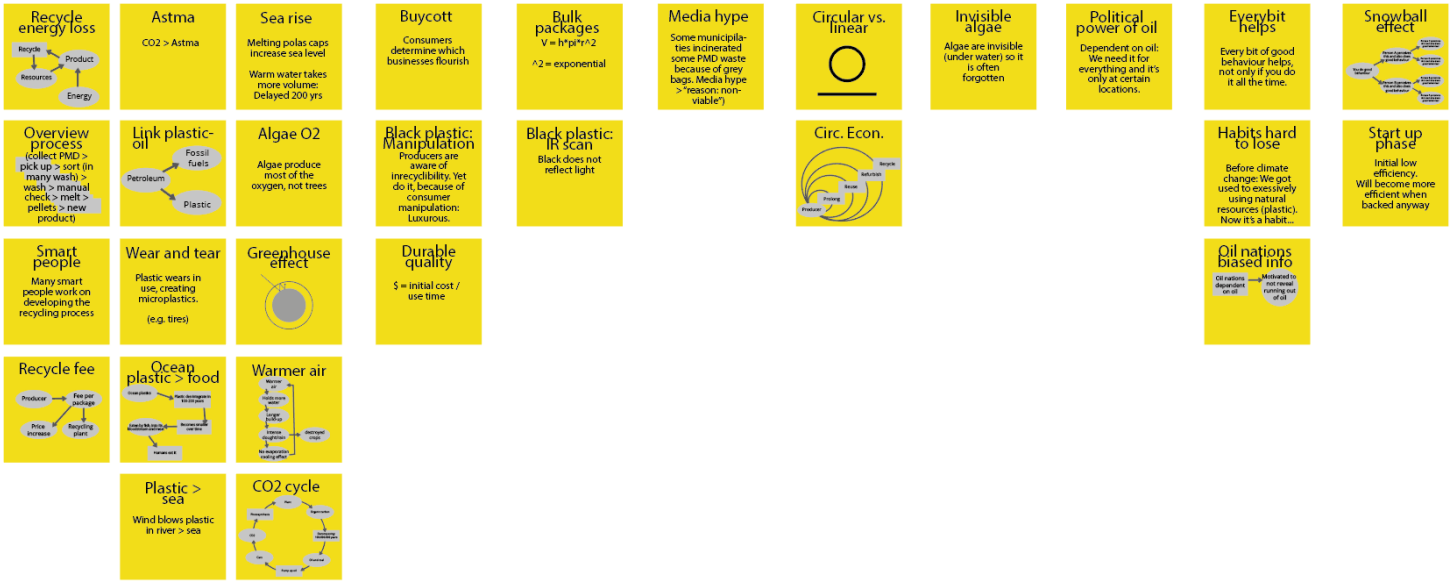
E.2 Cluster 2:



- This clustering is on what the MM is about. This nicely shows how broad the structure of MMs about plastic within the CE is.

