Green Lifestyles Alternative Models and Up-scaling Regional Sustainability / GLAMURS

Work Package 5: Case studies in sustainable lifestyles and consumption initiatives Deliverable 5.4: Case Study Report. Rotterdam-Delft-The Hague, The Netherlands

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Deliverable 5.4: Case Study Report. Rotterdam-Delft-The Hague, The Netherlands

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EXECUTIVE SUMMARY

The FP7 funded GLAMURS (Green Lifestyles, Alternative Models, and Upscaling Regional Sustainability) project focuses on transitions to sustainable lifestyles. A key starting point is that lifestyles of people engaged in bottom-up sustainability initiatives are more sustainable than regular lifestyles and that stimulating and diffusing those more sustainable lifestyles out of their niches will contribute to upscaling regional sustainability. In the GLAMURS project empirical work in is conducted in seven regions across Europe consisting of (i) research at the regional level as part of WP4 and (ii) of in-depth collaborative research with citizen sustainability initiatives in the seven regions in WP5.

This report, Deliverable 5.4, summarises the results of the Dutch case study in the urbanised region of Rotterdam-Delft-The Hague. This case study included in-depth research of and collaboration with (i) the energy initiative Vogelwijk Energie(k) in the Hague, and (ii) three Repair Cafes in Delft, Schiedam, and The Hague. The aims of the case study work are threefold: (i) to get an in-depth understanding of the nature of the initiatives under investigation, (ii) to explore opportunities for the initiatives to overcome the challenges that they face, and to feed the initiatives with knowledge that enables them to more effectively deal with their challenges, and (iii) to investigate what role the initiatives can play in sustainability transitions.

Chapter 1 introduces the case study and its aims, the region, the three Repair Cafes, and the local energy initiative Vogelwijk Energie(k) in the Hague. Chapter 2 reports on the actor and network analysis for the initiatives. Chapter 3 reports on the results of the in-depth interview with members and non-members of the initiatives. Chapter 4 reports on both regional and initiative focus groups. Chapter 5 reports on some of the survey results. Chapter 6 reports on the backcasting workshops and the developed visions. Finally, in Chapter 7 key insights are presented and policy relevance is discussed.

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1. Introduction of case study and initiative

1.1. GLAMURS Project

The FP7 funded GLAMURS (Green Lifestyles, Alternative Models, and Upscaling Regional Sustainability) project focuses on transitions to sustainable lifestyles. A key starting point is that lifestyles of people engaged in bottom-up sustainability initiatives are more sustainable than regular lifestyles and that stimulating and diffusing those more sustainable lifestyles out of their niches will contribute to upscaling regional sustainability. Moreover, the aim of the GLAMURS project is (1) to explore the complex links and interactions among social, economic, cultural, political and technological factors that influence transitions to sustainable lifestyles and transformations to a green economy, not only at the individual and micro-economic level, but also at the regional level, the macro-economic level and the European level, and (2) to develop and evaluate models of lifestyle change both at national and European levels in order to provide recommendations on governance designs and policy mixes for pathways for the transitions mentioned. These recommendations need to be aligned with the objectives of the Europe 2020 strategy and the Resource Efficiency Flagship Initiative. The project also aims to develop and assess forward-looking scenarios and desirable visions for transitions through a combination of expert input, stakeholder input, and involvement of citizens business, and government actors at the regional level.

In the GLAMURS project empirical work in is conducted in seven regions across Europe consisting of (i) research at the regional level as part of WP4 and (ii) of in-depth collaborative research with citizen sustainability initiatives in the seven regions in WP5. This report, Deliverable 5.4, summarises the results of the Dutch case study in the urbanised region of Rotterdam-Delft-The Hague. This case study included in-depth research of and collaboration with (i) the energy initiative Vogelwijk Energie(k) in the Hague (introduced in Section 1.4), and (ii) three Repair Cafes in Delft, Schiedam, and The Hague (introduced in Section 1.3).

The aims of the case study work are threefold. The first aim has been to get an in-depth understanding of the nature of the initiatives under investigation, such as the way that they are governed (also focusing on good and bad practices), the motivations of members to join and stay involved, the role of sustainability in the everyday life of members (and how this is affected by the initiatives), and the challenges that they face. The second aim has been to explore opportunities for the initiatives to overcome the challenges that they face, and to feed the initiatives with knowledge that enables them to more effectively deal with their challenges. The third aim has been to investigate what role the initiatives can play in sustainability transitions, to what extent they are currently able to fulfil this role, and what is needed to

support the initiatives in this role. In the remainder of this chapter we introduce the region (Section 1.2) and the initiatives (Sections 1.3 and 1.4). Chapter 2 reports on the actor and network analysis for the initiatives, while Chapter 3 reports on the results of the in-depth interview with members and non-members. Chapter 4 reports on both regional and initiative focus groups. Chapter 5 reports on some of the survey results and Chapter 6 on the backcasting workshops. Finally, in Chapter 7 key insights are presented and policy relevance is discussed.

1.2. The case study region: Rotterdam-Delft-The Hague

The Rotterdam-Delft-The Hague region in the Netherlands can be understood to consist out of three COROP regions: the Greater Rijnmond region, the agglomeration of The Hague, and the Delft and Westland region. Together, these make up the largest urbanized area in the Netherlands including the major cities of Rotterdam, Delft and The Hague. Since 2015 the region is also known as the Metropolitan Region Rotterdam The Hague (MRDH 2016), consisting of 23 municipalities (see Figure 1.1). The region, located in the west of the Netherlands, consists out of the main urban parts of the province of South Holland. As of 2015, it has a population of just below 2.5 Million people, of which over 76 percent lives in heavily to very heavily urbanized areas. With a population density of over 1550/km2 it is one of the most densely populated areas in the world and the population is still gradually growing (all population numbers are from the Central Bureau of Statistics). The Rotterdam-Delft The Hague (RDH) region is part of the Rhine-Scheldt-Meuse delta and almost entirely below sea level. Therefore, the region has large infrastructures for protection against flooding, located along the coast as well as along the river beds. The region also has a large concentration of port, waterway, road and railway infrastructures.

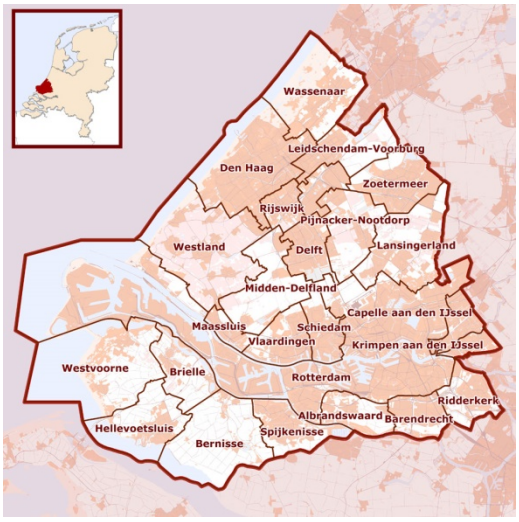


Figure 1.1 Map of the Metropolitan region Rotterdam-Delft-The Hague and its 23 municipalities.

There are various relevant levels of government and governance in the region. The Hague is the seat of the national government. The entire region is located in the province of South-Holland, the centre of which is also The Hague. The metropolitan region consists of 23 municipalities, each having their municipal government. Whereas the urban regions of both greater Rotterdam and greater The Hague used to be two separate so-called Urban

Regions, these merged into the Metropolitan Region Rotterdam-The Hague (MRDH 2016) in 2014. The Rotterdam area has one of the largest ports in Europe. The port's main activities are petrochemical industries and general cargo handling and transhipment. The port has the largest container terminal in Europe, with excellent access to the hinterland. Greater The Hague has a service-oriented economy, in particular government services. The Westland area is the main greenhouse horticultural area of the Netherlands

The Rotterdam-Delft-The Hague region has major sustainability problems, including high carbon emissions, air quality issues, a loss in biodiversity and climate change impacts. The region was strongly affected by the last financial crisis, which led to considerable public budget cuts and has major social issues, such as limited social cohesion, deprived areas, unemployment and withdrawal of the welfare state.

Within the Rotterdam-Delft-The Hague we focus on two types of bottom-up sustainability initiatives: The energy initiative Vogelwijk Energie(k), and the Repair Cafés of Delft, Schiedam and The Hague. These are introduced in more detail below.

1.3. Repair Cafés of Delft, Schiedam and The Hague

Repair Cafés are freely accessible meetings that are organised several times a month (sometimes weekly), where people gather to fix broken objects and share knowledge and experience on repairing with each other, with support from specialists such as electricians, seamstresses, carpenters, and bicycle mechanics (Kropcheva, et al 2015; Postma 2015; http://www.repaircafe.org). These are volunteers of the Repair Café. Objects that are repaired include clothes, electrical appliances, bicycles, furniture, toys, etc. In addition to salvaging items that would otherwise be discarded, Repair Cafés contribute to a collective learning experience on repairing among the participants. They also provide an environment for people to build up social contacts. The number of Repair Cafés is still growing, not only in the Netherlands, but also abroad. In our study we focus specifically on three Repair Cafés that are organised in our case study area (Rotterdam-Delft-The Hague). These include Repair Café Delft, Repair Café Schiedam, and Repair Café The Hague (see Figure 1.2). In terms of content, Repair Cafés are focused on the domain of consumption (extending the lifetime of products / waste prevention). Originally, the concept of Repair Café was invented as a way to reduce wastes and to extend the lifetime of products. However, over time it became clear that the Repair Cafés also have a strong social function, such as avoidance of costs for people with a low income, and the improvement of social cohesion among participants. The social function is currently recognised to be equally important to the environmental function of the Repair Cafés.

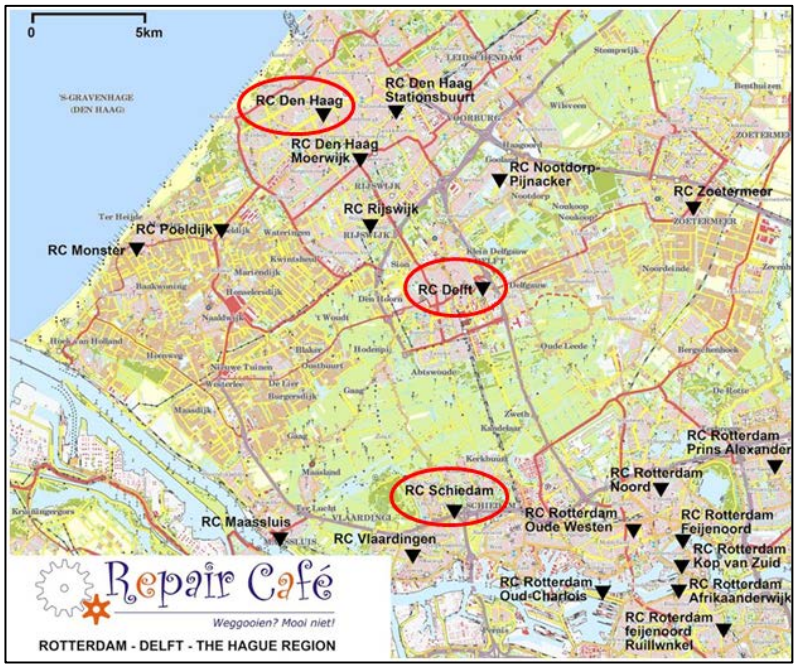


Figure 1.2: Geographical map of Repair Cafés in the Rotterdam-Delft-The Hague region in 2014 with the included Repair Cafés encircled (adjusted from Kropcheva et al 2015)

The first Repair Café in the Netherlands was initiated in Amsterdam in 2009 by the person that is still the lead person of the national Repair Café Foundation. Based on the success of this initiative, a foundation was set up to provide professional assistance to anyone with the desire to set up a local Repair Café. To be eligible for assistance, the initiators have to use the Repair Café name and logo, and make use of official Repair Café communication channels. The number of Repair Cafés grew exponentially both within and outside the Netherlands. Currently, there are nearly 300 Repair Cafés in the Netherlands and almost 700 Repair Cafés worldwide. The Repair Café of Delft was started in 2012, the Repair Café of Schiedam in 2014, and the Repair Café of The Hague in 2011. Some details can be found in Appendix A

Figure 1.3: Overview of initial aims and unexpected impacts of Repair Cafés (adjusted from Kropcheva et al 2015).

One of the main challenges of the Repair Cafés is that the national Repair Café foundation will focus on the international diffusion of Repair Cafes and will end support for local Repair Cafes in the Netherlands. This requires Repair Cafés in the Netherlands to develop new networks (possible at the regional level) as a replacement. Another major challenge that all Repair Cafés deal with is that manufacturers design their products in a way that makes them difficult to repair and sometimes easy to break down. The national Repair Café foundation has worked together with European-level consumer organisations to lobby for improved reparability of products. Finally, collaboration with local municipalities and finding locations can be challenging too.

1.4. Vogelwijk Energie(K)

Vogelwijk Energie(k) is a citizen-initiated energy initiative in the Vogelwijk district of The Hague (http://www.vogelwijkenergiek.nl/). The Vogelwijk district has a surface area of about 2.6 square kilometres and has around 2,000 households. It is one of the most popular quarters in the city to live, with a lot of green, close to the beach and high value housing blocks. The district directly borders a dune area and it is very near to the sea. Vogelwijk Energie(k) presents itself as an association of 250 enthusiastic people in the Vogelwijk district that pursue sustainability in daily life. It was originally started as a foundation, but by the end of 2010 Vogelwijk Energie(k) became a cooperative, and from 2014 it continued as an association. Since end 2014, the association has 250 members. A separate cooperative exists for a solar roofs project that was started by the association. The cooperative has 58 members, 7 of which are not members of the Vogelwijk Energie(k) association. Currently, the association has 5 board members, none of which were among the original initiators of Vogelwijk Energie(k). There is also an advisory council with 6 members. The long-term goal of the association is to make Vogelwijk carbon-neutral by 2040. Because the residents of the Vogelwijk district have relatively strong investment power and good connections to professional networks, the initiative wants to be a frontrunner in local, sustainable energy production.

The initiative was started in 2008, with the first project formally commencing in early 2009. This project concerned the recommissioning of an obsolete wind turbine located near the district. In cooperation with the energy company Eneco (the original owner of the turbine) and the municipality of The Hague, the cooperative successfully recommissioned the wind turbine. This was an iconic project for the cooperative, which drew a lot of attention from within and outside the district. By mid- 2013 Eneco decided to demolish the wind turbine, as the costs for maintenance proved to be too high. The wind turbine was demolished in March 2014. In the meantime, the cooperative had started several other projects. A key project is the development of solar roofs at two nearby schools, which was specifically developed for people that do not have the possibility to place solar panels on their own

roofs. The initiative is supported by Eneco, who outsourced some of the necessary activities to Solar Green Point. All people from the Vogelwijk district, as well as parents of schoolchildren that live in the so-called 'postcoderoos' of the project, can participate to the solar roofs project. Other concrete projects on the insulation of houses, the use of led lights, and the use of smart meters were started in 2011. In 2013 a pilot project (running for half a year) on a shared electrical car was initiated. The board of the initiative is currently working on plans for structural use of shared electrical cars.

One of the main challenges that the current board members of the initiative see for the coming years is to mobilize a "second wave" of people to invest in sustainability. This does not concern the attraction of new members, as the board members of Vogelwijk Energie(k) are already quite satisfied with their membership ratio. However, in their view the people that were already motivated to engage in sustainability initiatives have now been mobilized, and the next major challenge is to mobilize people for whom sustainability typically plays a much smaller role in their daily life. Concretely, the board members want to have mobilised this second wave by 2020. Another challenge is how to make the district carbon neutral by 2040, as the existing stock of houses is from the early 20th century, so the houses are highly appreciated, but poorly insulated and there is still insufficiently known how to make these carbon neutral, while preserving the traditional image of the houses. A final challenge concerns how to balance collaboration with other initiatives and actors in The Hague with spending sufficient time on relevant actions and projects in Vogelwijk and how to combine producing electricity with facilitating other actions towards carbon neutrality in the neighbourhood. Interestingly, the latter has been addressed by the initiative by establishing both an association and a solar cooperative having the same board.

2. Actor and network Analysis

2.1. Introduction

This analysis revolves around mapping and analysing key actors and actor networks surrounding the initiatives studied in the Rotterdam-Delft-The Hague region as part of the Glamurs project. The analysis reveals relevant actors for the initiatives, their (social) relations to each other, as well as bridges they have built to actors outside the initiative or in other initiatives. The aims of this exercise were:

- To find the relevant actors for the initiatives, their roles, categories, motivations as well as the links between them.
- To draw and understand the networks of the initiatives
- To lay the basis for comparisons between the network structures of the Dutch initiatives and initiatives in other regions.

Table 2.1 Definitions of key concepts as used in the network analysis in the Glamurs project.

Actor: An actor is an individual person, a group of persons or an organisation. Actors are part of a network; within an initiative there are actors or networks of actors. You can either use their name (Tim Miller) or their role (representative of the community).
Key actors/stakeholders: they have a protagonist role. The ODA defines key stakeholders as "those who can significantly influence, or are important to the success of the project" (ODA, 1995: 1).
Stakeholder: "A stakeholder can be any relevant person, group or organisation with an interest in the issue, either because they will be affected by the subject (victim, gainer) or because they have influence, knowledge or experience with the subject" (European Commission, 2003: 63).
Networks: ''More or less stable patterns of social relations between interdependent actors, which take shape around policy problems and/or policy programmes" (Klijn, 1997, 30). In these networks, the institutional context and rules limit and structure the possible range of activities (Ostrom et al., 1994). In our case the region is a network of initiatives or of single actors. An initiative is a network of actors.
In GLAMURS we use the terms actor and stakeholder synonymously.

Some basic definitions as used in the netmap exercise described in this chapter can be found in Table 2.1. A more elaborate description of the methodology and procedure applied can be found in Omann et al (2015), which builds upon work by Jennifer Hauck (e.g. Hauck et al, 2015).

2.2. Methods and procedure

The main method used in the mapping and analysis of key actors and actor networks is the Net-Map method, which can be understood as a variant of Social Network Analysis (SNA). Net-map is a participative method that revolves around the identification of actors, their motivations, and their relationships in interaction with stakeholders. The actors and their relationships are shown in network graphs, where nodes signify actors, and edges and/or arcs signify relationships between the actors[1]. Other aspects of networks may be visualized in graphs as well. For example, the size of the nodes that signify actors may be given a size proportional to the centrality of those actors in their network. In the Net-Map approach, data are usually gathered through interviews and workshops with key stakeholders. In this case, we have made use solely of participate workshops, in which the stakeholders themselves manually draw out the networks they are involved in, using tools and guiding questions provided by facilitators. In this way, Net-Map helps stakeholders to determine what actors are involved in a given network, how they are linked, how influential they are, and what their goals are.

In the Netherlands we performed Net-Map workshops with representatives of the initiatives studied in the Glamurs project. Thus, one workshop was performed with 8 board members of Vogelwijk Energie(k) and one workshop was performed with key people of the Repair Cafés of Delft (2 persons), Den Haag (1 person), and Schiedam (1 person). In general workshop may last around 3-4 hours. For the Dutch case study we had just over one hour for the workshop with the Vogelwijk Energie(k) initiative, and around two hours for the workshop with the Repair Cafés.

The following four steps here used for the netmap workshops in GLAMURS, (Omann et al 2015):

1. Define the relevant actors according to a starting question and write them on post its, which are put on a big sheet of paper.

2. Define the relative influence of those actors by building influence towers (the heights of the tower is then normalised to 0-1)

3. Define the motivations of the actors to engage in the region/initiative. Motivations we started with were: regional development, environmental concern, economic interests; community feeling, wellbeing, experience of community (if others are named by the participants, they should be included)

4. Define links between all actors:

[1] Edges are visualized as lines, to indicate that the relationship has no direction, while arcs are typically visualized as arrows to indicate that there is a direction in the relationship.

So, in both workshops we first identified actors important to the initiatives by asking our workshop participants the following questions:

- **For Vogelwijk Energie(k):** Which actors have influenced the development of the Vogelwijk district towards climate neutrality, and the Vogelwijk Energie(k) initiative in the past 5 years?
- **For the Repair Cafés:** Which actors have influenced the start and development of your Repair Café in the past five years?

Based on these questions, our workshop participants generated an initial list of relevant actors. The names of the actors were written on post-its (different colours indicated whether an actor was from civil society, government /research/education, and business), and the post-its were distributed over an A3-sized sheet of paper. We asked our workshop participants to them to select the most important ones from the initial list, and we removed all actors not mentioned from the sheet of paper, in order to focus the remainder of the analysis on the most important actors only, which was necessary due to our time constraints.

Moving to the second step, we then asked our participants to determine the influence of these actors on their initiative, which our participants could indicate by placing stacks of fiches on the post-its belonging to these actors. In the third step we asked our participants to describe the motivations that these actors have in relation to the initiative, and we recorded these motivations in a notebook (in the Vogelwijk Energie(k) workshop), or on the sheet of paper itself (in the Repair Cafés workshop). In the fourth step we asked our workshop participants to identify relationships between the actors outlined on the sheet of paper. The relationships were indicated by the participants by drawing arcs (arrows) between the actors outlined on the sheet of paper. The participants identified three different types of relationships (as instructed by the facilitators), using three different colours of markers to draw these out: (1) the provision of information, (2) the provision of support, and (3) negative influences.

Throughout the workshop, we (as facilitators) aided the participants in creating the visualization of the networks. We also made recordings of the discussions that our stakeholders had, as well as photographs of the different stages of the workshop. These materials were used to aid in the interpretation of the results, as outlined below.

2.3. The NetMap of the Case Study

Initiative networks – The Repair Cafés

The first question at the NetMap workshop for the Repair Cafés was: Which actors have influenced the start and development of your Repair Café in the past five years? The Netmap visualisations for the three Repair Cafés are shown in Figures 2.1 to 2.3.

The three networks are quite similar in terms of the types of actors involved. The national Repair Café foundation features in all three networks (in the network of Repair Café Den Haag the foundation was included in the actor called Other Repair Cafés). The national organisation offers support to local Repair Cafés, although this function will disappear in 2016. Information exchanges between the local Repair Cafés and the national foundation also take place. The foundation was typically assigned a moderate influence, and the motivations that our respondents associated with the foundation include self-empowerment, empowerment of others, joint action, stimulating social cohesion and contributing to sustainability.

The types of actors that feature in all three networks are (i) other Repair Cafés that the Repair Cafés in our case study sometimes communicate with, or exchange support with, (ii) local visitors and volunteers of the Repair Cafés, and (iii) local and regional media that help promote the activities of the Repair Cafés. The influence of other Repair Cafés was found to be moderate, and their motivations can be summarised as knowledge exchange (learning from each other) and joint action. Visitors and volunteers were found to be highly influential, because, without them, organising the Repair Cafés would be impossible. Volunteers can get involved for different reasons, including the stimulation of sustainability, the stimulation of social cohesion, exercising their hobby, community experience, and learning. The motivations of visitors are also various, including economic interests (low-cost repairs), contributing to sustainability, community experience and emotional attachment to broken objects. Local and regional media typically have a moderate influence and their motivations can be summarised as wanting to raise awareness, as well as the simple need to fill newspapers and broadcasting time. The relationships to these actors typically involve the exchange of information and support (in most cases the Repair Cafés are the receivers of support).

The networks also include organisations that provide locations to the Repair Cafés, such as the Science Centre of Delft University of Technology (Repair Café Delft), Seniorenwelzijn (Repair Café Schiedam), and multiple actors that were summarised as Location Providers in the network of Repair Café Den Haag. The influence of these actors is considered to be relatively high (in the case of Den Haag it is moderate) as having a good location is vital in the organisation of the Repair Cafés. A motivation that these actors have in common is legitimacy: Providing a location to the Repair Cafés also contributes to legitimising their own existence because of the meaningful activity that Repair Cafés carry out in their buildings.

There are also actors in the networks that helped to make the Repair Cafés possible, by providing different types of support (such as financial support in the start-up phase), including the municipality of Delft, Fonds 1818, and Shell (Repair Café Delft), Seniorenwelzijn (Repair Café Schiedam), and HMC (Environmental Centre of the Hague), the Rabobank and Den Haag Doet (Repair Café Den Haag). We did not get insight into the motivations of all these actors, but their motivations include contributing to sustainability, stimulation of social cohesion, and empowerment of others. Their influence is typically moderate, except in the case of Den Haag, where the HMC was assigned a high influence because of its role in setting up the Repair Café. The representatives of Repair Café Delft specifically mentioned one contact that they have in the municipality of Delft (Monique Mertens) that continually provides support to their Repair Café.

Figure 2.1 The NetMap visualisation for Repair Café Delft.

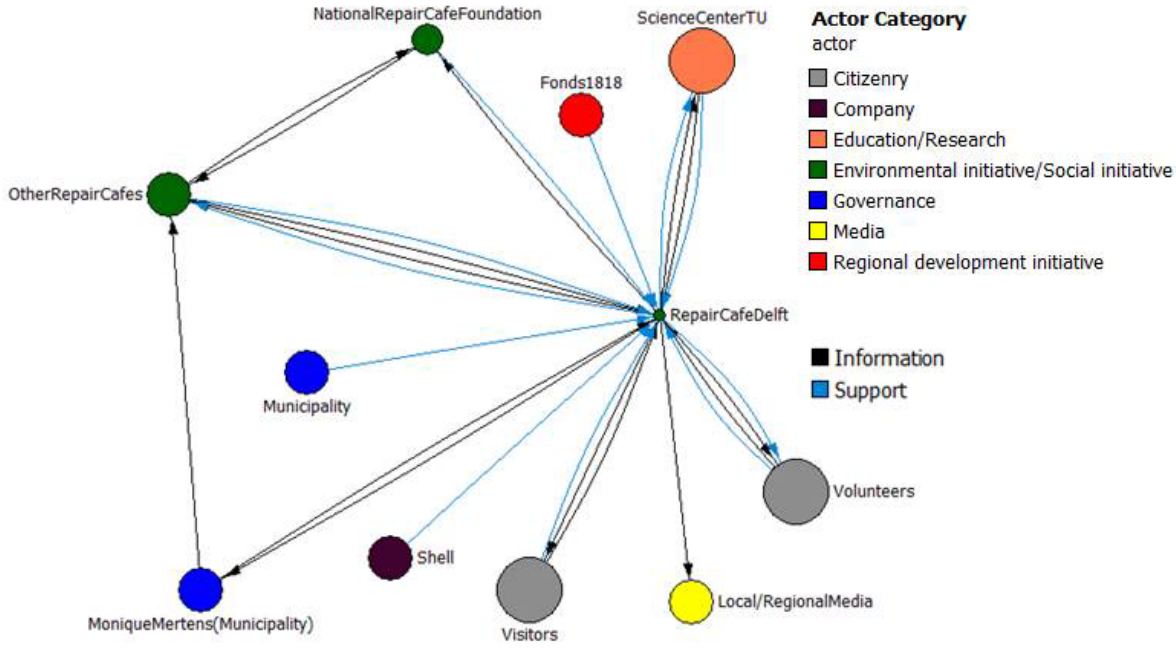
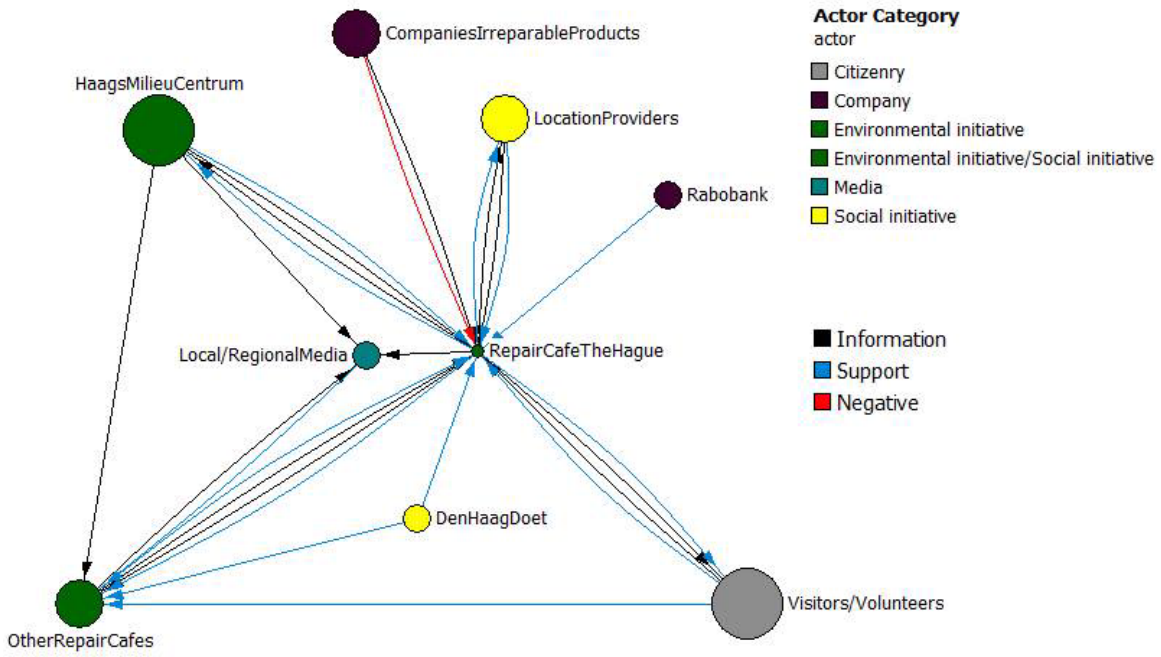
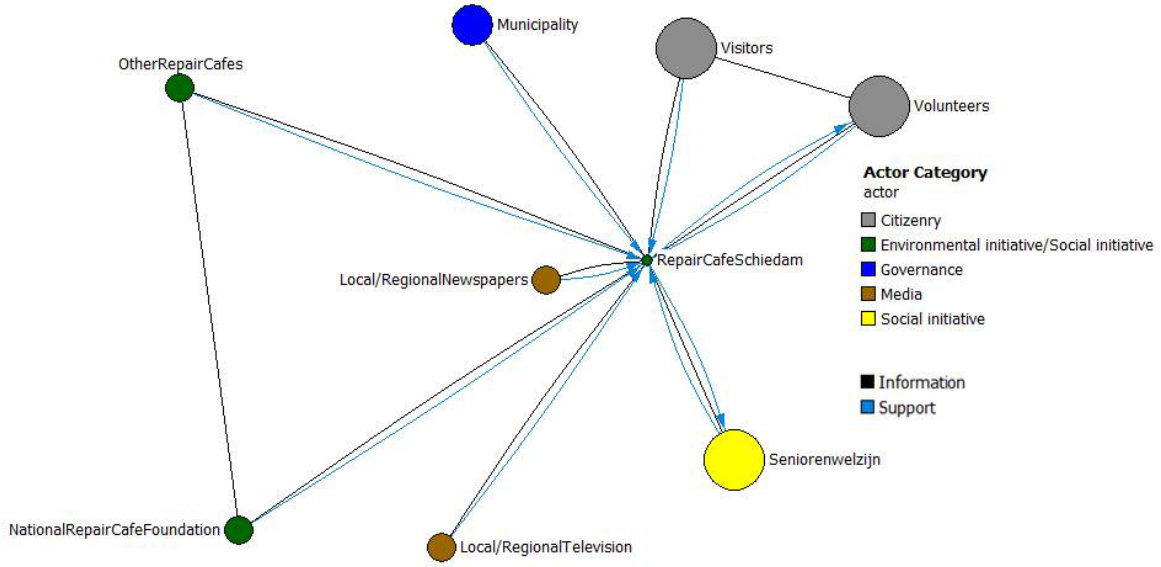


Figure 2.2. The NetMap visualisation for Repair Café The Hague.



The representative of Repair Café Den Haag mentioned the manufacturers of irreparable products as an actor with an important negative influence on the activities of the Repair Cafés. What is also interesting to mention about the Repair Cafés in general is that our participants repeatedly said that other relationships were being planned (new organisations that would be contacted in the future), and that many relationships only existed for a limited period of time; these were exploratory relationships that did not get a follow-up (not included in the network). The networks of the Repair Cafés are thus rather fluid, which is something that is not captured in the visualisations. It also highlights the desire of the Repair Cafés to (continue to) engage in additional networking activities in the future.

Figure 2.3. The Netmap visualization for Repair Café Schiedam.

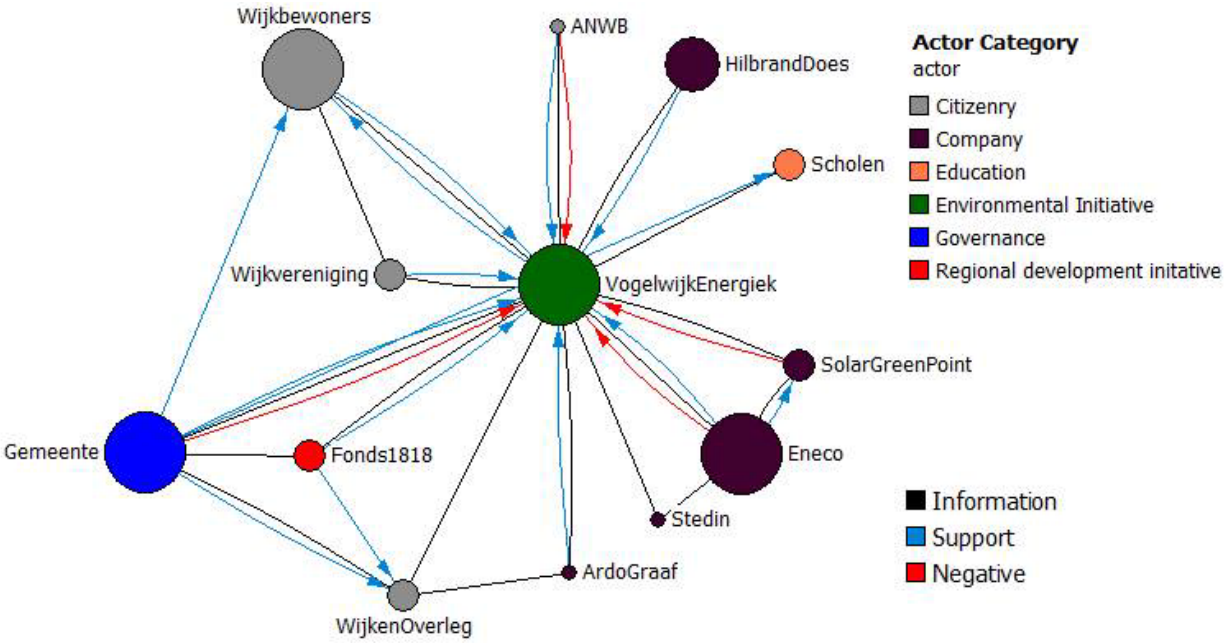


Initiative networks - Vogelwijk Energie(k)

The research question at the basis of the NetMap workshop for Vogelwijk Energie(k) is: Which actors have influenced the development of the Vogelwijk district towards climate neutrality, and the Vogelwijk Energie(k) initiative in the past 5 years? Figure 2.4 shows the visualisation of the network for Vogelwijk Energie(k).

The most influential actors in the network of Vogelwijk Energie(k) are the initiative itself, the municipality , the energy company Eneco, and residents of the Vogelwijk district. Vogelwijk Energie(k) is an initiative that is driven in the first place by the bottom-up activities of residents of Vogelwijk, which explains why the influence of the initiative itself was assigned a high value. The motivation of Vogelwijk Energie(k) is to make a contribution to sustainability. The municipality of The Hague and Eneco have been important partners from the early stage of development. Throughout the initiative's development they have provided support, although in certain episodes the relationships with these actors have also been problematic, which explains the negative links in the visualisation.

Figure 2.4. The Netmap visualization for Vogelwijk Energie(k).



The municipality sees the initiative as a contribution to its own sustainability targets. Eneco, who is a major partner in a solar roofs projects, as well as a former partner in a wind turbine project, is involved in the initiative partly as a means to improve its image, but also because the company wants to make a contribution to sustainability. The residents of Vogelwijk Energie(k) include the members of the initiative (about 250), as well as other residents in the Vogelwijk district. The members are indeed important because the implementation of projects strongly depends on their cooperation. The initiative also actively tries to involve non-members in its activities, in an attempt to mobilize them for sustainability. The Vogelwijk Energie(k) initiative exchanges information with all these actors, and receives support from them. In the case of the residents, the initiative is also understood to provide support by facilitating the implementation of sustainability measures in the households of its members.

The initiative has worked together (or still is working together) with several organisations for specific projects, including with the ANWB (for a pilot project on the use of electrical cars), SolarGreenPoint (for its solar roofs project), and Stedin (for several projects). These organisations have a moderate influence, and are typically loosely involved based on various types of economic interests, or to improve their own image. Vogelwijk Energie(k) exchanges information with all these actors, and in the case of the ANWB also received support. As can be seen in the visualisation, the board members have also experienced difficulties in their relationships with the ANWB and SolarGreenPoint, which largely boil down to difficulties in the cooperation, or conflicting interests.

Two persons are involved in Vogelwijk Energie(k) based on economic interests. These persons are professional energy advisors that bring in their expertise in the initiative. For one it was reported that his involvement is also a hobby for him. The other one is involved a bit more intensively, which is why his influence is somewhat stronger. The Vogelwijk Energie(k) initiative is also in contact with the local neighbourhood association, as well as with other neighbourhoods of The Hague through a dedicated discussion platform (WijkenOverleg). The influence of these organisations on the initiative is relatively small, and largely boils down to exchange of information. The neighbourhood association also provides support, which includes giving publicity to the initiative in their neighbourhood newspaper.

The remaining actors are Fonds1818 and schools in the neighbourhood. Fonds1818 is a regional development fund that has provided financial support to Vogelwijk Energie(k). The influence of this organisation is considered to be relatively small, and the motivation is to empower others to contribute to the development of the wider region (roughly corresponding to the case study region of Rotterdam-Delft-The Hague). The schools are part of the network primarily because of their involvement in the solar roofs project of Vogelwijk Energie(k). One school can also be understood to provide support by providing a meeting venue for information meetings of the initiative, and by making a roof available for solar panels, but a support link between this actor and the initiative was not drawn by our participants.

3. In-depth interviews: membership, wellbeing, behaviour and governance

3.1. Introduction

The original purpose of the qualitative, in-depth interviews is to explore the determinants and effects of membership in sustainability initiatives, as well as their diffusion potential. Details on the methodology can be found in Omann et al (2015). Insights generated in the conceptual work performed in the theoretical WP3 contributed to a broadening and deepening of the interview approach. First, the intended sample of interviewees was broadened to also include, besides initiative members, non-members of initiatives that are interested in joining the initiative, as well as non-members that are not interested in joining, but are interested in living a more sustainable life. Second, the focus of the interviews was broadened to also probe into motivational conflicts (and related coping strategies) that interviewees experience in pro-environmental behaviours, as well as the interviewees' ideas on governance for sustainability.

3.2. Methodology and procedure

Research questions

The interviews in the Dutch case study were prepared and performed in cooperation with the other case study researchers. The seven case study teams jointly developed a set of research questions that addressed the following topics:

- the motivations and other factors that support and hinder (a) engagement in sustainability initiatives and (b) less unsustainable choices and behaviour in everyday life
- the experience of motivational conflicts in deciding and behaving less unsustainably, the factors underpinning such conflicts and the use of coping strategies to deal with such conflicts
- the experience of time pressure, and its impact on pro-environmental behaviour and engagement
- perceptions of local and global governance of societal change towards sustainability
- the effects of less unsustainable behaviours in general and initiative membership in particular on lifestyles, wellbeing, motivational conflicts, and time use.

Based on these, the seven case study teams jointly developed their empirical approach, including agreements on shared procedures and materials for sampling, interview questions and guidelines, coding framework, coding, data analysis, and data interpretation. More information can be found in Omann et al (2015) For the detailed questionnaire and coding scheme, see ANNEX I and ANNEX II of Omann et al (2015).

Sample

In the Netherlands, we aimed at a sample of 15 individuals, including members (and interested non-members) from both the Vogelwijk Energie(k) initiative and the three Repair Cafés. Because several people volunteered for interviews, we ended up with a sample of 18 individuals. Table 3.1 offers an overview of the sample distribution.

Table 3.1. Sample distribution for Dutch qualitative interviews.

	Repair Cafés	Vogelwijk Energie(k)	Total
Members	7	5	12
Non-members	3	3	6

Coding framework

Under the leadership of Anke Fischer (JHI) and Ines Thronicker (UFZ) the case study teams collaboratively developed a common coding framework. A step-wise procedure was used to develop the coding framework and detailed guidance for coding, with examples. The main steps are listed below:

1. All case study teams produced a short document that outlined their impressions of the interview process as well as their initial impressions of the data, following the structure of the research questions. The case study teams also reported on their sample of interviewees in an overview table.

2. At the project meeting in Trondheim (May 2015), members of all case study teams jointly explored these first impressions and, in a grounded way, identified the themes that emerged from the data. Small teams were formed to develop storylines on specific themes related to the research questions.

3. These initial theme-based considerations were used as the starting point of a comprehensive, shared codebook (or coding framework), with explanations for each coding category, and detailed best practice examples.

4. In order to make sure that all categories meant the same to all involved in the analysis, we exchanged transcripts of two Scottish interviews, coded them independently, and then compared and discussed the coding. This served to further refine the coding categories and

make the approach more comparable. We also exchanged coded interviews in order to comment on each other's coding, and coded selected transcripts across countries. Phone conferences helped to finalise the details of the coding framework.