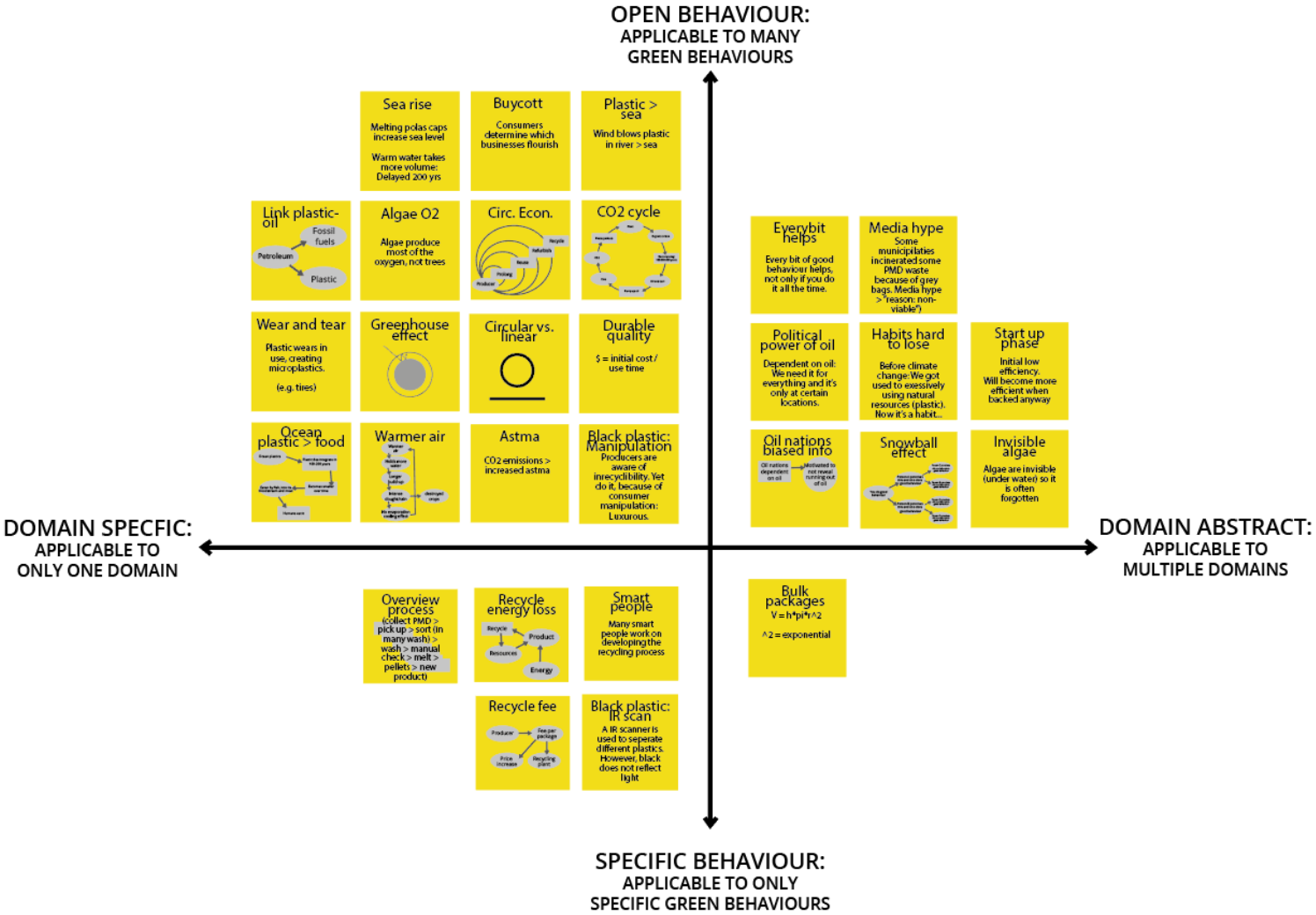
E3. Cluster 3A

SPECIFIC ⟷ **GENERALIZABLE**

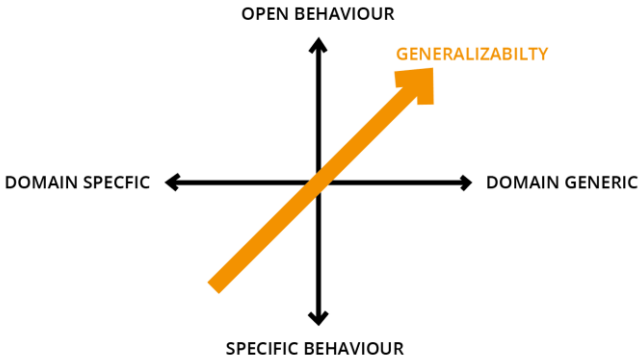


- Some MMs are more generalizable than others. For example the one that explains how plastic is made from petroleum together with gasoline is very specific and cannot be transferred to any other system. On the other hand, the "snowball effect" is generic: It can be about any physical or social system.
    - However, the one axis doesn't seem to cover it all... It is not only about how easily a MM can be transferred to another domain, it is also (or even mainly) about for how many relevant (green) behaviours it is beneficial.
        - ... On to cluster 3B →

E.4 Cluster 3B



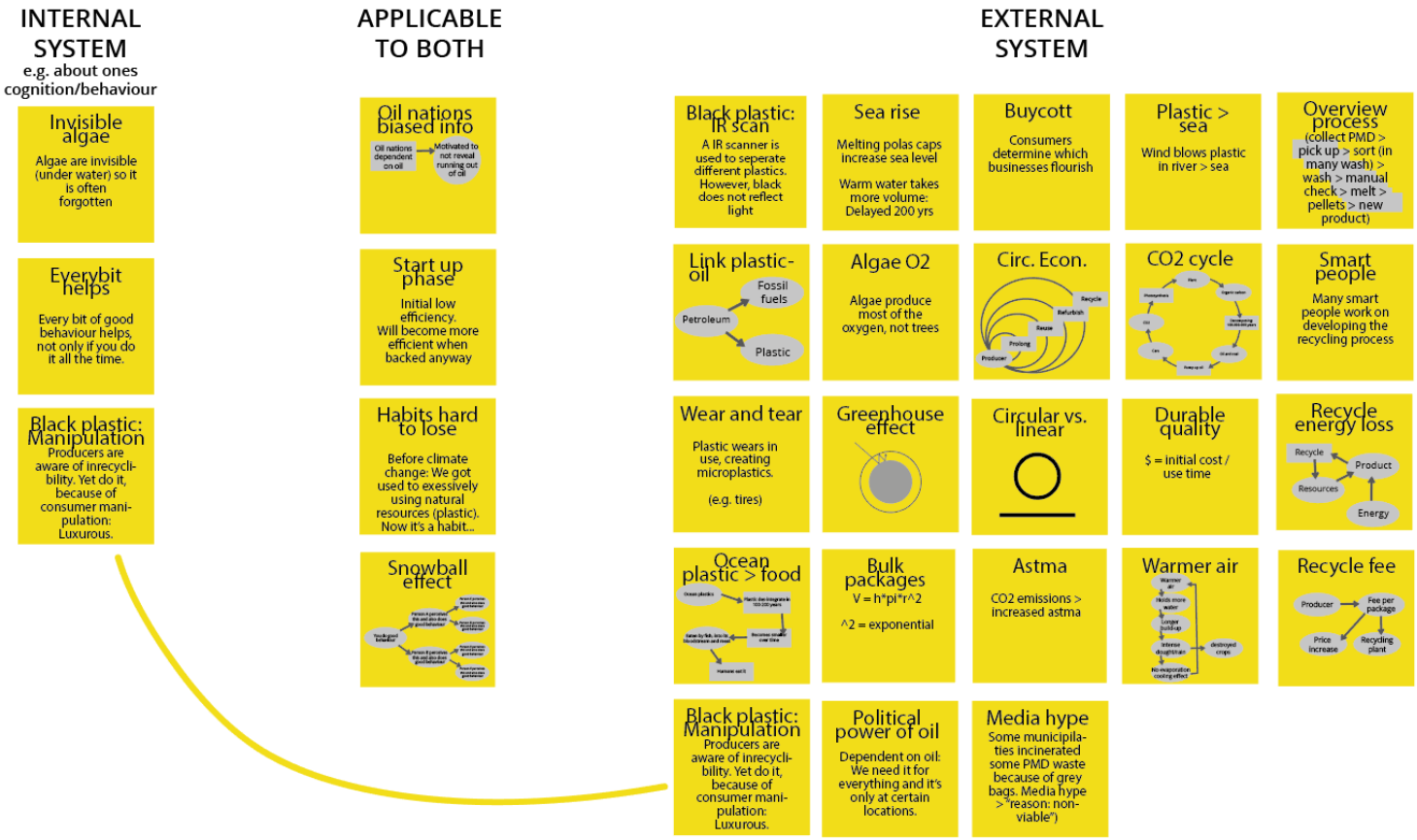
- While clustering, two dimensions of generalizability emerge:
    - **Domain** specific/generic: Is the MM applicable in another domain?
        - Specific instance vs. abstract MM. An abstract MM is a generalization of an instance: One situation in which the rules of the abstract MM are applied.
    - Specific/open **behaviour**: For how many relevant (=green) behaviours is the MM applicable?
        - Logically, there is a correlation between domain and behaviour specificity. If a MM is applicable to many domains it is likely to affect more behaviours. However, this is not always the case.



- Both dimensions combined form overall generalizability.

- Relevance: A MM that is applicable to many green behaviours may be desirable: It's an efficient way to increase impact. However, a MM being less coupled to a specific behaviour has the potential downfall of not being recognized to be used (or being easily disregarded -it is likely incongruent with other motivations such as ease).