5. One interview was then coded in each team, and feedback was exchanged by email, followed by a final revision of the framework, with an Adobe Connect call to discuss remaining questions (July 2015).

Data analysis

When the coding framework was finalized, the Dutch interview transcripts were coded with the help of Atlas.ti. After all transcripts were coded, a summary of the findings and their interpretation was written, including illustrative quotations (translated to English) that support the interpretations. The findings were organised in four separate summaries reflecting the main themes of the research questions and, thus, four thematic summaries of up to 40 pages were written: governance, wellbeing, behaviour and time, and membership. The summaries roughly follow the structure of the coding framework and the guidance developed by the theme-related author groups. The following section summarises selected results for each of the four themes for the Dutch case study.

3.3. The membership theme

One of the main themes investigated through the interviews concerns membership to the Repair Cafés or Vogelwijk Energie(k). For this theme we discussed four subthemes, which are (1) the form and strength of engagement of members, (2) good and bad practices, and challenges in the daily practice of the initiatives, (3) the motivations of people to become involved and/or stay involved, and (4) the barriers for non-members to join the initiatives.

The membership theme - Repair Cafés

With regard to the **form and strength of engagement** it is worthwhile noting that the Repair Cafés included in our study are organized once a month, and most volunteers will typically spend only a few hours in the morning of the day that their Repair Café is organized.

Table 3.2 Overview of good & bad practices and challenges by Repair Café volunteers.

Good practices	Bad practices	Challenges
• Having and developing specialities. • Mentoring new volunteers. • Support from the national Repair Café Foundation. • Good atmosphere and helping colleagues. • Having interesting partners nearby the location. • Time investment required is low. • Promoting the Repair Café during special events • It seems to be relatively easy to find volunteers. • Offering internships for young people. • Organizing educational events for children. • Attracts people with various motivations. • The joint development of the repair manuals. • Working together with other repair venues. • Networking at a local/regional level. • Evaluations, for example during lunch.	• Untrained people work on complicated repairs. • No space to keep tools. • No space to keep spare parts. • Competition with regular repair venues • Divorce of management from the actual repairs. • Too little incentives to contribute to database.	• Having enough electronics specialists. • Desire of some to organize Repair Café more often. • Too little time to repair certain products. • Attracting young volunteers. • Address issues at earlier stage of production chains. • Items become increasingly difficult to repair. • Increasing awareness about existence Repair Cafés. • To appeal to a broader audience. • People may not trust the quality of the repairs.

Indeed, there are also volunteers whose involvement goes a bit further than that, for example because they are responsible for (or provide support in) the organization and administration of their Repair Café. In this case, a volunteer may even spend a few days each week on the Repair Café. For 'normal' volunteers, the activities in the Repair Café involve performing the repairs themselves, although this always involves more than just tinkering with objects. First, the volunteers actively involve visitors in the repairs that they perform, and several of our interviewees reported other things that they did, such as mentoring new volunteers, doing certain administrative tasks, and helping to create a nice atmosphere (thereby stimulating others). It also became clear that repairmen may develop specializations. Specializations that were mentioned during interviews include electronics, textiles, computers, and cameras. Indeed, board members may not necessarily be involved in the repairs themselves (although

this differs across Repair Cafés), and instead focus on organizational affairs, people management, and activities related to the National Repair Café Foundation (the interviews were performed in a period before the Repair Café Foundation reorganized itself to focus on international diffusion of Repair Cafés). Although several of our interviewees did not completely exclude the possibility of increasing their involvement and their time spent in the initiative, most of them at the same time seemed reluctant to spend more time on the initiative, because it would intervene with other things they like to spend their time on.

Table 3.3 Motivations to join and stay involved Repair Cafes. I indicated where it specifically regards a motivation to join or to stay involved.

Internal factors	**External factors**
• Having something useful to do when you are retired or unemployed. • Use talents in a meaningful way. Strongly linked to having a technical professional background or technical hobbies. • Wanting to help other people / the joy of helping other people (see wellbeing summary). • Wanting to contribute to the reduction of wastes. • The joy of teaching people to repair things (stay involved). • The variety of devices encountered (stay involved). • Exercising your hobby.	• Good atmosphere and friendly people. • Interaction with a diverse group of people. • Repair Cafés feel like a family. • Countering the tendency of manufacturers to create products that break down easily and/or are difficult to repair. • Being asked. • Repair Cafés offer a concrete way to work on sustainability.

When we talked with interviewees about **good and bad practices and challenges** in the Repair Cafés (see table 3.2), the relatively low investment of time required from volunteers was mentioned as well. Other good practices mentioned by the interviewees include having certain specializations in the pool of volunteers, and also using these to mentor newcomers, the organization of educational events for school children and offering internships, collaboration with other Repair Cafés (e.g., the joint development of repair manuals) and other repair venues, and the fact that the Repair Cafés appeal to people with different types of motivations (e.g., sustainability motivations and social motivations are both prominent). Bad practices were observed less often, but include the fact that sometimes untrained people were allowed to work on complicated (potentially dangerous repairs, that there was sometimes too little space to keep tools and spare parts, that it is not always clear whether or not Repair Cafés compete with regular repair venues (e.g., bicycle repair shops), the divorce of management of the Repair Cafés from actual repairing that was observed in one Repair Café, and the fact that it proved difficult to contribute to the shared database on product faults that the National Repair Café Foundation aimed to develop. Challenges observed by the interviewees include the increased share of electronics in the products that are offered for repair, the pressure from other parties

(e.g., municipalities) to organize Repair Cafés more often, the limited time available for repairs, the increased difficulty of repairs, and the limited appeal of Repair Cafés to a broad audience (including younger people).

When we asked our Repair Café interviewees to tell them something about themselves, they would often quickly end up talking about their **motivations to join and stay involved** in their Repair Café (see table 3.3), indicating a strong link between their background and their motivation to join. This related, for example, to the fact that Repair Cafés offer volunteers an opportunity to exercise their hobby (e.g., tinkering with objects), and use their talents, often obtained through technical education and training, in a meaningful way. Motivations for joining also include the desire to help other people and the positive responses they received from those they helped (also see summary of the wellbeing theme), as well as the desire to reduce the amount of waste that our society produces, and the desire to counter the tendency of manufacturers to engage in wasteful production practices. Other motivations relate more to the good atmosphere at the Repair Cafés, and the opportunity to interact with a wide range of people in a friendly manner. A few **obstacles to joining or staying involved** (see table 3.4) were also mentioned, including not having the necessary skills, a bad fit with the people already participating, or the lack of professionality of the Repair Cafés. Even though the time investment required for Repair Cafés is relatively low, a lack of time was also mentioned as a barrier. One respondent also mentioned that the Repair Cafés are a drop in the ocean, and thus believes that there is little that can be achieved through them.

Table 3.4. Obstacles to joining or staying involved Repair Cafes.

Internal factors	External factors
• Not having the necessary skills. • "It doesn't occur to me."	• Not the right atmosphere / bad fit with people. • Being pressured into volunteering more often (hypothetical case). • Not professional enough. • Not having enough time. • It is just a drop in the ocean.

The membership theme- Vogelwijk Energie(k)

With regard to **form and strength of engagement** of members the Vogelwijk Energie(k) initiative clearly differs quite strongly with the Repair Cafés. In fact, one of the ideas behind the way the initiative is organized, is that there is as little burden on members as possible, in terms of the time investment required. Membership typically involves participation to one or more of the projects that Vogelwijk Energie(k) organizes, and some members may also attend the meetings that the initiative organizes, where they may also contribute their own ideas. Indeed,

this also means that the engagement of the board members is very intense and time consuming.

One of our interviewees is a former board member, and he made clear that setting up and running the initiative requires a lot from the board members, who are all people that also have busy jobs. Being a member at least involves paying an annual membership fee, and members are then free to choose what projects they want to participate in. For some interviewees, an important aspect of being a member is simply to support a group of people / an initiative that promotes ideas that are important to the interviewee. In terms of **good and bad practices and challenges** for Vogelwijk Energie(k) (see Table 3.5) our interviewees were overwhelmingly positive.

Table 3.5. Overview of good and bad practices and challenges mentioned members of Vogelwijk Energie(k).

Good practices	Bad practices	Challenges
• Vogelwijk Energie(k) is fulfilling a frontrunner role. • The collective spirit. • Broadening the range of projects. • Sustainability appealing to broader group of people. • Vogelwijk Energie(k) is a professional organization. • The board of Vogelwijk Energie(k) is very responsive. • Contributes to learning. • Flexibility for members. • Participation doesn't create burdens. • Vogelwijk Energie(k) keeps exploring new topics. • A truly a bottom-up initiative. • Building on strong commitment of residents. • Mobilizing schools in the wind turbine project. • Giving residents co-ownership over the initiative. • Making use of good professional contacts. • Generating good publicity. • Start with an iconic project. • Interesting with additional presentations.	• Not all activities necessarily require collective action. • Appeals to a limited range of people.	• Keep up with technological developments. • Promoting the initiative among a broader public. • Creative combinations with other development. • Helping/supporting other neighbourhoods • Attracting more young members.

For example, the interviewees highly appreciate the frontrunner role that Vogelwijk Energie(k) plays, and how the initiative makes sustainability appealing to a broader group of people. The interviewees also praise the professionality of the board members, and their responsiveness during and around meetings. Another positive element of the initiative that was mentioned by members is the flexibility that the initiative offers to its members (i.e., choosing what projects to participate in), and the fact that the initiative unburdens its members, and makes engaging in sustainable energy practices easier. The initiative also continuously explores new ideas and themes, which also contributes a great deal to learning among its members. The former board member in particular mentioned that in his view one of the greatest success factors is that the government was kept out of the initiative as long as possible, and that the residents of Vogelwijk Energie(k) were given through co-ownership over the initiative and its projects.

In this respect, Vogelwijk Energie(k) also benefited from the fact that it could build on an already high level of engagement in common affairs of the residents of the neighbourhood. Bad practices were only mentioned by non-members, and include the observation that not all activities (e.g., installing solar panels) really require collective action (and are therefore somewhat redundant in the interviewee's opinion), and that Vogelwijk Energie(k) overemphasizes sustainability aspects of the initiative, therefore making it less appealing to people for whom other values are more important (e.g., economic benefits). Challenges for the initiative that have been mentioned by interviewees are to keep up with the latest technological developments, the difficulty of mobilizing a broader group of people to invest in sustainability (i.e., mobilizing a 'second wave'), developing creative combinations with other developments in the district, helping out initiatives starting up in other neighbourhoods, and attracting more young members.

Table 3.6. Motivations to join Vogelwijk Energie(k). It is indicated where it specifically regards a motivation to join or to stay involved.

Internal factors	**External factors**
• Wanting to do something on sustainability and energy saving. • Wanting to contribute to increasing awareness. (It feels good to contribute). • Finding like-minded people. • The meetings are interesting because of variation of activities and presentations (stay involved). • Disillusion with the national government. • Wanting to do something as a neighbourhood.	• Professional approach of Vogelwijk Energie(k) • The focus of Vogelwijk Energie(k) on innovations. • It is not expensive to become a member. • You can choose what projects to participate in and what projects not to participate in (stay involved). • The initiative makes things easier for its members. • The national government is not doing enough. • As a collective you can do things that you cannot do alone.

With regard to **motivations to join or staying involved** sustainability motivations were more prevalent than in the Repair Cafés (see Table 3.6). Some interviewees were also satisfied with how government deals with sustainability issues, and see the initiative as a way to do something about them in a bottom-up way, while at the same time contributing to awareness on sustainability in general. Interviewees also mentioned that the initiative allowed them to find like-minded people in the neighbourhood and that they liked the idea to do something together as a neighbourhood. Some of the good practices mentioned earlier also count as sources of motivations to stay involved, such as the professional approach of Vogelwijk Energie(k), the flexibility to choose which projects to participate in, and the fact that the initiative makes things easier for its members.

In addition, interviewees reported that they like the focus of Vogelwijk Energie(k) on innovations, and that the initiative allows them to do things that can only be done in a collective. **Barriers to joining or staying involved** (see Table 3.7) were mentioned primarily by non-members, and were in some cases merely hypothetical (these are not mentioned here). As mentioned before, one of the non-members found the initiative to be too idealistic, lacking a business-oriented perspective. Another non-member said that the things that the initiative makes possible for members are things that he is already able to do by himself, and that it therefore does not make sense for him to join. Yet another non-member said that he simply did not know very much about what the initiative is specifically up to these days, and that is not looking to become member of yet another collective anyway.

Table 3.7. Obstacles to joining or staying involved Vogelwijk Energie(k).

Internal factors	External factors
• Already doing things individually that the initiative does collectively. • Also having a busy job. • Having insufficient knowledge about what the initiative is up to. • Not wanting to be part of another collective effort. • You may not live in this house for much longer.	• Suspicion of conflicts of interest (hypothetical). • The group is too activist (hypothetical). • Lack of concrete, short-term goals (hypothetical). • The initiative is too idealistic / lacks a business-oriented perspective.

3.4. The wellbeing theme

A second major theme discussed during the interviews concerns wellbeing effects of sustainable behaviour, and wellbeing effects related specifically to the work of our interviewees in their initiatives. Overall, issues related to the theme of wellbeing did not come up as much in the Dutch cases as it did in other cases. To the extent that they did come up, they mostly did in the interviews with the Repair Café Volunteers, and they did in relation to initiative-related impacts on wellbeing. Thus, our summary of the wellbeing theme is relative brief.

The wellbeing theme - Repair Cafés

The **initiative-related wellbeing effects** of participation to the Repair Cafés are overwhelmingly positive, and relate strongly to the motivations of volunteers to stay involved in the initiative. Many of the wellbeing effects reported by our interviewees relate to the joy of being able to help people in need. In the latter case, the examples mentioned by the interviewees usually related to visitors that clearly have little money to spend on regular repair venues or replacement products, or visitors that bring products to which they have a strong emotional attachment. These visitors are visibly moved if their items are successfully repaired, and in turn, the interviewees we spoke with were visibly moved when they told us their stories about these cases. More in general, the thankfulness that visitors of the Repair Cafés often show the volunteers was clearly an important source of satisfaction for the interviewees. Another category of wellbeing effects in the Repair Cafés related more to personal development, such as discovering talents and finding out that one is capable of more than (s)he suspected. Importantly, the Repair Cafés also give the volunteers a stage where they can express their talents, and where the value of their talents is recognized. In this regard the work that our interviewees perform at the Repair Cafés also gives them pride. Another related wellbeing effect concerns the satisfaction that some of the interviewees take in being able to use their own knowledge and skills to teach other people (e.g., including interns and visitors). Finally, some wellbeing effects related to the good and friendly atmosphere at the Repair Cafés, and the pleasure that the interviewees have in interacting with their colleagues as well as visitors of the Repair Cafés.

The interviewees had trouble coming up with examples of **negative wellbeing effects**. There were some who briefly mentioned examples of visitors that were ungrateful or impatient, but they would usually immediately emphasize that these are exceptions to the rule. Another minor source of negative wellbeing effects is the disappointment or frustration that the volunteers may feel if they are not able to repair something. At the same time, it was also clear that this most often has to do with the product (broken beyond repair or manufactured in a way that makes it difficult to repair), rather than with the lack of skills of the volunteers.

The wellbeing theme -- Vogelwijk Energie(k)

As mentioned earlier, wellbeing effects almost exclusively came up during interviews with the Repair Café volunteers. The only examples that were mentioned in the case of Vogelwijk Energie(k) where **initiative-related impacts**, and more specifically relate to the social dimension of wellbeing, and more specifically to the joy of finding like-minded people in the initiative. However, this effect was mentioned by only two interviewees, and one of them immediately nuanced it by saying that he does not necessarily meet very often with other people in the initiative.

3.5. The behaviour theme

Introduction

The behaviour theme deals with examples, and supporting and hindering factors of environmental behaviour of our interviewees in general, as well as their environmental behaviour related specifically to their work in the initiatives. For these subthemes we made a distinction between several behavioural domains, as can be seen in Tables 3.8 to 3.13. Another specific subtheme included here is the experience of intrapersonal conflicts by our interviewees, and the strategies that they use to cope with these conflicts. This latter subtheme came up less often in our case, compared with other cases in the GLAMURS project. A third theme, which came up even less often is the role of time in environmental behaviour.

In addition to the domain-specific supporting and hindering factors for environmental behaviour that we discuss below, we encountered several factors that were difficult to link to a specific domain. For example, a hindering factor that came up quite often is that it is difficult to say what choices are really more sustainable than others, which is usually caused by the complexity involved in assessing the sustainability of different choices, and the conflicting stories that our interviewees hear and read about this. An example of a general supporting factor in environmental behaviour that our interviewees referred to is their upbringing. Especially the interviewees that grew up in the late 40s or early 50s said that they were brought up in a time of scarcity, and that therefore thriftiness was a central value that their parents raised them with. Some similar examples were also given in relation to education and professional experiences. Finally, the importance of routines came up occasionally: Some of our interviewees said that environmental choices were part of their normal, routine life, and therefore they did not see it as something special, or something that takes extra effort or sacrifices, while other interviewees did in fact pose extra effort and sacrifice (of primarily financial security and comfort) as barriers to pro-environmental behaviour. Another general issue that is interesting to mention is that the interviews pointed out that pro-environmental behaviour may be stimulated by things other than the ambition to be 'greener.' Good examples of this can be found in the mobility domain, where interviewees reported choosing the bicycle over the car because it is more practical, more fun, or healthier. In the overview of the behaviour-related interview results below we only make distinctions between interviewees of the two different initiatives where these are really relevant.

Table 3.8. Overview of behaviours in the mobility domain.

Initiatives	Behaviour / Decision	Supporting factors	Hindering factor
Repair Café Vogelwijk	• Travelling by train rather than by car. • Travelling by bicycle rather than by car. • Travelling by bus rather than by car.	• It is more practical sometimes (depends on destination) • It is healthier; it is an exercise • No drivers license • Saving fuel and thereby reducing emissions • Having a subscription to the public transport bike[2] • Public transport is comfortable • You don't pay parking fees • In the train you can do work during the travel	• Having children • Having to go to different places for work • A car gives more freedom / saves time • Using public transport requires more planning ahead • Inconvenient public transport schedules • Not all places are easy to reach with public transport • Sometimes you need a car to transport something • Using a car is often easier
Repair Café Vogelwijk	• Buying a fuel efficient car	• Environmental motivations • Financial motivations (tax benefits)	• If you have a family you may need a bigger car
Repair Café Vogelwijk	• Using a shared car service instead of owning a car • Own just 1 car.	• Not needing a car very often • Having a car can cost a lot of money • You can use a taxi every now and then	• This is not feasible if you need a car on a regular basis
Repair Café	• Working from home	• Reduces fuel use • Reduces time spent on commuting.	• The need to be at your office regularly
Repair Café	• Don't use the airplane too often	• It is damaging to the environment.	• Low ticket prices • Some attractive places to visit (for holidays) are harder to reach if you don't fly there.
Vogelwijk	• Don't drive 200 km/h anymore.	• Better for the environment • Increased risk of getting tickets • Getting older	• In some countries you can drive at high speeds.
Vogelwijk	• Participate in a shared electrical car service (M)	• Facilitation by initiative (M) • General support for electrical cars.	

[2] This is a service with which you can always use a bicycle from a railway station.

The behaviour theme – Mobility

One category of examples of sustainable choices that apply to all our volunteers is using public transport or bicycles instead of cars. Supporting factors in this regard include the fact that using a bicycle may actually often be the most practical option, and that public transport can be more comfortable than the car. Also, in the train you can do work that you cannot do in the car, which means that you can use your time more efficiently. A supporting factor that relates more specifically to protection of the environment is that not using the car also saves fuels and reduces emissions. Hindering factors in this regard are that cars offer you more flexibility if you have children or if you have to be at different places during the week for your job. Public transport is also bound to quite specific travelling schedules, and not all places are easy to reach. In summary, in certain situations, using a car is simply easier.

Other mobility related choices mentioned by our interviewees include buying a fuel efficient car, or owning just 1 car, and making use of a shared car service or taxis. Here financial as well as environmental motivations may serve as supporting factors, while the hindering factors again have to do with the practicalities of having your own (or a bigger, less fuel-efficient) car.

Our interviewees from the Repair Cafés also mentioned the possibility of working from home, and that they try not to travel by airplane too often. Working from home saves commuting time and also reduces fuel use. However, it may be difficult to work from home if you are expected or required to be in the office on a regular basis. The choice not too fly too often is motivated primarily by concerns for the environment. Hindering factors here are low ticket prices and the desire to visit places that are hard to reach unless you fly there.