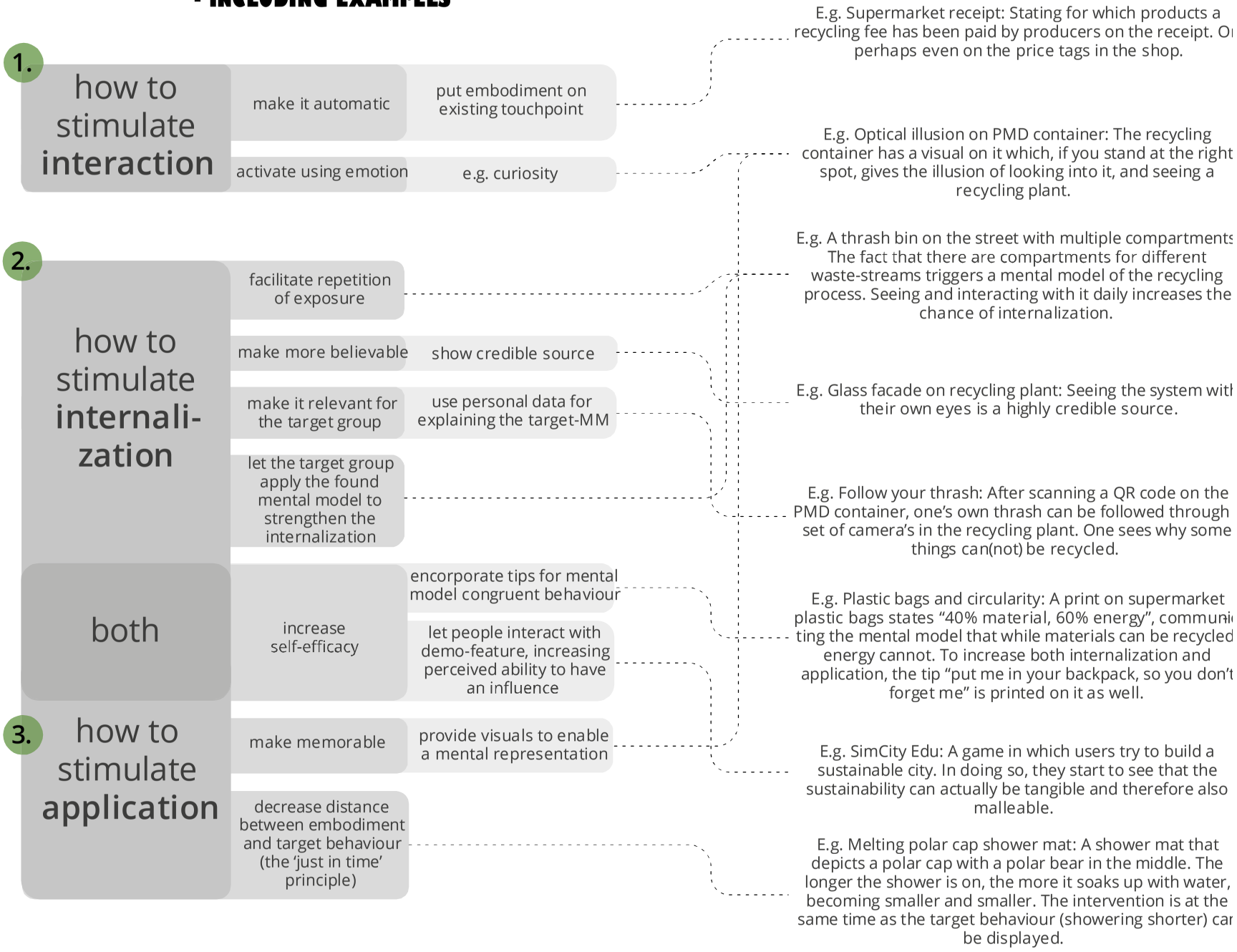
E.5 Clustering #4



- This clustering distinguishes between MMs that are internal or external to the individual:
    - Internal: About ones own cognition or behaviour.
    - External: About a system separate from the individual.

Applicable to both: These MMs are more generalizable/abstract, and could be applied to both external and internal systems.

REFINING THE EMBODIMENT: 3 LEVELS OF STIMULATION - INCLUDING EXAMPLES



F: Embodiment examples for each strategy of *Refining the embodiment*

For each strategy to refine an embodiment an example can be found below.