One of our interviewees from the Vogelwijk Energie(k) initiative mentioned that he does not drive 200 km/h anymore as an example of pro-environmental behaviour. He says he made this choice because it is better for the environment, because of the risk of punishment (i.e., speeding tickets) and because he is getting older. As a hindering factor he mentioned that in some countries you can easily drive at high speeds without punishment. Another interviewee from Vogelwijk Energie(k) mentioned that he participated to the shared electrical car service of the initiative, where the facilitation of the initiative, and his idealist support for electric cars in general were mentioned as supporting factors.

The behaviour theme – Energy

The behaviours reported by our interviewees with regard to the energy domain usually relate to energy measures taken in and around them home.

For example, several interviewees reported that they installed solar panels (sometimes facilitated by Vogelwijk Energie(k)). Supporting factors here are subsidies, environmental motivations, the fun of seeing your energy meeting going backwards, and the desire to be a frontrunner. Hindering factors are that having solar panels does not necessarily make a lot of difference financially, that there are can be a lot of paperwork and costs involved, and that there are other measures that may be more effective. In the case of Vogelwijk Energie(k) people also have the option to participate to a solar roofs project of the initiative if they don't have the

space to place solar panels themselves. For people that do have that space, it does not always make sense to participate to such a project.

Table 3.9. Overview of behaviours in the energy domain.

Initiatives	Behaviour / Decision	Supporting factors	Hindering factor
Repair Café Vogelwijk	• Installing solar panels	• It is fun to play with • Subsidy • Sustainability • Be a frontrunner	• It doesn't make a lot of difference financially • There can be a lot of paperwork involved • Costs • There are other measures that are more effective
Vogelwijk	• Participation in collective solar panel projects (M)	• Facilitation by initiative (M)	• It doesn't make sense if you have your own solar panels.
Repair Café	• Purchasing energy from a green energy company		
Repair Café	• Having shares in wind turbine projects	• Good for your mood when it is windy • Reducing the costs of energy (gives satisfaction)	
Repair Café Vogelwijk	• Low temperature in the house • Switching off the heating system when not at home	•	
Repair Café Vogelwijk	• Buying an energy efficient heating boiler	• Becoming more energy efficient	• It is not easy to say what is the best moment to replace your old boiler
Repair Café	• Drying things outside		
Vogelwijk	• Installing led lights or (other energy saving lights)	• Facilitation by initiative (M) • The quality of led lights has improved • Led lights are energy efficient • Led lights perform better than other energy saving lights	• Not all led lights have a good colour of light
Vogelwijk	• Installing a smart energy meter (M)	• Facilitation by initiative (M) • Understanding better how you spend your energy	
Vogelwijk	• Installing a heat pump	• Facilitation (information) by initiative (M)	• Costs • Lack of information on costs and benefits
Vogelwijk	Taking chargers out of the electricity sockets if they are not	It is very easy to do	Lack of knowledge on effects of not doing it

	in use		
Vogelwijk	Switching of the lights in a room if it is not used		

Examples of energy saving measures in the house are to live with a low temperature inside the house, switching off the heating entirely when no one is at home, and buying an energy efficient heating boiler. The members of Vogelwijk Energie(k) reported several more measures, such as installing led lights, smart energy meters, heat pumps, switching off lights in rooms that are not used, and taking chargers out of their sockets when they are not in use. The first few examples are facilitated by the Vogelwijk Energie(k) initiative, and some of the other measures were understood as simply being common sense. Few hindering factors were mentioned, although it was mentioned for led lights that they don't always give a good colour of light, and for heat pumps it was mentioned that the costs can be high, and that there is still relatively little information on the costs and benefits of having one.

Other behaviours reported in the energy domain by Repair Café volunteers include purchasing energy from a green energy company, and having shares in wind turbine projects. Here environmental motivations are important, and hindering factors were not explicitly discussed.

The behaviour theme - Food

In the food domain our interviewees reported behaviours such as eating vegetarian, or eating meat more sporadically, buying organically grown food, as well as locally produced, or seasonal food, not eating pre-packaged food, and buying food with little packaging. Interestingly, when discussing behaviour in the food domain, hardly any hindering factors were mentioned by the interviewees, but many supporting factors were mentioned, which include environmental motivations (e.g., eating meat is bad for the environment), normative motivations (e.g., you don't need meat every day), with increased opportunities (e.g., supermarkets offer more organic products, and there are good meat replacements), and with health and animal wellbeing. With regard to buying food locally two additional arguments that were made include that growing up on a farm makes you aware of the difference that buying food locally makes, and that if you want to live in a nice neighbourhood you also have to invest in it.

One of our Repair Café interviewees also stressed that he doesn't like to throw away food, because there might be someone that could still eat it, and it is also morally unjust, given that there are plenty of people around the world that live with hunger. A hindering factor mentioned here is that food sometimes simply spoils before you are able to finish it. One of our interviewees for Vogelwijk Energie(k) mentioned that he grows his own vegetables, for which his prime motivation is that it is fun to do. This person also had a background in agricultural studies.

The behaviour theme – Housing

Measures taken with regard to housing, besides those already mentioned under the header of energy, were not discussed as much as the previous themes. Interviewees from both the Repair Cafés and Vogelwijk Energie(k) reported that they took measures to improve the insulation of their house, which in the case of Vogelwijk Energie(k) is also facilitated by the initiative. Some interviewees reported that taking measures for improved insulation may not be practical depending on the way that the house is constructed.

Table 3.10. Overview of behaviours in the food domain.

Initiatives	Behaviour / Decision	Supporting factors	Hindering factor
Repair Café Vogelwijk	• Eating meat sporadically • Being a vegetarian	• Eating meat is bad for the environment (gradual change of attitude) • It is not necessary to eat meat every day (sobriety) • More people accept this • You don't need meat • There are good replacements • It is a habit	
Repair Café Vogelwijk	• Buying biological food	• It is healthier • Animal welfare • It is better for the environment • Supermarkets offer better possibilities for this nowadays • More people accept this. • The availability of biological food packages • It doesn't cost more if you don't eat meat every day	
Repair Café Vogelwijk	• Buying food locally	• It is more sustainable • Growing up on a farm and knowing the difference that this makes • Experience from work • If you want to live in a nice neighbourhood, you need to invest in it	
Repair Café Vogelwijk	• Buy food with little packaging • Don't buy drinks in small packaging	• To reduce the amount of wastes you produce • The food that you buy from shops where they have less packaging tastes better	• Supermarkets that are more widespread have a lot of packaging • Lack of time

Repair Café Vogelwijk	• Not eating pre-packaged food	• Pre-packaged food is unhealthy • Pre-packaged food is bad for the environment	
Repair Café	• Throw away as little food as possible	• The desire not to waste food • Maybe someone else still wants to eat it • In other countries people have less to eat	• Food sometimes simply spoils
Repair Café Vogelwijk	• Buy seasonal food	• It is better for the environment (logistics)	• Some seasonal food is too tasty to wait for the actual season
Vogelwijk	• Growing your own vegetables	• It is fun to do	

Another measure reported by Vogelwijk Energie(k) interviewees, which is also related to facilitation by the initiative, is to get personal, tailor-made advice for energy saving measures that can be taken at home. For this, Vogelwijk Energie(k) works together with an energy saving expert. One of the Repair Café interviewees mentioned that he also asked for advice, from his landlord, on how to live more sustainable at home. The interviewee from the Vogelwijk Energie(k) initiative that has an agricultural background reported that he does not use pesticides in his garden. Even though it would save time, it is relatively easy to maintain your garden in other ways, which he also knows based on his professional experience.

Table 3.11. Overview of behaviours in the housing domain.

Initiatives	Behaviour / Decision	Supporting factors	Hindering factor
Repair Café Vogelwijk	• Improving insulation of house	• Facilitation (information) by initiative (M)	• Unpractical due to the way the house is constructed
Repair Café	• Asking home owner for advice about how to live more sustainably.		
Vogelwijk	• Getting personal advice about energy saving measures that can be taken at home (M)	• Facilitation by initiative (M)	
Vogelwijk	• Don't use pesticides in the garden	• It is relatively easy to maintain your garden in other ways • Professional experience	• Using pesticides saves time

The behaviour theme – Consumption

With regard to the consumption domain, the interviewees from Repair Cafés and Vogelwijk Energie(k) report quite some behaviour that relate to conservation of objects, such as not throwing away things too easily, or buy new things too easily, using objects as long as they last, and refurbishing old items.

Some respondents also mentioned that they would give old objects to friends or to second hand stores if they were still functional, but they wanted to buy a replacement for themselves. Others also reported that they would focus on functionality and durability of objects when making purchases, and yet others reported that they also decided not to own a lot of things in the first place. Many of these behaviours have to do with thriftiness and sobriety, and valuing the objects that one owns. Hindering factors here are that it is sometimes easier to replace broken items, rather than refurbishing them, that repairs may take a lot of time, that new things may be aesthetically more pleasing, or simply that people sometimes don't know that something could still easily be repaired. Some of our Repair Café interviewees also reported that they repair even more things after becoming member, because they have better knowledge and skills required for those repairs.

Other reported behaviours related to separating wastes and recycling, and saving water. An important stimulant in the separation of wastes is the availability of an appropriate infrastructure, the lack of which was also mentioned as a hindering factor. Some interviewees also said that separating wastes is very easy if it has become part of your routine behaviour. Saving water is usually motivated by concerns about increasing scarcity of water. One interviewee from the Vogelwijk Energie(k) initiative reported that she buys things that are made from recycled materials, and another interviewee reported that hey tries to buy things locally as much as possible, because he wants to invest in the neighbourhood that he lives in.

Table 3.12. Overview of behaviours in the consumption domain.

Initiatives	Behaviour / Decision	Supporting factors	Hindering factor
Repair Café Vogelwijk	• Don't throw away stuff easily • Reusing stuff that other people throw away • Focus on functionality and durability when buying things • Don't own a lot of things • Using objects as long as they last. • Don't buy new stuff too quickly • Refurbishing old items • Giving working products to	• "Don't throw away something if it still functions" • Valuing objects • Sometimes small fixes can make a discarded object useful and/or beautiful again (it is also fun to do) • Thriftiness / Sobriety • Maybe you can still use an old object for something	• It doesn't occur to people that something can still be repaired • It is easier to buy a replacement for a broken item • Sometimes you cannot wait for something to be repaired because it needs to be replaced soon.

	other people if you want to replace them • Bringing old items to the second hand shop or selling them on the internet		• Sometimes new things are aesthetically more attractive[1] • It is not always clear what is the good time to replace something (example of cars)
Repair Café	• Repairing more things (M)	• Increased knowledge about repairing / increased skills (M)	• You need to have the basic skills
Repair Café Vogelwijk	• Separation of wastes • Recycling	• Supporting infrastructure • It reduces the amount of 'regular' wastes • It is routine behaviour	• Lack of supporting infrastructure
Repair Café	• Don't throw things on the street		
Repair Café Vogelwijk	• Saving water	• Water is becoming increasingly scarce	• People will only start doing this when the scarcity becomes obvious
Vogelwijk	• Buying things that are made from recycled materials		
Vogelwijk	• Buying things locally	• If you want to live in a nice neighbourhood, you need to invest in it	

The behaviour theme- Educational and political activities

Interviewees from both initiatives reported that they make efforts to raise their children to value nature and teach them about the importance of sustainable behaviour. It is not entirely clear what counts as supporting or hindering factors here. Some Repair Café respondents also reported that they sometimes see themselves as ambassadors for sustainability, which is also influenced by the experiences that they have with the Repair Café. Being an ambassador can even be just talking about the Repair Café at birthday parties. One of the Vogelwijk Energie(k) interviewees said that she also teaches people in her close social circles about the importance of being conscious about food. She is reluctant to do that outside those circles, because she doesn't want to patronize people. One of the Repair Café interviewees also reported some political oriented activities, such as always voting for green parties, at putting his money with a bank that invests in sustainability.

Table 3.13. Overview of behaviours in the domain of education and political activities.

Initiatives	Behaviour / Decision	Supporting factors	Hindering factor
Repair Café	• Acting as an ambassador for sustainability (M)	• Experiences gained at the Repair Café (M).	
Repair Café Vogelwijk	• Teaching (grand)children about the value of nature • Teaching children about the importance of sustainable behaviour	• Unclear, seems to be related to a general attitude.	
Repair Café	• Voting for the green party		
Repair Café	• Putting money in a bank that invests in sustainability		
Vogelwijk	• Teaching people from close social circles about the importance of being conscious about the food that you buy.		• Feeling that you are patronizing people

The behaviour theme – Conflicts and coping

Although intrapersonal conflicts are not very strongly represented in our interviews, several examples were mentioned (see Table 3.14). The conflicts observed with regard to mobility often relate to owning and using of cars. People would sometimes say that they could potentially use public transport as an alternative, but that they might still choose the car because it offers more flexibility. Coping strategies that came up here include admitting that it is a bad argument, saying that it happens only occasionally, and saying that public transport also has a lot of problems. Simply owning a car could also lead to conflicts, and here too the coping strategy is either admitting that it is wrong, or saying that public transport is not necessarily better. Two people also mentioned that they felt conflicts because on the one hand they try to live a green life, but on the other hand occasionally use airplanes for travel (even when this happened very rarely it was seen as a problem). Admission that it is wrong was also a coping strategy here, but other strategies include compensation strategies (e.g., not having a car), saying that it is not a decision you make by yourself, and saying that there are places in the world that are difficult to visit unless you fly there. One person also mentioned that buying an electric car would be more sustainable, but that it is also very costly. Here the coping strategy is to prioritize financial security.

With regard to energy one interviewee mentioned that she burns peat in her vacation home in Ireland, which is very bad for the environment. She defended this behaviour by saying that the shed is still full of peat, and that they will stop using it when they run out of what is still in the shed. Another energy-related conflict is one where an interviewee said he might save energy

by buying more energy efficient lighting, but that he chose not to do it, because the quality of the energy-efficient light is not very good.

Table 3.14. Overview of conflicts and coping strategies

Behavioural domain	Description / Triggers (3.5.1)	Coping strategy (3.5.2.)
1. Mobility	• Buying an electrical car would be better for the environment, but it is also costly	• Prioritizing financial security
	• Wanting to go on holidays by airplane, which is very wasteful[1 and 2]	• Saying that not using a car compensates • Saying that you are not proud of yourself and don't pat yourself on the back for the sustainable behaviour that you **do** exhibit • Saying that it is not a decision you make alone[9] • You want to see the world (show your children the world)[10] • Seeing beautiful places around the world shows you what is at stake
	• Going by public transport is less wasteful than going by car, but it is easy if you get to decide when to leave, or when to arrive	• Saying that it is a bad argument[11] • Saying that trains also have their problems, for example when it is freezing
	• Doing several things for sustainability, but still having a car[3]	• You know that it is wrong, but you still do it • Saying that public transport is not necessarily less wasteful
	• Doing several things for sustainability, but also having a second home in Ireland you often go to by airplane	• Sometimes going by car and boat, but saying that it often isn't practical • Travelling by car is tiring • The 'other things' compensate
	• Going somewhere with the car while you could also have used public transport[4]	• It happens only occasionally
2. Energy	• Burning peat for energy in vacation house in Ireland, while knowing this is very wasteful	• The shed is still full of peat • We will stop using it as soon as we run out[12] • Where we burn the peat, it won't do much harm[12]
	• Having the possibility to save energy by buying energy efficient lighting but not doing it[5]	• The quality of the light is not good
5. Consumption	• Being against discarding objects when they can still be used, but at the same time getting a new phone every two years (gadget freak)	• Saying that there are limits to this. Not necessarily wanting the newest stuff • Blaming industry for manufacturing need
	• Wanting to buy sustainable products, but also wanting financial security	• Prioritizing financial security (first the stress, then the morals)[13]
	• Do you keep repairing a product that is aging (costly), or do you buy a new one to be done with the maintenance?	• If you buy a new one, it is usually a more efficient product

	• Going to the Albert Heijn, even though you know the products are not always animal friendly or environmentally friendly	• Prioritizing a comfortable life • Saying that you don't want to spend an entire afternoon doing groceries
	• Sometimes people offer something to repair for free, but you expect that they will sell it afterwards (M)[6]	• Taking comfort in the fact that you prevented an object from being thrown away • Deciding that the repair is unfeasible a little bit quicker
	• Sometimes people ask you to repair something that should be repaired in a regular repair venue (M)	• Not everyone can afford the repair; It is sometimes difficult to say who can • Difficult to deal with in general (coping is difficult)
	• Not wanting to throw away things to easily, but also having an aesthetic appreciation for new things	
	• Buying tropical wood, while knowing that probably it is not produced in a sustainable way[7]	• After making the decision to buy it we no longer think about it
7. General	• Increased opportunities for having a comfortable life have reduced the sustainability of lifestyle[8]	

With regard to consumption, several conflicts were mentioned. There was one interviewee who described himself as a gadget freak, and who would get a new phone every two years even though he is very much against discarding objects. His coping strategy was to say that there are actually limits to his behaviour on this front, but he also blamed industry for 'manufacturing need,' that is, actively creating a desire among consumers for newer products. Several interviewees also experienced conflicts between buying (more expensive) sustainable products, and financial security. In this case, they would usually prioritize financial security ("first the stress, then the morals"). A conflict is actually more a matter of uncertainty on whether it is better to repair and preserve an old product, or buy a new product that may actually be much more (energy) efficient. One person mentioned that she doesn't want to throw away things too easily, but that she sometimes would like to buy new products because they are aesthetically more pleasing. Another person mentioned that he bought tropical wood, while he knew that, although it was certified, it probably wasn't produced in a sustainable way. He said that he simply bought it, and did not think too much about it anymore afterwards.

Two conflicts with regard to consumption relate to issues that arise during work in the Repair Cafés. One conflict is that sometimes the volunteers feel that they are repairing things that could be repaired in a regular repair venue (e.g., bicycle repair shops), and they feel bad about competing with those regular repair venues. They usually tell themselves that not everyone can afford the regular repair venues, but in general they experience this as a very difficult issue to deal with. The other conflict concerns cases in which they feel that people are abusing the fact that they repair things for free. For example, some interviewees suspect that there are people that have things repaired for free at Repair Cafés to subsequently sell them on the

internet. The volunteers cope with this by telling themselves that they at least helped prevent an object from being wasted, but there was also one volunteer that said he would sometimes decide a bit quicker that the object is irreparable (even though it actually still might be reparable).

Finally, a general conflict that was mentioned, is that increased opportunities for having a comfortable lifestyle have at the same time reduced the sustainability of lifestyles. People are now used to a certain standard of comfort that they will not be willing to give up anymore.

The behaviour theme – Time

The issue of time did not come up very often explicitly. When it did come up, it was often related to mobility choices, where people would make comparisons between the time it takes to go somewhere either buy car, public transport, or bicycle. It also came up in relation to how people buy and prepare food. For example, one interviewee explained that he tries to buy his food from different shops (rather than one supermarket) because they use less packaging, but that under time pressure he sometimes has to go to the supermarket anyway. One interviewee also talked about the time that it takes to do 'research' into what choices are actually sustainable, and mentioned that he does not have the energy to investigate everything, or that there are other things, such as hobbies, that he prefers to spend his time on.

3.6. The governance theme

For the governance theme we basically focused on two main subthemes: (1) The view of our interviewees on current arrangements for the governance of sustainability, and (2) the view of our interviewees on future, or better arrangements for the governance of sustainability. In practice, these two subthemes are not always easy to keep separate, as our interviewees often built their normative views on critiques on the status quo. In general, our interviewees feel quite negative about the status quo of governance of sustainability in the Netherlands. Their normative views usually pointed for bottom-up changes that start from the community, although the importance of better facilitation by the government was also occasionally mentioned.

The governance theme – Repair Cafés

Our Repair Café interviewees gave quite some attention the negative role of companies in the governance of sustainability. There are strong suspicions among these interviewees that companies engage in planned obsolescence, and that they intentionally make products

difficult to repair (or even discourage people from repairing them), in order to sell more. There was also one interviewee that accused companies of 'manufacturing need.' Indeed, there were also several negative comments about the lack of action by the Dutch governments on sustainability issues.

Most normative views refer to bottom-up initiatives as potentially better (although partial) arrangements for the governance of sustainability. Several interviewees observe a lot of organizational capacity in Dutch civil society, and see this as something we could make use of. One interviewee also spoke about the necessity for bottom-up initiatives to start fulfilling more functions that were traditionally fulfilled by governmental agencies. The Repair Cafés themselves are seen as a good example of bottom-up initiatives that fulfil social as well as environmental functions. Repair Cafés were also see to have an important educational function, by making people more aware of the possibilities to repair products that are currently still too easily thrown away. One person also expressed the hope that the Repair Café movement might achieve more fundamental changes in the way that products are manufactured, for example through lobbies at the European level. The same person also promoted more radical forms of change, such as a shift from business models that are based on the sale of ownership rights to models that are based on selling services (e.g., you don't pay for a car, but you pay for transport).