G Shortlists for participants during toolkit test

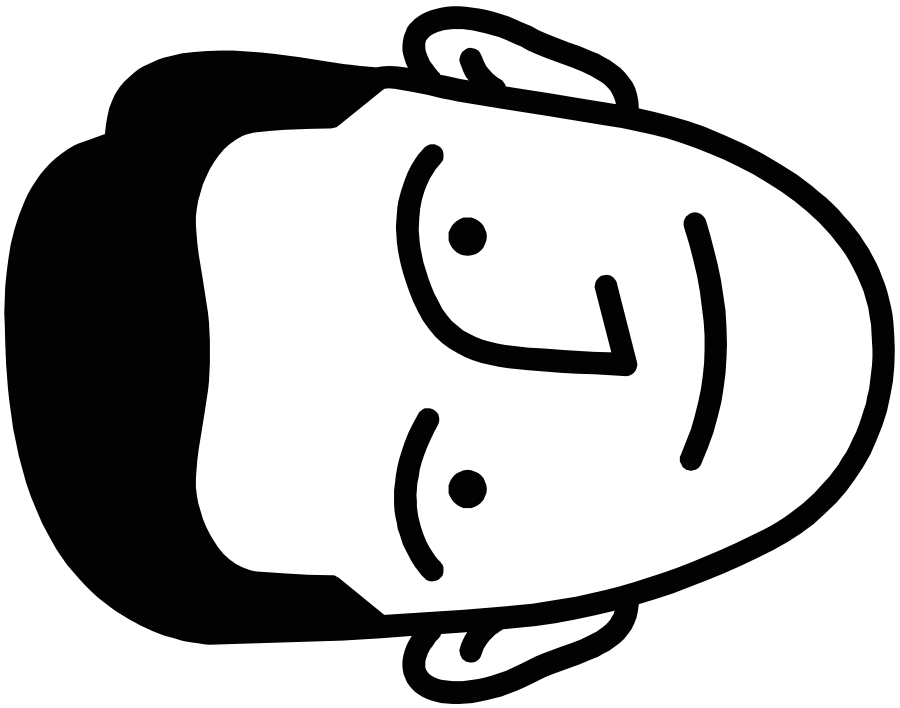
To circumvent the need for the participants to emerge themselves in the domain of plastics within the circular economy, two shortlists were provided: One to get to know the target group and one to get familiar with some mental models within the domain.

G.1 Persona

Meet Peter. He is 31 and works in facility maintenance. If you'd ask him what he knows about recycling, he would tell you it's not much. He doubts whether recycling has any effect, since he heard that plastic is often combined with the regular thrash and incinerated. And even if it is recycled, he thinks that the output material would not be of much use.

In general he believes that he, as an individual consumer, has little effect with his behaviour and that businesses and the government should take action first.

Peter is not very committed to making an environmental impact (the fact that he does not have that much money to spend on greener products doesn't help). However, he is concerned for his future children. He wants them to have a safe and prosperous world to grow up in.



Recycling info-sheet

Each year, the Dutch produce 490 kilograms of waste per person. Only about 50% of this is recycled. Around 80% of it could be.

Non recycled thrash in the Netherlands is incinerated. This leads to green-house gasses that contribute to climate change.

If recyclable materials are incinerated, their resources are lost for good. This is not in line with the concept of the circular economy, in which the same (finite) resources are kept in the circulation infinitely.

Consumers can exert influence on green products and services by boycotting or buying/using them. This “Political Consumption” is often forgotten in the context of recycling and buying (un)recyclable products.

The recycling process is financed by the businesses that produce packages. For each package they pay a fee which covers the costs made in collecting and recycling it.

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H: Moderator guide for toolkit test

The test of the toolkit was intensively guided by a moderator. The moderator used the following guide to give explanation and directions.

Introduction on MMs and TK

- For graduation I've developed a **framework** on how **mental models** can be used by designers to **influence behaviour**. This may sound a bit confusing, so I'll break it down:
    - First of all, it is about influencing behaviour. Behaviour change is the goal of this framework.
    - Secondly, "Mental model" (MM) entails a model people have in their head about anything in the world. This model describes how this "something" works.
        - For example, a MM could be about the green-house effect. It could entail how the sun's rays reflect on the earth's surface, heat up the earth, reflect back from the ozone layer, etcetera.
        - Another example of a MM could be a psychological bias; the bandwagon effect. This MM entails that people tend to follow what other people do, in order to avoid risky behaviour and standing out. Knowing this, means having the MM.
            - Now, you may wonder why it is interesting to influence people's MMs. Well, if someone does not believe that global warming is real it may help to explain them how it works instead of simply *telling* them it is real. Furthermore, being aware of the bandwagon effect bias may help people to recognize and prevent it instead of being a mindless sheep.
        - There are 2 advantages of changing behaviour through MMs. First, it's much more convincing to explain why something is a certain way, than to simply state that it is (think about the green-house effect, for example). It allows people to form their own conclusions, yielding a higher autonomy and less resistance. Secondly, MMs can be about something abstract, which is applicable to many situations (the bandwagon effect, for example) and can therefore have a large combined effect.
    - Thirdly, it is a framework that I developed. This means that I executed research to come up with a theoretical framework. However, this is not directly applicable by designers. Therefore, I translated it into a toolkit with hands-on tips to work with MMs. I want to emphasize that this is the first iteration of the toolkit, so it might have some sharp edges. And it is not yet clear which parts of it are useful. So please feel free to criticize, and say what works for you and what does not; that is the purpose of this test. Furthermore, to safe the time of writing a full guide for you that helps you through the whole process, I decided to be the guide. I am live and can adapt to your questions, so feel free to consult me as your guide.
- In order for MMs to be a useful for designers, they need to know which MM to use and how they create an *embodiment* of it. An embodiment (EMB) means a design in which a MM is embodied, in any way, so that the person who interacts with the design is likely to adopt the MM.
    - So, there are two aspects of the toolkit: A mental model part and an embodiment part. Both are subdivided into a collect and evaluate phase and a refinement phase.

        - Therefore, the first step is to collect potential MMs and to evaluate them. Next, one chosen MM will be refined in part 1B. Then it will translated into design ideas for embodiments in phase 2A. Finally, in phase 2B one concept will be refined a bit further.
            - To help designers do this, the toolkit consists of possible strategies to, for example, generate embodiments and dimensions to keep in mind while tweaking the MM.

Plan for today

- Today we are going to test the toolkit.
- You will work on a real case, using the toolkit. We will go through all 4 phases of the toolkit, and we will do so relatively quickly. The case is about sustainability and your goal for today is to increase the desired behaviour of consumers: Recycling of plastic. Although there are many ways to do this (e.g. paying people to do so, put a fee on not doing it or making it easier by increasing the number of collection containers) today we will only focus on solutions that are driven by MMs. This may be tricky, so keep an eye on this (I will as well).
- The schedule for today is: We will go through the toolkit, discuss your experience and end with a lunch.

Phase 1A (MM collection and evaluation)

- First, you will get acquainted with the target group. I composed a persona (Peter) which is based on actual people from Delft which I interviewed.
- Now, to get familiar with the process of recycling and the MMs about recycling, I composed a small information sheet. You can use this to come up with 2-3 MMs which you think have potential, based on what you now know about the target group. But also feel free to come up with your own.
- Write down the 2-3 chosen MMs on the evaluation cards. We will include the *system* on the evaluation card. The system is the thing that the MM is about. If the MM is the green-house effect, then the system is the sun, earth and ozone layer. If the system is the bandwagon effect bias, the system is people and their brain.
- That was the first part of phase 1A, now we will evaluate them. You can see the evaluation card as a checklist, with questions that relate to the theory parts of the toolkit. Go through the checklist, and consult the corresponding A3s on the wall (the ones marked 1A).
- After filling in the entire checklist, add up the points. Now, it's time to make a decision on a MM to design for. You don't have make a decision based on the total points, it is just an indication.

Phase 1B (MM refinement)

- Now that you've chosen a MM, it is time to go into phase 1B: Refining the MM. Again, use the checklist to go through the theory parts of the toolkit.
- But before doing that, there is one extra step: See whether you can find any additional effects for the chosen MM. An additional effect is an extra effect on behaviour which can be accomplished by the same MM.
- After going through the checklist, write down the refined MM.

Phase 2A (EMB generation and evaluation)

- This part of the toolkit (2A) makes the transition from the MM to the embodiment, which has to give people the MM.