There were also two interviewees that see some value in regulatory measures, such as green taxes, as well as lower taxes on labour.

The governance theme - Vogelwijk Energie(k)

Several interviewees from the Vogelwijk Energie(k) initiative were very critical about the role of the Dutch government in the governance of sustainability. One interviewee accused the government of silly policies, and sees initiatives as Vogelwijk Energie(k) as stepping in where the government is failing. One of the former initiators of Vogelwijk Energie(k) is probably the most negative of all about the role of government, but his critique referred to the more general relationship of governments to citizen initiatives. During on his career in the redevelopment of neighbourhoods he had several bad experiences with the failure of governments to facilitate bottom-up initiatives. This is also one of the reasons why he decided to keep the local government in The Hague out of the initiative for as long as possible, although he was quite positive about the role that the municipality of The Hague played in the later stages of the development of Vogelwijk Energie(k).

In the case of Vogelwijk Energie(k) too, respondents see bottom-up action (for example in the form of initiatives like Vogelwijk Energie(k)) as a positive contribution to the governance of sustainability. A mentioned before, such initiatives were sometimes seen as stepping in where the government is failing. Vogelwijk Energie(k) too is seen as something that has an educational function, by bringing more knowledge to its members, but also by acting as a

frontrunner in the domain of local, sustainable energy production. Here, there was a strong emphasis on the necessity of having a government that knows how to facilitate such bottom-up movements. One of the interviewees also saw facilitation of bottom-up movements as a good alternative for regulatory measures, in which he has relatively little faith (positive stimulation works better). However, as mentioned before, there was quite some dissatisfaction among the interviewees about how governments currently handle facilitation.

Facilitation was also discussed in another sense, because some interviewees mentioned that the sustainability of lifestyles can already be improved a lot if activities such as separation of wastes are properly facilitated (e.g., providing the necessary infrastructure). In short, sustainable behaviour should be made easy for people.

The governance theme – Other

There were also some changes in government that came up in both groups of interviewees. For example, interviewees from both groups emphasized the importance of changes in mentality, which was partly seen as something that starts at the level of the individual, but also partly as something that can be stimulated through education.

4. Drivers and barriers to sustainable lifestyle choices: A focus group analysis

4.1. Introduction

The overall aim of Work Package 4 of the GLAMURS project is to provide an empirically-grounded understanding of patterns of time-use (with an emphasis on work-leisure balance, the perception and effects of time pressure), and associated consumption patterns. To explore some of these topics, focus groups were organized as part of the Work Package. In focus groups, a small number of selected participants engage in discussion with each other on issues concerning their own experiences. Focus groups are often set up for exploratory purposes, allowing researchers to develop preliminary insights on the beliefs, attitudes, values and meanings that people attribute to certain aspects of their life experiences. In GLAMURS, the focus group method was used to develop preliminary insights on time-use patterns and associated consumption patterns, drivers and barriers of people's (sustainable) lifestyle choices, people's motivations for joining sustainability initiatives, and the impacts on their lifestyles of their engagement in initiatives. These focus groups were conducted in all case studies of GLAMURS, and in this chapter we report on the preparations for, and results of the focus groups that were organized in the Netherlands. An extensive description of the methodology can be found in Dumitru et al. (2015), and a comparative evaluation of all focus group results can be found in in Dumitru et al. (2016).

4.2. Methodology and procedure

Selection of participants

In the original setup of the GLAMURS project the intention was to organize one regional focus group with people from an urban area within the case study region, one regional focus group with people from a rural area, and one focus group for each initiative involved in the case study. As the Dutch case study region is highly urbanized, we decided to organize two regional focus groups with people form urban areas, and we did not organize a focus group with people from a rural area. One of our regional focus group consisted out of people living in and around The Hague, and the other focus group consisted out of people living in and around Rotterdam (with some exceptions). For the selection of participants of the two regional focus groups we worked with a bureau (CG Selecties) that specializes in selecting respondents for different types of research. We gave the bureau a list of criteria for the respondents, stating that we wanted to have diversity in gender, age, facility situation, education, income, ethnicity, and

location in the region. The selection bureau paid the participants 50 euros as a reward for their participation to the focus group. The selection bureau sent us lists of the proposed participants, such that we could request any changes if required. For our focus group of the Rotterdam region we requested some changes because we felt that students were overrepresented.

In addition to the regional focus groups, we organized two focus groups with people from the initiatives in our case study. We organized one focus group with people associated with the Repair Cafés, and we organized another focus group with people associated with Vogelwijk Energie(k). The participants for these focus groups were selected in cooperation with the board members/initiators of the initiatives. For the Repair Café focus group we created a doodle (an online agenda tool) that the initiators and board members of the three Repair Cafés distributed among their members. For one of the Repair Cafés we received the contact details of two specific people, which we invited to participate to the focus group discussion. We received relatively few applications through the doodle, and therefore we asked a few people that we had interviewed before, one of whom agreed to also participate to the focus group. We were eventually able to get five representatives from the Repair Cafés, and we decided to also invite one person that we knew was interested in the Repair Cafés, but didn't work as a volunteer in a Repair Café.

For the Vogelwijk Energie(k) initiative we also tried to invite people using a doodle (distributed among members by the board) at first, but we received only one application. The board of the initiative sent out a reminder, but this didn't change the situation. The board of the initiative suggested that it would be better to connect a focus group to a meeting of their general assembly. They would ask for volunteers during their meeting, and we would be able to use a separate room for about an hour to organize our focus group. We proceeded with this plan, and in this way we were able to organize the focus group with 5 volunteers.

Procedure

The participants selected for participation to the focus groups were invited to the campus of Delft University of Technology. Upon arrival we asked the participants to read and sign consent forms, as well as the participant data sheet. After everyone finished this step we offered a further explanation of the purpose of the focus group, and the rules that we asked everyone to follow during the focus group. These rules include the following:

- Respect that there are no right or wrong answers in the discussion
- It is allowed to build on the answers provided by other participants
- Let each other finish
- The moderators guide the discussion by asking questions
- The moderators do not participate to the discussion

After discussing the rules the discussion was started. To structure the discussion we used a translated version of the list of questions provided in the methodological guidelines. We worked with two moderators, whom made sure that progression in the discussion was made by asking the questions provided on the list. Occasionally, follow-up or probing questions were asked during the discussion as well to allow participants to elaborate on certain comments they made during the discussion. After closing the discussion we invited the participants to fill out time-use diaries. An explanation of the time-use diaries was offered and we answered any questions that came up while filling in the diaries. If a participant had filled the time-use diaries we thanked him/her and the participant would be free to leave.

For the Vogelwijk Energie(k) focus group we had to use an altered procedure. This focus group was organized in the Vogelwijk district itself, as it was connected to an annual meeting of Vogelwijk Energie(k). The meeting took place in one of the schools of the district. We asked our participants to fill out a consent form and the participant data sheet, but we didn't ask them to fill out the time-use diaries, because there was not enough time for that. We shortened the discussion by reducing the amount of questions somewhat, and by managing the discussion itself a bit more strictly.

4.3. Data coding and analysis

All coding was done in Atlas.ti, a software package for Computer Assisted Qualitative Data Analysis. The coding procedure used for coding the transcripts of focus group discussion is somewhat different from the procedure that we used for interviews. The case study researchers involved in the focus group task agreed on an initial shared coding framework that reflects the underlying research questions of this task. The shared framework includes coding categories that capture:

- Lifestyle satisfaction
- Desired lifestyle changes
- Drivers and barriers to sustainable lifestyle choices
- Beliefs about and experiences of time
- Motivations for and effects of joining a sustainability initiative
- Time-use and well-being

Additional coding categories (e.g. categories that refer to the different lifestyle domains of Glamurs) were added in a later stage of the process, and were developed in an inductive manner. Thus, the categories of the initial coding scheme were treated as 'tentative concepts', which in practice means that they were used to focus the coding procedure, but that there was some freedom in changing or adding categories.

In the first round of coding descriptive codes were used, which were invented on the fly. These codes were aimed to capture the coded fragment of the transcript in one sentence. The descriptive codes were later categorized in the coding categories of the shared framework. In our case we added tentative keywords to our descriptive codes to make it easier to sort, and search through the descriptive codes later. Below are a few examples of this:

- *Energy_solar panels are too expensive*
- *Expenditure_always tries to find the cheap deals*
- *Food_if preparing food is part of your routine it doesn't create time pressure*

After finishing the descriptive coding procedure, the entire list of codes was inspected and streamlined (e.g., merging codes, removing irrelevant codes, and improving descriptions). After streamlining the coding scheme relationships between the codes were developed, which is something that Atlas.ti facilitates. The resulting networks of codes were used as a visual aid in the interpretation of the results. The codes were also colour coded to indicate whether they were affiliated to the regional focus groups (red), the initiative level focus groups (blue), or both (purple).

The next step was to categorize the codes in the categories of the shared coding framework. This process took several stages. In the first step the descriptive codes were only categorized in the main categories of the framework. At this point, additional main categories were created when a code did not fit one of the existing categories, but was deemed important enough to keep in the list. The new categories captured the following:

- Difficulties that volunteers experience in sustainability initiatives
- Examples of sustainable lifestyle choices
- Other pressures (i.e., other than time pressure) and their effects on wellbeing
- Value judgments made by the participants
- The effects of social aspects of life on lifestyle satisfaction

After putting the codes in the main categories, the codes were put into subcategories as well to further specify the analysis. The first subcategories addressed concern the Contextual and Individual subcategories for the drivers and barriers of sustainable lifestyle choices. Other subcategories that we added refer to the 6 lifestyle domains of Glamurs. Another subcategory that we added at a quite late stage is the sub-category on technology (not included in all main categories), which was added because in multiple groups we discussed the role of technology quite explicitly.

As a 'final' step in the analysis, the codes of different subcategories were displayed in a network view to further explore their relationships. The interpretations offered below are based primarily on what was found by studying the networks of codes.

4.4. Focus group results

Regional focus group results

Lifestyle satisfaction

The highlights of our discussion on lifestyle satisfaction are reported in Table 4.1. In our discussions on lifestyle satisfaction, a major theme that emerged is the work-life balance of our participants. The views on this balance can be roughly divided into two categories. First, there were several participants who felt that their leisure time (also described as the time after work) gives them the most satisfaction. Our participants mentioned several activities as examples of what they would do in their leisure time. We also explicitly discussed the relationship between the work-leisure balance and happiness. Many people agreed that working less and receiving less income is a good trade-off. One of our discussants suggested that he was happier now, with less working hours and a lower income, because he has more freedom to decide how to spend his time. Some of our discussants indicated that they only worked for the money, which links to an idea that was sometimes expressed that you work to survive. Second, there were also people that get satisfaction out of their work for various reasons. Some discussants reported that they got satisfaction out of the fact that in their work they helped people. Others discussed how work gives you a purpose in life, and how it helps you to structure and routinize life. In contrast, there were also some people that enjoyed the fact that their work had relatively irregular and unpredictable working hours, although this would also make it difficult for them to plan certain activities outside working hours. A certain amount of independence in work (e.g. determining your own hours) was also occasionally reported as a source of satisfaction in work. Work can also contribute to social contacts.

Two of our discussants were unemployed, one of whom was unemployed against his will. His unemployment was clearly a great source of frustration and pressures to him. The other unemployed person did not perceive these pressures, but had to do with the fact that she was unemployed by choice, and because she knew she would work again in the near future. Even for people that get satisfaction out of their work, there are aspects that lead to less satisfaction, of which increasing bureaucracy (in terms of administrative work and rules) is an important example.

Table 4.1. Highlights of discussion on lifestyle satisfaction (regional).

Highlights of discussion on lifestyle satisfaction
• *Leisure time gives most satisfaction.* • *Working less and receiving less income is a good trade-off.* • *Freedom in work (how to organize time) contributes to satisfaction.* • *You work to survive.* • *Helping people through your work gives satisfaction.*

- *Work gives structure to your life.*
- *Work contributes to social contacts.*
- *Involuntary unemployment is a great source of frustration and pressure.*
- *Increasing bureaucracy in work is a source of frustration.*
- *Obligations (e.g., social obligations and chores) give little satisfaction.*
- *Interaction with friends and family gives satisfaction.*
- *Independence gives satisfaction.*
- *Eating healthy food contributes to satisfaction.*

Our focus group participants generally felt that obligations give them little satisfaction. This includes social obligations (such as having to go to birthdays), and chores that have to be done in and around the house. Some people mentioned that their interaction with friends and family is an important source of lifestyle satisfaction, while there was also one person who said that she enjoyed the fact that she was now living alone (after a divorce) and doesn't have to take into account anyone else. This topic is somewhat related to the work-life balance theme, as the amount of time one has to spend at work also determines how much time that person has for family or friends. Finally, we also had quite some discussion on the role of food in daily life (only the codes specifically related to lifestyle satisfaction are shown here). Eating healthy food proved to be important to our participants for various reasons.

Desired lifestyle changes

Overall, we found that relatively few parts of the discussion specifically addressed desired lifestyle changes (see highlights in Table 4.2). Given the results discussed above in relation to lifestyle satisfaction, it is no surprise that discussions on desired lifestyle changes also revolved largely around the work-life balance. There were some people that indicated that they want to work less, and there were also people that wanted to stop working entirely (retire early). People that belong to the latter category include those that perceived increasing pressure from bureaucracy at work. Typically, people wanted to work less in order to have more time for leisure activities or friends and family. Some people explicitly stated they would not want to stop working entirely, because work can also be a source of satisfaction. There were also people that wanted to work more, but this was mostly to create more financial security for them, and it was typically recognized by these people that there would be tensions with their leisure time if they worked more. Some comments were also made about the desire to live somewhere else. There were quite many people that would talk about changes that they had already made in life, including radical changes in the work-life balance (e.g. less working hours, and more possibilities to determine your own times). There were also people that said that you could change things if you simply wanted it, and they said that therefore didn't desire any changes currently.

Table 4.2. Highlights of discussion on desired lifestyle changes (regional).

Highlights of discussion on desired lifestyle changes
• *Work less or stop working entirely* • *Spend more time with friends and family* • *Continue working or work more* • *Live somewhere else*

Time-use and wellbeing

In the discussions that related to time-use and wellbeing many of the topics touched upon in the discussions were tied together (see highlights in Table 4.3). Large parts of our discussions revolved around doing chores in and around the house, an activity that was typically perceived as something that gives little satisfaction (or only gives satisfaction after it is finished). Discussions on several other themes (including the work-leisure balance and time pressure) link to the discussion on doing chores. Here, an interesting apparent paradox arises. On the one hand doing fewer chores was discussed as an example of reducing time pressure. This view is part of a broader narrative on how people are capable of taking control of their own time and reduce time pressure by 'letting things go,' of which doing less chores around the house (or doing them less often) was explicitly used as an example (this discussion also links to the idea that time pressure is often created by ourselves). On the other hand, our participants reported that not doing chores wasn't the result of lack of time, but primarily a result of the lack of energy after coming home from work. This points to an important observation, namely that the time pressure that our participants were discussing had as much to do with the quality of their time as with the quantity of their time. The fact that they spend most of their day working means that in the remainder of the day there are certain types of activities that they no longer wish to undertake, even though they might still have to the time for these activities.

Another way in which work links to the discussion we had on time pressure has to do more specifically with work. Part of the discussion dealt with the desire of some people to work less. To some extent working less has to do more with the quality of time rather than the quantity of time. One person made this point quite clearly. He first said he wanted to work less, but later explained that in his case this specifically meant that there is specific work that he would do less, while doing other work more in the time that he buys this way. A related view that was expressed in this context is that being able to determine your own times also reduces the pressures that you experience from work, which can for example be achieved by becoming your own boss. Working from home was also discussed very briefly as an example of reducing time pressures (less commuting time). Indeed, there were also participants for whom working less literally meant spending less time on work and more time on leisure (quantitatively). Several people also looked forward to their retirement, because they were unsatisfied with their work (for example, due to increasing administrative work) and because they would know how to spend the extra time they would have after retirement.

When asked whether the associated reduced income mattered to them, our discussants would typically reply that this is a good trade-off, under the condition that you are not in debt and still make enough money to pay for your fixed expenses. One person also reported that it would be possible to reduce expenses somewhat, for example by growing her own food. We also discussed about time pressures from work in the context of unemployment. Again, the views of our participants differed here depending on whether their unemployment was voluntary or not. We also had a couple of people in our group who had irregular and unpredictable work schedules. Although this is something they enjoyed, they also said that it made it more difficult to plan things ahead or to make certain agreements with others.

Table 4.3. Highlights of discussion on time use and well-being (regional).

Highlights of discussion on time-use and wellbeing
• *Reducing time pressure by 'letting things go'* • *Quality of time as important as quantity of time in experience of time pressure* • *Working less reduces time pressure* • *Being able to determine your own working hours reduces time pressure* • *Working from home reduces time pressure (less commuting)* • *By working fewer hours you have more time for leisure activities* • *Looking forward to retirement, because of low job satisfaction* • *Working less versus lower income is a good trade-off if you reduce expenses* • *Irregular work schedules are enjoyable but make planning ahead difficult* • *Food habits change under time pressure* • *A healthy meal is always important* • *You spend money if you have more time (e.g., shopping out of boredom)* • *New technologies have increased the amount of things we spend time on* • *Time expenditure and pressure may depend on social environment* • *Commuting time can be enjoyable ('discharging' after work)* • *Traffic jams cause stress*

Another theme discussed in relation to time pressure is the consumption of food. Our participants reported that they would occasionally change their food habits if they had little time. In this context, the lack of time was usually caused by having to work during the day and having to go somewhere else in the evening (such as dancing classes). Some people reported that they would prepare a simpler meal than they normally would, although others were of the opinion that preparing a good meal doesn't necessarily take more time. Also, some participants tended to prepare large amounts of food on days that they have a lot of time. The excess food will then be saved for those days where time is scarcer. Our participants agreed that having a healthy meal was important, even if there is little time to prepare food. For example, one participant explicitly stated that she sometimes would have wanted to eat something else after eating an easy meal, although her easy meals were still healthy ones.

One discussion concerns how time affluence influences expenditure. In this regard some of our participants reported that they tend to spend more if they have more time. Again, a relationship was drawn with work-life balance, because our participants felt that the less you work, the more time you will have to spend your money. One person specifically indicated to go shopping out of boredom, and that she would sometimes buy things she didn't really need.

Another discussion we had in this context concerns the role of technology in the way that we spend our time. Our participants discussed how modern technology has increased the amount of things that you can spend your time on, and how these technologies (social media in particular) can be addictive. Some participants indicated that they would sometimes interact with different types of media, while feeling that they could be doing something more useful or desirable instead.

Yet another discussion concerns more social aspects of time pressure. To some extent, the way people spend their time, or experience time-pressure, depends on the behaviour of people in their environment. This may concern the direct family of the individual, but it also concerns people that are more 'at a distance.' For example, some participants would feel time pressure if they saw that others are in a hurry. One person even feels guilty when she sees that others are in a hurry, while she is not.

We also discussed mobility as it relates to time. This discussion primarily revolved around the question whether public transport and bicycles are a good alternative to cars (in terms of time) or not. This discussion is elaborated on in the section on barriers to sustainable lifestyle choices. One interesting aspect of our discussion that may be mentioned here is that some people reported that they enjoyed their commuting time because it gave them some time for themselves before and after work. This was only mentioned by people that travel by bicycle or by public transport. This may be explained by the fact that commuting by car may cause stress because of traffic jams. The people that enjoy their commuting time said that this time is qualitatively different from the time you spend at home, because the commuting time fulfils specific functions, such as 'discharging' after work and escaping your own environment for a while. Thus, here too the quality of time is an important dimension.

Other pressures and wellbeing

One important aspect of our discussions is that we spent quite some time discussing pressures that are not necessarily related to time (see Table 4.4). As was mentioned before, for some people energy it costs to perform certain activities is more important than the time that these activities cost. Several pressures are related specifically to work (or unemployment), and these pressures have most to do with expectations. For example, our discussants perceived a pressure to perform in their job, and unemployed people felt pressure from the expectation that they would apply for new jobs, even when finding a new job seemed almost impossible because of their age. In general, many of the pressures discussed in our focus groups can be most usefully understood as social/normative pressures.

Table 4.4. Highlights of discussion on other pressures (regional).

Highlights of discussion on other pressures
• *The energy activities cost may be more important than the time they cost* • *Pressures can come from expectations from your social environment* • *Pressure to perform in a job* • *Pressure to find a job when you are unemployed*

Drivers of sustainable lifestyle changes

In our regional focus groups we spent more time discussing barriers to sustainable lifestyle changes than drivers of sustainable lifestyle changes (see Table 4.5). We didn't discuss drivers to changes in the work-life balance much, which is somewhat surprising given the amount of time we spent discussing this theme with regard to its relationship to lifestyle satisfaction. One of the drivers mentioned in this regard is that you can typically work less if your partner also has an income. In this context it was also mentioned that your relationship with your partner needs to be stable if you decide to work less. Another condition that was mentioned (not really a driver), is that it is no problem to work less if you have no debts. With regard to leisure, what might be mentioned as a driver is that some people force themselves to engage in sports now and then, although this driver seems to have a rather negative connotation to it.

Table 4.5. Highlights of discussion on drivers of sustainable lifestyle changes (regional).

Highlights of discussion on drivers of sustainable lifestyle change
• *You can work less of your partners also has an income* • *You can work less if you have no debts* • *Using public transport and cycling may be faster than travelling by car* • *The speed of public transport depends on destination and schedules* • *Travelling with public transport creates some additional 'personal time'* • *Eating good meals is a matter of routine behaviour* • *Sustainable food choices easier if facilitated (e.g., vegetable boxes)* • *Separation of wastes is a matter of routine behaviour* • *Separation of wastes has to be facilitated* • *Solar panels do not have to look ugly* • *Pro-environmental behaviour does not take extra time*

The drivers of sustainable behaviour were discussed quite elaborately with regard to mobility. Here the discussion largely revolved around the question whether travelling by car is faster than public transport or cycling. Some people suggested that travelling by car is actually often slower because of traffic jams and the need to find parking spots. However, this argument was countered with the observation that the speed of travelling by public transport depends on

various factors, such as your destination, the time of the day and the schedule of public transport. Indeed, there were also other reasons for travelling by public transport or by bicycle. As was mentioned before, for some travelling by public transport creates some additional personal time before work. Simpler reasons were also mentioned, such as not owning a car or drivers' license.

Some drivers for sustainable lifestyle choices in relation to food were also mentioned. Eating seasonal vegetables was mentioned as one example of a sustainable lifestyle choice. In the past, eating seasonal vegetables was more or less the only option because there was no opportunity to put in the fridge. One participant mentioned that she ate seasonal foods some time ago when she had the opportunity to get a box of vegetables for a relatively low price from a local farmer. However, this initiative by the local farmer was ended eventually. It was also suggested that preparing good meals doesn't take any extra effort when it is part of your routine behaviour (although this may not be explicitly related to sustainability). It can also make a difference to what extent people actually enjoy preparing food. Those that see preparing food as a hobby typically also tend to pay more attention to their nutrition choices.

To some extent we also specifically discussed the role of pro-environmental behaviour in the daily lives of our participants. Figure 12 reveals some of the things that were said on this topic in relation to drivers of sustainable lifestyle choices. A typical example of pro-environmental behaviour that came up a lot is the separation of wastes. Here, it was very clear that, even though separating wastes was perceived as something that requires relatively little effort (or routine behaviour), this activity has to be appropriately facilitated for people to engage in it. Only a few drivers were mentioned in relation to activities in the area of energy, but some of these were mentioned as a contrast to things that were mentioned as barriers. For example, it was mentioned that solar panels are ugly, which was countered by someone saying that solar panels don't have to be ugly if you don't see them or when they are placed on a modern house. In general our participants responded that in their view pro-environmental behaviour doesn't take extra time, although you might be willing to engage in voluntary work for the environment when you have more time.

Barriers of lifestyle changes

The barriers to making sustainable lifestyle choices were also discussed quite elaborately with regard to mobility (see table 4.6). As mentioned before, the discussions on mobility revolved around the question to what extent one mobility option is faster than another, the conclusion to which seemed to be that this depends on a variety of factors. Additional arguments for not using a car instead of public transport or a bicycle are that public transport is too expensive, that public transport uses fixed time schedules that you have to keep to, that public transport is unhealthy (people coughing on the bus or in train coaches), that travelling by car is more comfortable (for example, when it rains), and that travelling by bicycle is sometimes not feasible due to the large distances that have to be covered. Some participants even stated that they hate public transport, although this could also mean that they preferred to travel by bicycle instead, suggesting that their attitude towards public transport is not necessarily a barrier to sustainable lifestyle choices.

We also discussed barriers to separating wastes and other aspects related to pro-environmental behaviour. Our discussion revolved mostly around the facilitation of waste separation. Our participants felt that separating wastes was more difficult if it was not appropriately facilitated . This is part of their more general view that pro-environmental behaviour has to be made easy. The underlying mechanism here may be that walking to the waste bins takes a certain amount of time, and if people have little time they may feel less motivated to separate their wastes. In this case, facilitation could specifically aim at bringing waste bins closer to the homes of people.

Table 4.6. Highlights of discussion on barriers to sustainable lifestyle changes (regional).

Highlights of discussion on barriers to sustainable lifestyle change
• *Public transport can be expensive and uses fixed time schedules* • *Travelling by public transport is unhealthy (people coughing on the bus)* • *Travelling by car is more comfortable* • *Travelling by bicycle is not always feasible* • *Separation of wastes difficult of not properly facilitated* • *Solar panels and windmills are ugly* • *Solar panels are expensive* • *If you have more time, you might buy environmentally unfriendly things* • *Gathering knowledge on sustainable choices takes time* • *Working less is not possible if you need the money (work to survive)* • *General economic circumstances may make it difficult to work less* • *It is not easy to say "no" if others ask for your help*

Sustainable energy options were discussed in one of our regional focus groups. When discussing this topic, our participants first mentioned a few reasons for being in favour of sustainable energy production, but then proceeded to list a number of reasons why they would not do something in the area of sustainable energy. There was a participant that suggested that windmills can cause health problems, and generate little energy. Also, windmills were considered ugly by some of our participants, and they found that there were already too many of them littering the landscape. One participant also made the point that she thinks solar panels are ugly, especially when they are placed on older houses. Finally, solar panels were found to be too expensive, and in this regard a comparison was made with the Germany situation, where solar panels are much cheaper thanks to subsidy programs. Such a program used to exist in the Netherlands, but it was cancelled. It was suggested that if you have more time, you might buy things that are bad for the environment more easily. It was also suggested that gathering knowledge on pro-environmental behaviour takes time, which may act as a barrier. One person suggested that pro-environmental behaviour has nothing to do

with time affluence/scarcity, because according to him there are many people in the world with enough time on their hands but that do nothing for their environment.

With regard to barriers to sustainable lifestyle choices and work-life balance we mainly discussed the barriers to being able to work less. One person that had indicated she would like to work less also indicated that she wouldn't do that at the moment, because she wants to make more money before starting a family. Other participants discussed the fact that working less (or not working at all) means that your income is reduced (and you need income to survive). Thus, it is only possible to work less if you have a stable relationship with a partner that also works. The people that wanted to work more (or wanted to find a job again) suggested that this was made difficult by the current economic circumstances. Especially for older people that are unemployed, it is very difficult to find a new job again.

Another discussion we had was on the fact that some of the people in the group were often asked for help by others (typically by family and friends). When someone else in the group would suggest that you can take matters in your own hand in order to reduce different kinds of pressures, then these people would reply that it is not always possible to say "no" when people are asking for your help. Especially when it concerns family, these individuals feel obliged to help out. This can also make it difficult for these people to make changes in their life, because those changes might affect people in their environment negatively, which is something that they don't want.

Conclusions on regional focus groups

Overall, what was most striking to us is that we kept returning to the role of the work-leisure balance in the daily lives of our participants. Almost every discussion we had on other domains of GLAMURS somehow linked to work-leisure balance, including food (how work and leisure activities influence the time there is to prepare a healthy meal), mobility (commuting), and how people maintain their household, although in the latter case the focus was on doing chores, which may have relatively little to do with sustainable life choices. Where we talked specifically about pro-environmental behaviour (sustainable energy and separating wastes) people would mostly refer to the contextual factors that make such behaviour easy or difficult, and they clearly felt that the government has a responsibility in making pro-environmental choices easy.

Another aspect of our discussion that we found interesting concerns the relationship between the quantity of time (time affluence/scarcity) and the quality of time. Although we didn't explicitly discuss it during the focus groups the main qualitative difference between work time on the one hand and leisure time on the other hand seems to be that during work time you do things that you are expected or supposed to do (obligations), which means that in your leisure time everything that also feels like an obligation (i.e. extrinsic motivation) becomes a source of negative pressures. Indeed, the extent to which this is experienced as a problem is influenced by the actual amount of time that people spend on work and leisure, but even people that have relatively many hours of leisure time experience the pressures from activities that are extrinsically motivated. Another interesting observation here is that some people are able to reduce the amount of pressures that they experience by creating more freedom in work, or by doing work that they simply enjoy a lot. Indeed, a closely related observation is that we spent

quite some time discussing pressures that are not entirely related to time, but more to social/normative expectations. These were perceived by our participants to consume a lot of energy, which also makes them less willing to engage in certain activities (e.g. activities that feel like an obligation or that are also related to normative expectations) during their leisure time.

Indeed, a question that still remains somewhat open is how this links to sustainable lifestyle choices in other domains than the work-life balance. The focus group has revealed that the work-life balance of people influences their behaviour in the domain of food, mobility, and to some extent product-use (specifically the separation of wastes). We think it is important to consider the extent to which choices in these areas are perceived as extrinsically motivated. If the choices are extrinsically motivated, this appears to reduce the willingness of people to spend time on them during those parts of the day that they consider to be the 'time for themselves', even though their time is not necessarily scarce.

Initiative focus group results

Lifestyle satisfaction

Like in the regional focus groups, in the initiative level focus groups we talked a lot (even more) about the work-life balance, although in this case the emphasis was primarily on work (see Table 4.7). In the Vogelwijk Energie(k) focus group there was a strong emphasis on the consequences of retirement, as 4 of the 5 discussants were retired themselves. In the Repair Café group included three people that were retired, two people that were employed, and one person that was unemployed and partially unfit for work. In the Repair Café focus group, when asked about what gives them satisfaction in life, the participants' response was that they enjoyed helping people and working with technology. For them, these things are also closely related (it is fun to help people with technology). All our participants agreed that they got satisfaction out of interacting with people, and helping them in different ways. Adding a technological dimension to this makes helping people even more interesting to our participants.

When we discussed lifestyle satisfaction with the Repair Café Group the participants repeatedly ended up talking mainly about their current or past careers and how these related to their lifestyle satisfaction. The participants emphasized various benefits that they saw in actually having work, such as developing a network that is also useful outside work, and the possibility to meet people from different cultures (if you get to travel). One person in particular explained how much he enjoyed his work, and how this had to do primarily with the fact that he had a lot of freedom in work. His satisfaction with his job also has to do with the fact that he made a job out of his hobby, and something he used on a voluntary basis. Another participant, someone who used to have an important position in a well-known public organization (focused on health) said that the older he got, the less useful he perceived his work to be. He declared that this lack of feeling of usefulness was compensated by the fun that he had in work. Our

participants also indicated that they if you have fun in your job, then you are also more willing to work many hours.

A closely related topic that we spent a lot of time discussing on is how unemployment acts as an important source of dissatisfaction. The participants discussed how unemployed people experience a lot of pressures that are incomparable to pressures experienced by working or retired people. This includes concrete pressures, such as the pressure from welfare organization to apply for jobs on a regular basis, and the pressure due to reduced income. However, our participants indicated that the pressures also related to much broader structural factors, such as the norm that you should have a full time job, and spend large part of your life working. Not having a job generally also made people feels that they no longer had a function or goal in society. Also, being unemployed can make your social circle smaller.

In both the initiative level groups we discussed the relationship between lifestyle satisfaction and retirement. The retirees in our groups agreed that retirement generally leads to the feeling that you have more freedom, which is a significant source of satisfaction, even for those people that used to enjoy their job. However, our participants also mentioned aspects of retirement that give less satisfaction. For some it was difficult to get used to being retired, because retirement made it more difficult to give structure to their life. Also, no longer having a job (and the function that goes along with it) may make you feel unappreciated, or less useful.

Table 4.7. Highlights of discussion on lifestyle satisfaction (initiative).

Highlights of discussion on lifestyle satisfaction
• *Helping people gives satisfaction (Repair Café)* • *Working with technology gives satisfaction (Repair Café)* • *Interacting with people gives satisfaction* • *When you have work, you have a network* • *Freedom in work gives satisfaction* • *Feeling useless in work reduces satisfaction* • *Having fun in work gives satisfaction* • *If you have fun in your job, you are willing to work more* • *Unemployment creates various pressures* • *Being unemployed makes your social circle smaller* • *Retirement usually leads to satisfaction* • *It may be difficult to get used to being retired* • *Being retired may make you feel unappreciated or less useful*

In the context of our discussions on work we also touched upon the volunteering work quite a lot, but this will be discussed in more detail in the section on the effects of being part of a sustainability initiative.

Desired lifestyle changes

With regard to desired lifestyle changes (see Table 4.8) it should first be noted that most of our participants seemed to be quite satisfied with their life, and there were few things that they would want to change. Most of the desired lifestyle changes that were mentioned related to the discussion on societal pressures that we had.

Table 4.8. Highlights of discussion on desired lifestyle changes (initiative).

Highlights of discussion on desired lifestyle changes
• *Escaping societal pressures (not being part of the system)* • *Be less dependent on money and become more self-reliant* • *Combining work with other aspects of life is possible with good organization* • *Learning new things*

One person in particular suggested that giving into these pressures typically means that you won't have time for other things that are important in life, such as spending time with your family, sports, and sustainability. For him this was a reason not 'to be part of the system' (he didn't apply for welfare support). The same person also declared that he wanted to be less dependent on money and become more self-reliant. Other participants were of the opinion that it is actually quite possible to combine your work with other aspects of life as long as you organize your working life in the right way. Some of the retirees in our group said that they would like to learn new things (and were already doing so).

Time-use and wellbeing

A significant part of our discussion on time-use related to work. One person in particular emphasized that you have little time for other aspects of life if you work full time (which was also framed as giving in to societal pressures). Other participants tended to nuance this view by saying that there is typically still time for doing other things besides work, and that you sometimes have to force yourself to do other things besides work, because it gives you energy. It was also mentioned that the time pressure experienced in work is reduced if you take more control of your time. If you feel less pressured to work a certain amount of hours, this might in fact actually make you more willing to work for longer. Thus, in that sense some of our participants saw a relationship between time pressure and the tension between extrinsic and intrinsic motivations. Other people mentioned that they also needed a certain amount of pressure in work to perform well. It was also suggested at one point that volunteering work can create time pressure, although this was also said to be an exception to the rule, as well as a matter of choice.

Time pressure was also discussed in relation to unemployment. For unemployed people there is a pressure to find a job within a certain time frame. More generally, unemployed people may have the feeling that they are lagging behind, a feeling that gets worse the longer the unemployment lasts.

Table 4.8. Highlights of discussion on time use and well-being (initiative).

Highlights of discussion on time-use and wellbeing
• *You have little time for other aspects of life when you work full time* • *There is time for other things besides work if you really want it* • *Doing other things besides work gives energy* • *Time pressure in work is reduced if you take control of your time* • *If you feel less pressure, you may be willing to work more* • *Volunteering may create time pressure* • *Unemployed people are pressure to find a job within a certain period of time* • *Unemployed people may feel that they are lagging behind* • *Retirement creates freedom and reduces time pressure* • *Retired people may have too much time on their hands* • *The older you are, the slower you are in what you do*

Our retired participants simply explained that after their retirement they have a lot more freedom and no longer experience any time pressure, even though not everyone was necessarily happy with the large amount of time available. Also, for some people the effect of retirement is also that they adjust their expectations with regard to the time available to them, causing them (for example) to do things slower than they used to. Related to this, one of our retirees also described that he would often get stuck in doing a certain activity, which meant that he would spend more time on that activity then he intended to (he considered this to be a problem).

Other pressures and wellbeing

As in the regional level focus groups we discussed a number of pressures in our initiative level focus groups (mostly the Repair Café focus group) that are not necessarily related to time (Table 4.9). In the Repair Café focus group these pressures were mostly associated with societal pressures in the form of different kinds expectations. Many of these expectations have to do with how we organized our work life. Some of our participants also had the perception that you will be overtaken or replaced if you don't give in to the societal pressures. This includes pressures like making sure that you are useful to society, the pressure to work for a certain period of time, the pressure to perform, and the pressure to have a full time job.

Table 4.9. Highlights of discussion on other pressures (initiative).

Highlights of discussion on other pressures
• *Pressures created by expectations of others* • *Pressures created by how we organize our work-life* • *Societal pressures and pressures from 'the system'*

Drivers of sustainable lifestyle changes

In the initiative level focus group the discussion on drivers to sustainable lifestyle choices focus mostly on the domains of mobility and food. In some ways the discussion we had on mobility is similar to the discussion we had on the same theme in the regional focus groups. To some extent the discussion revolved around the extent that using a bicycle is sometimes faster than using a car. Our participants agreed that it is usually (but not always) faster to travel by bicycle in the city than it is to travel by car.

With regard to food there was some disagreement on the extent that having more or less time influences food habits. Some participants indicated that having time or not influenced their behaviour in this domain, while others shared anecdotes that demonstrate that they used to spend less attention on the way they consumed food when they were too focused on work (one of them changed jobs and the other became unemployed due to an accident). The people that claimed that time affluence/scarcity does not influence their food habits are people that have been interested in this domain for a long period of time (intrinsic motivation), or for whom responsible use of food was one of the habits with which they were brought up. This is also how the discussion on the food domain linked to drivers of pro-environmental behaviour in general. Our participants suggested that the tendency to engage in pro-environmental behaviour has a lot to do with your upbringing, or with intrinsic motivations. It was also acknowledge that certain sustainable lifestyle choices can be motivated by reasons other than sustainability, including financial reasons and increased comfort, but also the desired to help people (not specifically visible from the figure). Finally, it was also acknowledged that sustainable lifestyle choices are easier to make if they are properly facilitated. In this regard, one discussant indicated that it has become easier to buy sustainable food products.

Table 4.10. Highlights of discussion on drivers of sustainable lifestyle changes (initiative).

Highlights of discussion on drivers of sustainable lifestyle change
• *Travelling through the city by bicycle is often faster that travelling by car* • *If you have a rain suit, you can also cycle in the rain* • *Using the bicycle because it is healthier* • *It is easier to use public transport if you have more time* • *Having less time may or may not influence food habits* • *Pro-environmental behaviour has a lot to do with upbringing* • *Pro-environmental behaviour has a lot to do with intrinsic motivations* • *Sustainable choices may be motivated by non-environmental motivations* • *Sustainable choices are more easily made if they are facilitated*

Barriers of lifestyle changes

One part of our discussion on the barriers drivers of sustainable lifestyle choices related specifically to the domain of work-life balance. Although some drivers were mentioned as well, the focus was mostly on barriers to changing your work-life balance. As we had several retirees in our midst, we spend some time discussing how one of them had the privilege to retire early, which is no longer possible (or legitimate) to do nowadays. To counter some of the remarks that were made on 'taking control of your own time in work,' it was mentioned that it is not always possible to freely choose in the kind of work that you do. Coincidence plays a large role, and switching jobs may become more difficult as you get older. Our participants also spent quite some time discussing how it has become increasingly difficult to say "no" in work, because it has become easier to replace employees. This has to do partly with the societal pressures that were discussed before, but our participants also felt that we have enabled this development by never saying "no" in the first place.

A major theme in this discussion was upbringing, as our discussants believed that your upbringing determines to great extent how motivated you are to do things for the environment. Some participants had the view that few young people care about sustainability nowadays, which has something to do with the way that they are raised. Parents sometimes even give bad examples. One participant indicated that he felt demotivated to engage in pro-environmental behaviour sometimes if he notices that people with children (those who are supposed to care) don't seem to care about sustainability at all. His personal theory was that this might have to do with the fact that people with children (which he doesn't have himself) have too little time to worry about sustainability. Some of our participants also discussed the role that doom scenarios (such as those presented by the Rome assembly) had in their motivation to engage in pro-environmental behaviour. In this regard our discussants found that nowadays there are too many conflicting doom scenarios that overwhelm people. Also, these scenarios focus primarily on climate change, while there are other environmental problems that are equally relevant.

Table 4.11. Highlights of discussion on barriers to sustainable lifestyle changes (initiative).

Highlights of discussion on barriers to sustainable lifestyle change
• *It is no longer as easy to retire early as it was before* • *It is not always possible to freely choose the kind of work you do* • *Switching jobs becomes more difficult as you grow older* • *It is difficult to say "no" in work (you are easily replaced)* • *Upbringing may also act as barrier (parents that set a bad example)* • *Other people not caring reduces motivation to live a green life* • *There are too many conflicting 'doom scenarios' (reduced credibility)* • *There is a too strong focus on climate change* • *Companies have irresponsible policies on expiration dates* • *Travelling by car may be more comfortable*

- *Having solar panels matters little in terms of financial benefits*
- *Rebound effects may cancel out energy efficiency gains*
- *Insulating your house may be unpractical/impossible*
- *It is easier/cheaper to buy replacement products than it is to repair products*
- *Modern products are increasingly difficult to repair*

With regard to lifestyle choices in the domain of food the discussion revolved mostly around food waste, although unsustainable packaging practices were also mentioned. Our discussants found that people throw away food too easily, which is partially the result of irresponsible policies on expiration dates of the companies.