- These embodiments have to find a place in the world. For example, the embodiment could be a redesign of a PMD container or something in the supermarket or on a garbage truck. We are going to map these potential touchpoints people could have with the MM.
- Next, grab some post-its and the sheet "Ways to embody". This part of the toolkit provides many strategies to embody a MM.
- No idea is too crazy. Remember, we can get quality from quantity. And an unrealistic idea may be the inspiration for a more feasible one.
- When you need some inspiration, take a look at the touchpoints to get some input on where the embodiment may exist. However, don't get pinned down on this. Embodiments could exist anywhere, in any form.
- (If the participants come up with a lot of explicit embodiment ideas, tell them: There is a distinction between explicit and implicit embodiment ideas. Explicit embodiments simply state what the MM is, usually through text (for example a poster or website). An implicit embodiment on the other hand, does not explicitly state the MM, but shows it to people in a way that they see it themselves or are able to infer it (for example by showing the system itself or its output).)
- Now you have a lot of ideas, you are going to evaluate them using the last checklist (phase 2A). However, we cannot evaluate all, so we will pick a few intuitively. But first, let's have a look at the checklist. And we will do so by picking one idea and put it through the checklist. So pick your favourite idea.
- Now that you have a feel for what makes an embodiment effective, please choose two more ideas. You can do so intuitively, but keep in mind the checklist.
- Now, also for these two additional ideas fill in the checklist.
- Now we have 3 ideas to choose from. Which one do you like best? Why?

Phase 2B (EMB refinement)

- We are going into the final phase of the process. We now have one idea, which we are going to tweak into a more refined concept. For this, have a look at the final sheet; "Refining the embodiment".
- Make a concept poster to that communicates the design, including the MM and how it affects behaviour.

Post-test questions

- Open: What did you think?
- Can you talk me through your experience of the process (from beginning to end)?
    - Were the dimensions helpful to evaluate and refine the MM?
    - Were the strategies helpful to come up with ideas?
- Do you see this method being applicable to your design practice? Which parts? In what way?
- Was my explanation about what MMs and embodiments are, and why they can be useful clear?

I: Mental model explanation

The following two pages were composed and tested to communicate the concept of mental models for design for behaviour change.

What is a Mental Model and why is it useful?

A practical example: A Mental Model about the green-house effect
You can tell someone that driving leads to climate change, but because of people's wishful thinking (wanting that driving is not a terrible thing) and contradicting information (provided by oil beneficiaries) they may not believe it.

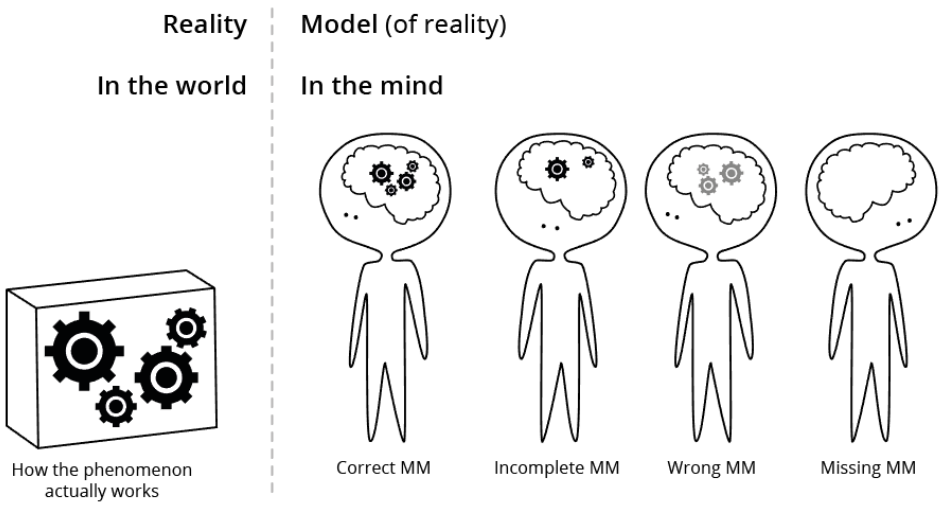
If we try to impose this belief on them, it may lead them to discard it even more since they don't like to be told what to think and do (they desire autonomy).