With regard to mobility the discussion revolved around the extent to which travelling by car is faster and more comfortable than other, more sustainable mobility options. Here it was found that it is sometimes faster and easier to travel by car.

With regard to lifestyle choices in the domain of energy there was strong agreement that sustainable choices in the energy domain have relatively little to do with time affluence/scarcity, although finding a suitable energy supplier can take time. One of the barriers mentioned concerns the fact that having solar panels matters relatively little in terms of costs (you don't do it for financial reasons). One participant said that getting solar panels caused a rebound effect for his children, who would use the solar panels as an excuse to use more energy. We also discussed the insulation of houses. One of our participants said that he regrets that he didn't properly insulate his house when he bought it, although his house is also relatively difficult to insulate, because it is an old house. Another participant said that he chose not to insulate his house because he heard it might cause the growth of fungi. There seems to be conflicting information on this topic.

With regard to product-use it was discussed that nowadays it is often cheaper to buy a replacement product instead of repairing if a product is broken. As a result, many things that can still be repaired are thrown away. A related barrier is that modern products are increasingly difficult to repair because of the way they are designed and assembled.

Conclusions on initiative focus groups

One thing that the initiative level focus groups have in common with the regional level ones is the strong focus on different themes related to work, such as work itself, unemployment and retirement. However, in the Repair Café focus group in particular, this discussion was linked much more strongly to broader structural forces perceived by our participants. These structural forces take the form of (primarily) negative pressures from society that demand from us to organize our work life in a certain way. Although it is difficult to say with certainty, this focus on structural forces might be related to the fact that the initiatives are also to some extent attempts by citizens to gain more autonomy (primarily from the energy industry or the manufacturing industry).

We think that there is a relationship between these pressures and pro-environmental behaviour, but it is not a very straightforward one. Like in the regional focus groups, the pressures discussed by the participants to the initiative level focus group seem to relate more to the quality of the time that people have available to them than the quantity of time. In this focus group the pressures were also explicitly linked by our participants to a tension between intrinsic motivations and extrinsic motivations. In essence, the discussion revolved around the fact that people experience more pressures when there are extrinsic motivations to engage in certain activities. The underlying hypothesis of our discussion on this seems to be that people that experience more of these pressures are less willing (perhaps have less energy) to give attention to other issues, including pro-environmental behaviour. This is also somewhat illustrated by the remark of one of our participants that he didn't pay attention to sustainability much when he was still working.

Overall, the participants to this focus group were more eager to discuss topics related to sustainability, and they proved to have a much stronger interest in environmental behaviour than the participants to our regional focus groups. That is also what one of the participants observed by the end of the discussion: That it occurred to him that everyone present for the discussion had a relatively strong interest in the environment.

What was also a striking feature of the Repair Café focus group in particular is that all participants indicated to get satisfaction out of helping other people, and that helping other people also often had a technological dimension for them. This is perhaps unsurprising given the background of the participants.

The motivations for and effects for joining and initiative

During our initiative focus groups we also discussed motivations for (see Table 4.12) and effects of (see Table 4.13) joining a Repair Café or Vogelwijk Energie(k). What was already discussed before is that the participants to the Repair Café focus group take a lot of satisfaction out of helping other people. This also features as one of the motivations that the volunteers have for joining the Repair Café. Other motivations relate more to their passion for technology and the fact that they have been tinkering with objects all their life. Interestingly, the participants to our focus group declared that pro-environmental behaviour was not their prime motivation for getting involved in the Repair Café, even though it is a nice addition. For the members of Vogelwijk Energie(k) the sustainability aspect proved to be quite important, although our participants acknowledge that other members may be involved for financial reasons. Our participants also indicated that they liked that Vogelwijk Energie(k) combines a long-term vision with practical short-term actions.

With regard to the fact that many volunteers of the Repair Café tend to join for other reasons than pro-environmental behaviour, there is one effect of joining the Repair Café that is particularly interesting, namely that in the Repair Café it is possible to meet people that are

motivated primarily because of pro-environmental behaviour. In this way, volunteers of the Repair Café get in touch with sustainability more, which also means that is begins to influence their thinking more. I think that this is a very interesting mechanism in terms of scaling up initiatives: you join an initiative for reasons other than sustainability, but by getting it touch with sustainability more through the initiative, it may start to play a bigger role in your thinking. Other effects of joining the Repair Café generally relate to things out of which the participants also reported to get satisfaction. This includes being able to help people in different ways, exercising a passion for technology, and meeting people from different cultures. The feeling of self-efficacy is also an important effect of joining the initiative, as the Repair Café allows the volunteers to express their talents, and also receive gratitude in return (recognition). Overall, the participants indicated that their participation changed relatively little in the way that they spend their time (the Repair Café is only organized once a month). Also, in many ways the Repair Cafés enhances features of the volunteers' lives instead of effecting actual changes. In this sense, it is more accurate to say that Repair Cafés attracts people with a certain lifestyle rather than saying that Repair Cafés produce people with a certain lifestyle.

Table 4.12. Highlights of discussion on motivations for joining a sustainability initiative.

Repair Café	***Vogelwijk Energie(k)***
• *Helping other people* • *Passion for technology* • *Pursuing a hobby in a useful way* • *Sustainability aspect is 'just' a useful addition*	• *Doing something for the environment* • *Financial motivations* • *Vogelwijk Energie(k) combines a long-term vision with short-term actions* • *Meeting like-minded people*

In Vogelwijk Energie(k) there is a strong emphasis on gathering new knowledge that can be applied at home, although several of our participants reported that they had already applied several energy saving measures before becoming a member. Here too, the participants reported that joining the initiative has changed relatively little with regard to actual behaviour. In this regard, the participants mentioned that one of the benefits of Vogelwijk Energie(k) is that it allows you to meet like-minded people, which can also be considered as one of the motivations.

We also discussed the effects of volunteering more generally (some people also do other volunteering work). What is important here is that volunteering was in some ways seen as a surrogate/replacement for work. For example, volunteering can give you a goal in life (which may be important to wellbeing if you are unemployed), and can make you feel appreciated again. Some participants even indicated that they feel more useful as a volunteer than they felt useful during their working life.

Table 4.12. Highlights of discussion on effects of joining a sustainability initiative.

Repair Café	***Vogelwijk Energie(k)***
• *Getting more acquainted with the sustainability theme* • *Satisfaction of helping other people* • *Satisfaction because of working with technology* • *Meeting people from different cultures* • *Increased feeling of self-efficacy* • *Satisfaction because of recognition of talents* • *Little effect on time-use* • *Feeling more useful*	• *Gathering new and useful knowledge that can be applied at home* • *Meeting like-minded people* • *Feeling more useful*

Comparison between regional groups and initiative groups

Lifestyle satisfaction

A clear commonality among our regional focus groups and our initiative level focus groups is that the discussions on lifestyle satisfaction focused heavily on various things related to work. Some of the people in the regional level focus groups experience pressures in their work, while there were also several people that saw their work as a source of satisfaction. In the initiative level focus group all people seemed to fall in this latter category. What all these people have in common is that they have a certain level of freedom in their work, such as being able to determine their own times. For some of these people, their work even seems to be something close to a hobby, which means that they experience relatively little pressure from work. What the focus groups also had in common is the emphasis on the dissatisfaction that follows from unemployment. It may not necessarily come across like that in this report, but during the discussion it was very clear that the pressures experienced by unemployed people can be very severe. In the regional level focus group the unemployed participant seemed to have a particularly negative outlook on life. In the initiative level focus group the only person that was unemployed at that time had found other ways to give meaning to his life.

In the regional level focus groups we spent much more time talking about leisure activities. Somehow, this didn't come up that much in the initiative level focus groups, although more in the Vogelwijk Energie(k) focus group than in the Repair Café focus group.

Desired lifestyle changes

In all focus groups the desired lifestyle changes also referred largely to things related to work, although at the initiative level there seemed to be less desire to actually make changes in the working life. Instead, the desired changes related more to how the participants relate to the social system of which they are part. For some people this simply means saying "no" more at work (this was largely in hindsight, as it was mentioned primarily by the retirees), and for other it meant trying to be more independent in terms of money. One participant even took a concrete step in this direction by refusing to apply for welfare support. In the Vogelwijk Energie(k) group most people were quite satisfied with their life. A special circumstance here is that 4 of the 5 participants were retired.

The people in the regional level focus group either desired to work less in order to increase the time they have for leisure, or they desired to work more to increase their job security and financial security. However, the latter people also acknowledged that this would have negative consequences for their leisure time, which they saw as something undesirable.

Time-use and wellbeing

With regard to time-use and wellbeing a striking difference between the regional level focus groups on the one hand and the initiative level focus groups on the other hand is that time-use was discussed much more elaborately in the regional level focus groups. Much of this discussion revolved around the difficulty of combining work and leisure with the chores that need to be done around the house. Another large theme had to do with the relationship between time scarcity/affluence and food habits. Other topics discussed in relation to time pressure include mobility, expenditure and the role of modern technology (e.g. social media) as a contributor to time pressure.

In the initiative level focus group the discussion on time pressure revolved almost entirely around the idea that the time you spend on work cannot be spend on other types of activities. As discussed before, time pressure was not the only type of pressure discussed in this context, and they were closely related to the societal pressures that had also been identified in the discussion.

Drivers to sustainable lifestyle choices

In both the regional level focus groups and the initiative level focus groups we discussed drivers to sustainable lifestyle choices in relation to mobility, although the topic was discussed much less elaborately in the initiative level focus group. In both types of focus groups the discussion revolved largely about the question whether using the car is faster than more sustainable options, such as bicycles and public transport. In both types of focus groups drivers are a mix of contextual and individual drivers. Contextual drivers include primarily infrastructural elements, such as the way that public transport is organized, the way that cities are planned (it is faster to travel through a city by bicycle), the occurrence of traffic jams, and the availability of parking spots. Individual drivers include the attitude of people towards public transport and cars, and the satisfaction that they get out of driving a car, or using public transport. Although it is difficult to prove, based on the fact that the topic was discussed less

elaborately in the initiative level focus group, some participants to the regional level focus group seemed to have a stronger tendency to choose travelling by car over travelling by bicycle or by public transport.

Other drivers that were discussed in both groups concern those related to choices in the food domain. A difference between the regional level focus groups and the initiative level focus groups that can be found here is that in the initiative level focus groups the treatment of food was related much more strongly to upbringing. Here too the drivers seem to be a mix of individual (intrinsic motivations) and contextual drivers (upbringing). Indeed, in this case it is somewhat difficult to separate the two, because it seems to be related to the fact that certain external influences (e.g. upbringing) get internalized.

In the regional level focus group the drivers of product-use were also discussed, specifically focusing on the separation of wastes. Here, contextual drivers were more dominant, as the participants kept emphasizing that the separation of wastes should be facilitated properly by the government.

Barriers to sustainable lifestyle choices

In both types of focus groups we discussed barriers to sustainable lifestyle choices in relation to work. In the regional level focus group the discussion focused more on the barriers to working less on the one hand, and barriers to working more on the other hand. Again, there was a mix of individual barriers (e.g. not wanting to work less for personal reasons) and contextual barriers (e.g. difficulties created by economic circumstances). Similar discussions occurred at the initiative level, but here there was a stronger role for the societal pressures that prevent people from making changes in their work life. There was thus a much stronger role for contextual barriers in this discussion.

In the regional level focus group some of the barriers in the domain of energy related to personal preferences (individual barriers) that often had to do with the aesthetics of windmills and solar panels. At the initiative level, the barriers related more to contextual factors, such as the fact that solar panels are usually not worth the investment or the fact that insulation of houses is not always attractive. Contextual barriers appeared in the regional focus group as well, including the fact that windmills were thought to generate relatively little energy, and the fact that solar panels are expensive in the Netherlands due to lack of subsidies.

In the initiative level focus group the influences of upbringing were also discussed in the context of barriers to sustainable lifestyle choices. In this context, it was discussed that upbringing can also act as a barrier, in the sense that nowadays young people are no longer brought up with social norms relevant to pro-environmental behaviour.

In the regional level focus group a specific topic that was discussed in relation to barriers concerns the separation of wastes. Here, there was some role for individual drivers (e.g. not always feeling motivated to separate wastes), but again contextual drivers were dominant (facilitation by the government). The initiative level focus-groups discussed product-use a bit more specifically, and both initiative level focus groups signalled problems that are at the basis

of the Repair Café initiative, namely that modern products are increasingly cheap to replace and difficult to repair.

In both types of focus groups a barrier that was also briefly discussed concerns the necessity to gather knowledge on the different sustainability options that are out there, although this was discussed more elaborately at the initiative level. This was perceived as something that takes time, and also something on which there are conflicting stories.

5. Survey results

5.1. Some regional survey results

Methodology and procedure

The survey explored the factors influencing environmentally-relevant lifestyle choices (both more and less unsustainable ones) in the six domains of interest for GLAMURS. Besides some of the factors influencing lifestyle choices, we were particularly interested in the relationships and trade-offs between choices regarding time-use, consumption and wellbeing.

A standardized questionnaire was developed to gather data on the above-mentioned categories of interest in the seven regions. A process of first developing an English version of the questionnaire was set up, followed by careful translations and adaptations to the official languages of each region.

Description of the sample

To draw a sample, we asked students and staff of the faculty of Technology, Policy, Management to forward invitations to other people they knew in the region. This led to 80 responses and Table 5.1 shows the characteristics of the Dutch sample in comparison to the other regions studied.

Table 5.1: Characteristics of the samples from the different regions

	Galicia (SP)	Banat (RO)	Donau-Böhmerwald (AU)	Rotterdam-Delft-Hague (NL)	Lazio (IT)	Saxony-Anhalt (GE)	Tenerife (SP)	Total
N	428	272	68	80	431	344	142	1765
% Male / Female	30% / 70%	40% / 60%	44% / 56%	33% / 47%	39% / 61%	45% / 55%	41% / 59%	38% / 62%
Mean age (*SD*)	33.7 (13.28)	31.0 (12.41)	45.5 (13.52)	38.5 (15.43)	39.8 (13.48)	55.3 (12.77)	34.5 (17.33)	39.7 (15.96)
Level of education (*SD*)	5.8 (1.33)	4.9 (1.14)	4.83 (1.49)	7.13 (1.13)	5.45 (1.27)	4.1 (1.09)	4.8 (1.33)	-

Income (SD)	3.01 (.94)	3.41 (1.35)	3.61 (1.0)	3.4 (1.52)	2.96 (1.02)	3.3 (1.03)	2.71 (.96)	3.13 (1.11)
Marital status (SD)	2.34 (.73)	2.27 (.93)	2.86 (.66)	2.53 (1.31)	2.69 (.75)	2.95 (.84)	2.37 (.95)	2.57 (.85)
Political orientation (SD)	2.83 (1.33)	4.28 (1.54)	3.51 (1.66)	3.52 (1.53)	3.14 (1.57)	3.16 (1.31)	3.25 (1.33)	3.28 (1.51)
% Urban/ Rural/ Suburban	59%	71%	1.5%	72.5%	68.4%	32%	64%	56.7%
	18%	20%	97%	6.2 %	8.4 %	41.3%	12%	22.5%
	23%	9%	1.5%	21.2%	23.2%	26.7%	24%	20.7%

Unfortunately, the regional sample is rather small, and a visual inspection already suggests that it is not representative of the region (for example, the sample has an unusually high education level). Therefore, we decided not to use this sample as a representation of the region, which means that our possibilities for the analysis of the survey data are limited. We cannot make comparisons between the regional sample and the initiative sample (see below), as is done in other regions, but we can present descriptive statistics of the sample. The initiative survey is presented below.

5.2. Initiative survey results[3]

Introduction and overview

A survey was performed among members of initiatives in all case study regions of the GLAMURS project, with the aim to develop a better understanding of what drives the emergence and development of the initiatives. In the Netherlands we distributed questionnaires among volunteers of the Repair Cafés of Delft, Den Haag and Schiedam, as well as members of the Vogelwijk Energie(k) initiative.

A similar questionnaire was distributed among other people in the region of Rotterdam-Delft-The Hague, to allow for (among other things) a comparison between the initiative sample and a representative sample of the region. However, we were not able to get a representative sample for the region, which means that the validity of comparisons between the initiative sample and the regional sample cannot be guaranteed. We therefore decided not to report on

[3] Apart from 5.2.1, this section has been written by Karen Krause, Maxie Schulte Juliane Bücker and Florian Müller from OVGU, whose help for this deliverable is greatly acknowledged.

comparisons between the two samples here, and we limit the results presented in this chapter to an overview of descriptive statistics based on the initiative sample.

In the next paragraph a brief theoretical background for the survey is offered, followed by a paragraph in which a description of the sample is offered.

Theoretical background

The focus for the Dutch initiative survey here is on descriptive statistics derived from a survey among members from sustainability initiatives (see also 5.3 for methodology and procedure). In the initiative survey scales and items were used to gather knowledge on different lifestyle aspects that interact with the concept of sustainability. These survey scales were selected by the case study team in Germany (Magdeburg). The selected six scales will be shortly described one after another in the following paragraph (for a more profound description of these scales please cf. Deliverable 4.2).

Subjective Norms

Norms have been proven to be relevant determinants (Cialdini, Kallgren & Reno, 1991; Fornara et al., 2011; Schwartz, 1992; Stern, 2000) of environmentally significant behaviour. They can be defined as expectations people have of their own actions and behaviours (Cialdini et al., 1991). In general, a distinction is made between social norms (e.g. "*Most people who are important to me think I should act in an ecologically-responsible way in my everyday life*") and personal norms ("*Based on my personal values I feel obliged to engage in a sustainable society*").

Self-Efficacy

Self-Efficacy describes the confidence and perceived behaviour control people believe to have on their scope of action and events that affect their life (Ajzen, 2002; Bandura, 1997). In the context of the GLAMURS survey, self-efficacy was defined as the ability to perform environmentally friendly behaviour and the belief, that one's own actions will have an effect on climate change at all. One example for an item used in this scale is "*There are simple things I can do that will have a meaningful effect to alleviate global warming*".

Identity

In the survey, items were included to ask people on some aspects of their identity, mainly, how far they would see themselves as someone who is concerned about the environment ("*I see myself as an environmentally friendly consumer*"). The base for this scale was taken from the works of Whitmarsh and O'Neill (2010).

Values

Schwartz (1994) defined a set of trans-situational goals which also form guiding principles of a person (or a group, see also Stern et al., 1999). Former research could show, that values are related to environmental behaviour (Poortinga et al. 2004; Schultz & Zelezny, 1999; Stern, 2000). The GLAMURS survey used a short version for the value scale by Stern, Dietz and

Guagnano (1998). In the GLAMRS survey, participants rated the different value dimensions of benevolence, conservation, stimulation, universalism and self-enhancement in regards to whether they form guiding principles of their lives or not. Recent research has shown that pro-environmental beliefs, norms and behaviour is positively related to self-transcendence values and negatively related to values connected to the self-enhancement dimension (De Groot & Steg, 2008). For that reason, people from the initiatives can be expected to have stronger values in the self-transcendence dimension (i.e. benevolence and universalism) and weaker values in conservation and self-enhancement. In addition to that, initiative members are probably more open to change, which is believed to be related to stimulation values.

Technological Innovation

The attitude towards technological innovations allows insights into how people may like to adopt those innovations and is linked to the concept of openness to change. It may offer a glimpse on technologically founded optimism – or the possibility, that the challenges of climate change can be solved using technology (Krömker & Dehmel, 2010). An example for items we used is "*I am the person who likes if technology works efficiently*".

Well-Being

Well-Being is a concept used to collect data on the general quality of life and comfort of people. In the initiative survey, two different scales were used. The first one – the Satisfaction with Life Scale (Diener et al., 1985) – covers the cognitive part of subjective well-being and quality of life (e.g. "*In most ways my life is close to my ideal*") whereas the second scale – the WHO-5-Well-Being-Index (WHO, 1998) – focuses on health-related aspects of well-being (e.g. "*I woke up feeling fresh and rested*").

Methodology, procedure and sample description

We made use of an online survey, for which a link was distributed among volunteers of the Repair Cafés and members of Vogelwijk Energie(k). We gave the link to the survey to the board members of the initiatives, as well as a text that the board members could use in their accompanying email. The board members then distributed the link among their volunteers and members. We also asked the board members to send out a reminder. If there were questions from respondents about the survey, then the board members forwarded these to us, and we responded to the questions directly.

The team in Magdeburg gathered the data from all the case study regions, and performed the clean-up and analysis of the data. Descriptive statistics on our sample, some basic analyses, as well as the data files on which these are based were sent to your team by the Magdeburg team. The description of the sample below is based on the information prepared by the Magdeburg team, as well as some additional descriptive statistics that we generated ourselves.