This group of people should be enabled to form their own conclusions by more fully understanding the situation. Instead of being told *that* climate change happens, they should understand *why* it does. They should understand *how* it works. In this example that would be through understanding how the green-house effect works.

Mental model definition
The green-house effect is a phenomenon in the world. People can have a Mental Model *about* this phenomenon.

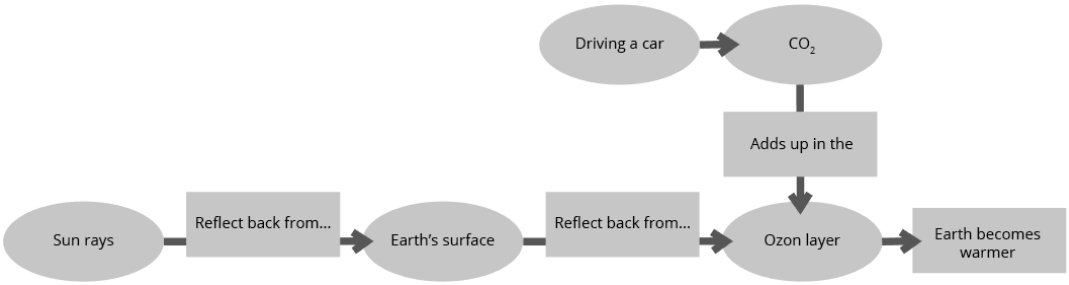
- A Mental Model is a *model* of reality. Therefore, it can be wrong and/or incomplete. Also, people can have different Mental Models about the same phenomenon.

- A Mental Model is *in the mind* of people, in contrast to the thing it describes which is *in the world*.



Summarizing; How a phenomenon in the world works (e.g. the green-house effect) can be communicated to people with incomplete or wrong Mental Models.

A Mental Model can be seen as describing a *chain of discourse*, describing the relationships between different elements. Someone's Mental Model about the green-house effect can look like this:



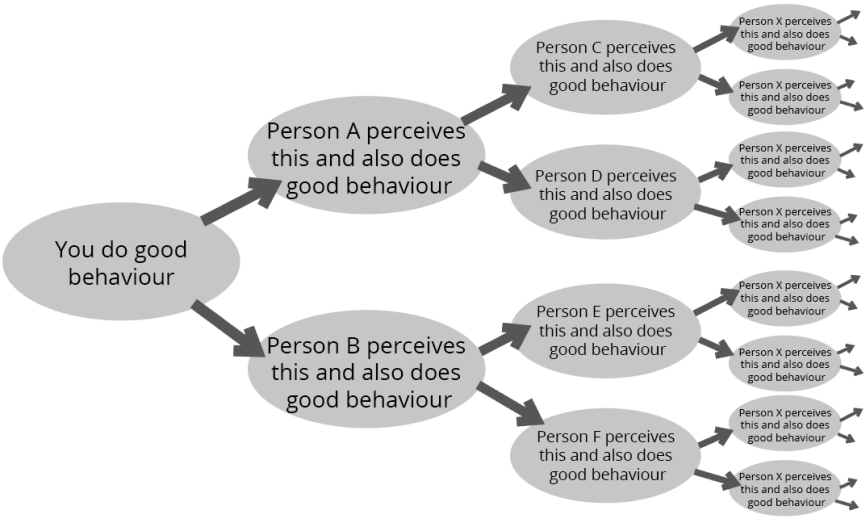
Someone's Mental Model about the green-house effect

Another example: A Mental Model about giving a good example

Besides physical phenomena (such as the green-house effect), people can also have Mental Models about psychological phenomena.

Many people are demotivated to act green because they feel like the impact they make, as just one person, is negligible. There is one phenomenon which, if they internalize a Mental Model about it, may remove this demotivation: The *ripple-effect*. This phenomenon entails that good behaviour spreads like a ripple in the water. People perceive each other's green behaviour and follow the example. In this way the behaviour spreads exponentially. Therefore, the behaviour of one person is much more influential than only its direct individual impact.

Especially with things such as recycling or using more sustainable products people are often demotivated by a perceived lack of impact. In that case, this Mental Model could provide a much more positive attitude towards the behaviour. And one big advantage is that this Mental Model is applicable to many behaviours. So once people have this Mental Model, it will have a large cumulative impact.



Someone's Mental Model about the ripple-effect