Description of the sample

The Dutch initiative survey sample consists of n = 25 respondents who filled the questionnaire entirely (while in addition 2 persons answered only part of the questions). Of the 25 respondents (14 from Vogelwijk Energie(k) and 11 from the three Repair Cafes) who indicated their gender 22.22% are women, and 70.37% are men. The average age of the same respondents is *M* = 63.56 (SD = 10.11), with an age range from 39 to 81. 19 respondents indicated their educational level, which ranges from lower vocational education to university education, with a relatively large amount of highly educated people in our sample (see Figure 5.1).

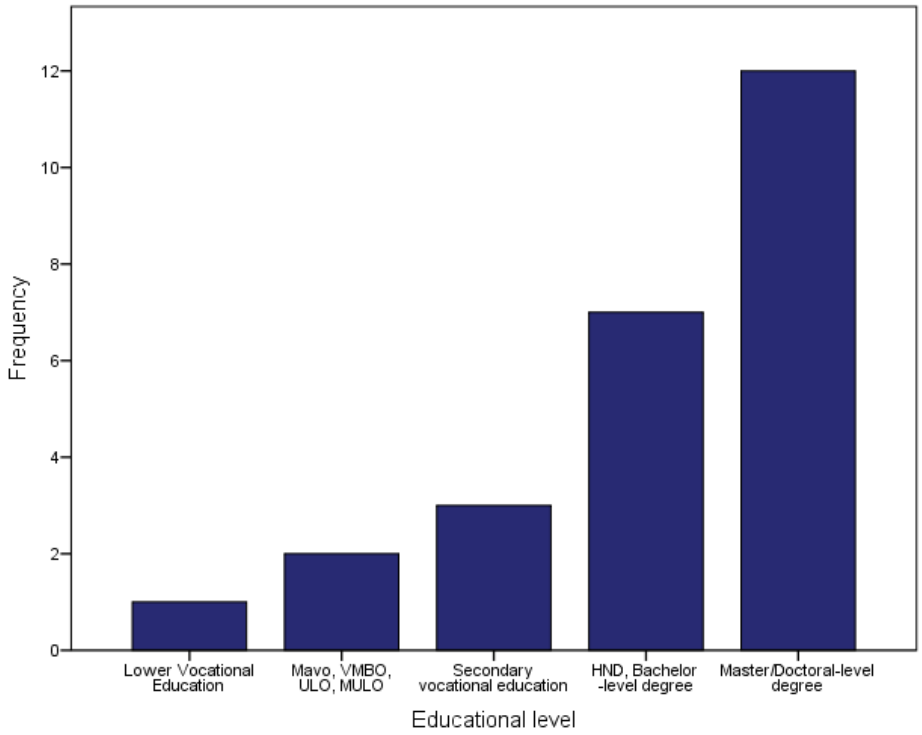


Figure 5.1. Overview of educational level of Dutch initiative survey respondents.

24 respondents specified their total monthly income at the household level (see Figure 5.2). The households of most of our respondents have an income between 1501-3000 euros (n = 11), and 3001-4500 euros (n = 10). There was 1 respondent with a household income between 1501-3000 euros, 1 respondent with a household income between 4501-6000 euros, and one respondent with a household income of more than 6000 euros.

25 respondents indicated the number of people in their household, which ranges from 1 to 5, and has an average of *M* = 1.760 (*SD* = 0.9695). 12 of these people live in an urban area, 12 live in a suburban area, and only 1 respondent lives in a rural area (see Figure 5.3).

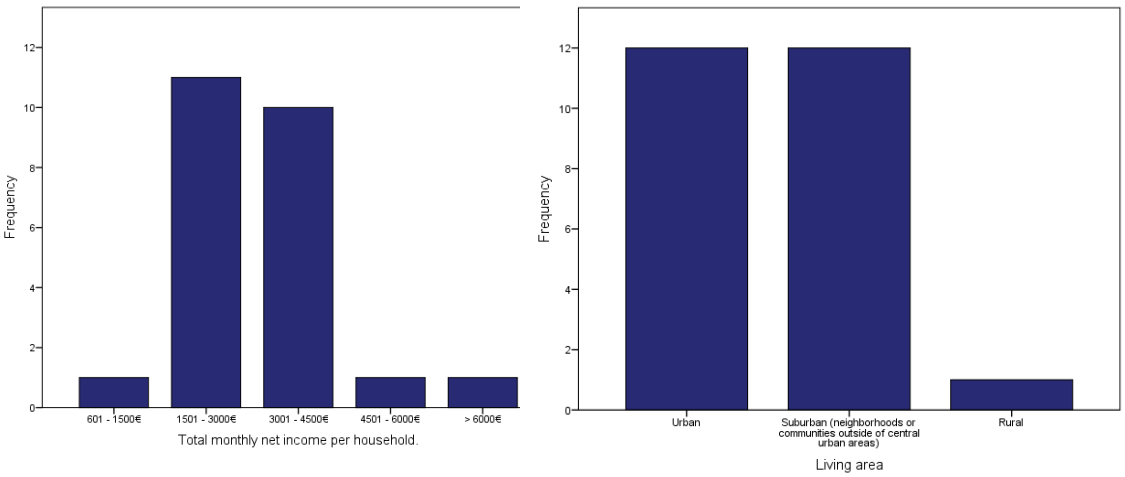


Figure 5.2. Overview of net income of Dutch initiative survey respondents (A) and Overview of living area of Dutch initiative survey respondents (B).

(A) Descriptive analysis

In the following part a short descriptive analysis of selected scales is given. This part of the survey was only used for the initiative members in each country. Since there is only a small number of participants for each sub sample, deeper statistical analysis could not be performed.

The reliabilities for the sub scales of *autonomy* (α = -.014), *connectedness to nature* (α = .609), *voluntary simplicity lifestyle* (α = .530), *authenticity* (α = .434) and *purpose in life* (α = -.107) were found to be too low to allow any form of analysis and are therefore generally excluded from those. Descriptive results are given nonetheless.

Autonomy

Participants (N = 26) were asked to express whether they agree or disagree with the following four statements on a scale from 1 – totally disagree to 7 – totally agree.

> *"Hearing the opinions of other people often makes me change my mind." (reversed) (M = 5.08, SD = 1.35)*[4]
>
> *"I often wonder what other people think of me." (reversed) (M = 4.58, SD = 1.36)*
>
> *"When I take important decisions about my life, I leave other people's wishes and opinions out of consideration." (M = 2.77, SD = 1.48)*

[4] M = mean, SD = standard deviation.

"I often find it difficult to determine what I really want." (reversed) (M = 5.08, SD = 1.55)

In general, participants seemed to place themselves in the middle between agreeing and disagreeing with the statements (M_m = 4.38, SD_m = .72). Members of the Dutch Initiative seem to be neither really autonomous, nor dependent.

Connectedness to nature

For this scale, participants (N = 26) were again asked to agree or disagree (this time on a scale from 1 strongly disagree – 3 neutral – 5 strongly agree) with the following statements.

"I think of the natural world as a community to which I belong." (M = 5.38, SD = 1.2)

"I have a deep understanding of how my actions affect the natural world." (M = 5.77, SD = 1.28)

"When I think of my place on Earth, I consider myself to be a top member of a hierarchy that exists in nature." (reversed) (M = 4.00, SD = 1.33)

People showed a high level of agreement with the three statements (M_m = 5.05, SD_m = .95), thus showing that self-reported statements hinted towards a strong connectedness to nature.

Voluntary simplicity lifestyle

Three statements on voluntary simplicity lifestyle were given and people (N = 26) were asked again to state their level of agreement or disagreement (1 totally disagree - 7 totally agree). Those statements were:

"Considering my lifestyle, I want to use up as little as possible when it comes to resources (e.g. water, energy, wood)." (M = 5.08, SD = 1.5)

"My comfort is more important to me than a simple (thrifty) way of life." (reversed) (M 4.46, SD = 1.36)

"To me, it is desirable to grow as many food products as possible by myself." (M = 3.38, SD = 1.75)

On average participants agreed strongly with the statements (M_m = 4.31, SD_m = 1.11). It is interesting to see that in real life; most of the participants seemed to have already adopted a voluntary simple lifestyle for themselves, so it could have been expected to be reflected in total agreement with those statements. Taking a closer look on the first item, the orientation to this kind of lifestyle can be seen though; furthermore, this item shows the highest level of agreement out of those three. Since some participants (Repair Café volunteers) engaged themselves in voluntary work that focuses on reuse of goods and products, the first item might reflect their values better. For that reason it is expected to see this high level of agreement there. The third item, however, focuses on food production. It could be possible to conclude that this is a lifestyle domain that is of less

importance to the participants from the Dutch initiative and the low level of agreement does not reflect a disagreement with this kind of lifestyle in general.

Authenticity

For the following two statements, people (N = 26) were asked whether they agree or disagree with them (1 totally disagree – 7 totally agree).

> *"I think it is better to be yourself, than to be popular." (M = 5.65, SD = 1.6)*
>
> *"I feel as if I don't know myself very well." (reversed) (M = 5.38, SD = 1.58)*

Again, people seem to point in a direction of being rather agreeing with the statements (M = 5.52, SD = 1.27), however it has to be mentioned that the reliability of this scale is rather low because it based on two items in combination with a small sample. However, for the purpose of informing the initiatives in the Netherlands the values are acceptable and provide a clear indication.

Purpose in life

The following two-item-scale focused on perceived purpose in life. Participants (N = 26) were asked again to report their level of agreement or disagreement with the two statements (1 totally disagree – 7 totally agree).

> *"In thinking of my life, I always see a reason for my being here." (M = 4.42, SD = 1.94)*
>
> *"Facing my daily tasks is a source of painful and boring experience." (reversed) (M = 5.92, SD = 1.09).*

For those two items, participants scored rather neutrally, too (M = 5.17, SD = 1.51). Similar to the scale of authenticity described above, this scale's low reliability indicates that further interpretation of these results should be treated with caution.

Agency and communality traits

Participants were given a list of adjectives. They were then asked to indicate to what extent those adjectives described themselves using the following scale: 1 – extremely disagree, 2 – disagree, 3 – neither disagree nor agree, 4 – agree, 5 – extremely agree. In the context of volunteer work in the sustainability initiatives - which was already framed by some predecessing survey items - it seems plausible to choose the following character traits which are linked to concepts that are cognitively activated already. For example, to be reliable is important for coordinated work as well as the concept of *well-meaning* behaviour. This could be linked to the underlying cause to do something to make the world a better place through joint actions and engagement in such initiatives. .

When asked to pick personality related traits that would describe themselves, participants found themselves to be facing in the direction of being *very reliable (M = 4.12, SD = .82), well-meaning (M = 3.88, SD = .77), efficient (M = 3.69, SD = .62), friendly (M = 3.96, SD = .6), good (M = 3.88, SD = .68), competent (M = 3.92, SD = .7)* and *able (M = 3.85, SD = .93).*They described themselves as *averagely decided (M = 3.38, SD = .85).* People disagreed mostly

with describing themselves as *insecure (M = 2.48, SD = .82), cold (M = 2.24, SD .78)*, *incapable (M = 1.65, SD = .85)* and a *liar (M = 1.77, SD = .86)*.

These results show that people tend to describe themselves with more positive personality traits. A connection to social desirability bias (see Paulthus, 1991) can be made here, though. It can be expected that people would describe themselves more positively. To an extent, it is interesting to note that the traits that got the highest scores are to be *reliable* and *well-meaning*.

Time usage (since joining the initiative)

For this scale, participants were firstly asked how their daily time schedule had changed since they had joined the initiative. They rated their schedule on a scale from 1 (not busy at all) to 7 (very busy). On average, participants (N = 26) reported to be slightly more than averagely busy (M = 4.5; SD = 1.21). This may be interpreted as a hint that for initiative members only a little additional time pressure has emerged since engaging in voluntary work.

Secondly, participants (N = 26) were asked how satisfied they were with the amount of time they spend on initiative-related activities. Using a scale from 1 (not satisfied) to 7 (completely satisfied), people rated their satisfaction to be slightly above the mean (M = 4.69; SD = 1.12). Using the same scale, we also asked them (N = 26) how satisfied they were with the quality of time they spend on initiative-related activities (M = 4.65; SD = 1.36). However, both of these values are so close to both each other and the middle of the scale that no real statement on the level of satisfaction can be made.

Motivations (for joining the initiative)

We were interested to understand why people joined the sustainable initiatives in the first place. We used two different scales to analyse motivations.

The first scale we used asked people "Did you become a member of the initiative because…" and offered the following options to reply:

> *"I feel motivated to engage in a sustainable society."*
>
> *"I want to cope with the economic crisis promoting a sustainable lifestyle."*
>
> *"I enjoy working in a cooperative climate."*
>
> *"I enjoy working without hierarchical job structures."*
>
> *"I like handwork."*
>
> *"I like to produce organic food (e.g. vegetables, fruits, jams)."*
>
> *"I want to hinder a materialistic society."*
>
> *"I was influenced by the peasant origins of my family."*

The participants replied using a scale from 1 (not at all) to 7 (very much). The two most prominent motivations were *"I feel motivated to engage in a sustainable society." (M = 6.16;*

SD = .85) and *"I want to hinder a materialistic society." (M = 5.66; SD = 1.26)*. The lowest motivation reported was *"I was influenced by the peasant origins of my family." (M = 2.34; SD = 2.06.*

The second motivation scale we used asked people to indicate how important the following reasons and motives contributed to their decision to engage in an initiative:

- Social attachment (social commitment), e.g. *Desire for a pleasant community.*
- Self-experience (self-awareness), e.g. *Possibility to have first-hand experiences and learn from them.*
- Social responsibility, e.g. *Feeling of obligation to help people who have it worse than me.*
- Self-esteem, e.g. *Need to strengthen my own feelings of self-worth.*
- Social influence, e.g. *Influence of voluntary work done by other family members.*
- Professional balance (Work-Life-Balance), e.g. *Feeling like having a task that fits my interests more than my work does.*
- Political responsibility, e.g. *Hope to bring political change.*

Participants (N = 25) had the opportunity to rate those reasons and motives on a scale from 1 (totally unimportant) to 9 (totally important). The initiative members rated most of these reasons and motives rather neutrally (mean values around 4). The reason that was rated as most important is self-experience (M = 4.09; SD = 1.12), the one rated as least important is social influence (M = 2.44; SD = 1.27).

Subjective importance of voluntary work

Here, participants (N = 23) were asked to indicate the importance of their voluntary work as a part of their life from 1 (very important) to 4 (not important at all). On average, people found their voluntary work to be important (M = 2.09; SD = .73). 78.3% of the sample rated their voluntary work to be either very important or important.

Group identification

To find out more about the identification people may have with their initiative, we asked them to indicate how strongly they would agree or disagree (1 not at all – 7 very strong) with the following statements:

"I am glad to be a member of my initiative."

"I feel strong ties to persons who are members of my group."

"Being a member of my group is an important part of my self-image."

On average, participants (N = 25) showed a slight tendency to agree with the statements (M = 4.49; SD = 1.51).

Collective efficacy

We asked participants again to state how much they agree or disagree (1 completely disagree – 7 completely agree) with the following statements:

> *"Through joint actions, groups like our group can effectively contribute to local climate protection."*
>
> *"Initiatives like our group can make an effective contribution to local climate protection."*
>
> In this sample (N = 25), a tendency towards a high collective efficacy was reported (M = 5.6; SD = 1.22).

Participative efficacy

Using the same scale as we used for collective efficacy, we also wanted to know whether people agreed or disagreed with two more statements concerning participative efficacy:

> *"My active collaboration is a significant contribution for my XY group to reach its goals through joint actions."*
>
> *"With my active collaboration I can make a significant contribution that our XY group can work effectively for local climate protection."*

Similarly, people (N = 25) scored in the between agreeing and neither agreeing nor disagreeing with the statements (M = 4.44; SD = 1.88).

Commitment and personal relationship to initiative, neighbourhood, etc.

In this category, we asked people for how many years they had been part of their initiative and how long they had been living in the area.

For this sample (N = 25), the following mean values occurred. On average, participants had been part of the initiative for about three years (M = 2.85; SD = 1.18). 72% of the participants had been living in the area for more than 10 years, 11.1% had been living there for three to ten years and only 1.9% had been living there for less than three years. The majority of the sample seems to have been staying at the region for quite a long time which may be in connection to the wish to be engaged in voluntary work since some commitment to the area is already given.

Self-allocation

We also asked people about changes that may have occurred within them since joining the initiative. In detail, those changes were formulated as:

> *"I developed on a personal level."*
>
> *"I see more purpose in life."*
>
> *"I have felt more self-accepting."*
>
> *"I have formed meaningful, positive relationships."*
>
> *"I have felt like being in charge of my own situation."*

"I have been autonomous and confident in my opinions."

"I have dedicated my time to people in my community to help the world become a better place."

For most of these points, participants (N = 25) tended to disagree. The highest level of agreement was found with *"I have dedicated my time to people in my community to help the world become a better place." (M = 3.76, SD = 1.76)*. Most other statements are strongly disagreed with. The lowest level of agreement was found for *"I see more purpose in life." (M = 2.00; SD = 1.62) and "I have felt more self-accepting." (M = 2.00, SD = 1.47).*

(B) Personal and social norms (by Karen Krause and Florian Müller)

Participants were asked to indicate their state of agreement with the following statements in the broader context of personal and social norms.

Personal Norms:

"Due to my personal values, I feel obliged to lead a sustainable lifestyle."

"Based on my personal values I feel obliged to engage in a sustainable society"

Social Norms:

"Most people who are important to me have very busy lives and are constantly active."

"Most people who are important to me think I should have a busy life and be constantly active."

"Most people who are important to me own many cool things." (reversed)

"Most people who are important to me think I should own many cool things." (reversed)

"Most people who are important to me act in an ecologically-responsible way in their everyday life."

"Most people who are important to me think I should act in an ecologically-responsible way in my everyday life."

People stated their agreement or disagreement on a scale from 1 (totally disagree) to 7 (totally agree). Taking a closer look at personal norms, participants (n = 36) showed agreement (M = 5.24, SD = 1.37). Quite a different result emerged for Social Norms. Here, participants (n = 36) showed a tendency towards disagreeing with the statements (M = 3.31, SD = .92).

It is interesting to see that norms perceived on a personal level seemed to make a difference to people while broader social norms left people feel rather indifferent.

Values

This next scale focused on values and beliefs that participants may have as guiding principles for their life. Hence they were asked to rate the following value scales on a scale from 1 (no importance) to 7 (guiding principle).

Benevolence

"Protecting the environment, preserving nature."

"Unity with nature, fitting into nature."

"Respecting the earth, harmony with other species."

Conservation

"Honouring parents and elders, showing respect."

"Family security, safety for loved ones."

"A world at peace, free of war and conflict."

Stimulation

"An exciting life, stimulating experiences."

"A varied life, filled with challenge, novelty, and change."

"Curious, interested in everything, exploring."

Universalism

"Social justice, correcting injustice, care for the weak."

"Equality, equal justice for all."

Self-Enhancement

"Influential, having an impact on people and events."

"Self-discipline, self-restraint, resistance to temptation."

"Authority, the right to lead or command."

(no clear assignment to the value dimension "Wealth, material possessions, money.")

Some values are deemed important to the participants: scale scores approach the value 6 (Universalism: M = 5-59, SD 1.17, n = 32 - Conservation: M = 5.83, SD .73, n = 32). Rated the least important is the value Self-Enhancement (M = 4.13, SD = .92, n = 32).

Well-Being

To approach the concept of well-being, three different scales were used. Participants were asked how much they would completely disagree (1) or completely agree (7) with changes which may have occurred within them since joining the initiative

The items we used are the following:

Present aspirations short scale:

"Generally I have a committed, intimate relationship."
"I choose what I do instead of being pushed along by life."
"I feel good about my abilities."

Satisfaction with life scale

"In most ways my life is close to my ideal."

"The conditions of my life are excellent."

"I am satisfied with my life."

"So far I have gotten the important things I want in life."

"If I could live my life over, I would change almost nothing."

WHO-5 scale

"I have felt cheerful and in good spirit."

"I have felt calm and relaxed."

"I have felt active and vigorous."

"I woke up feeling fresh and rested."

"My daily life has been filled with things that interest me."

"My daily life has been filled with meaningful activities."

On all three Well-Being scales, participants tend to agree. The lowest agreement is shown for the Aspiration short scale (M = 4.99, SD = 1.01) and there is a somewhat clearer trend for the WHO-5 scale (M = 5.21, SD = .72) and the Diener scale (M = 5.56, SD 1.07). The results suggesta tendency towards perceived well-being.

Behavioural Indicators

Participants were asked to name their monthly electricity fee during summer and winter, respectively. These two values were averaged in order to have an estimate of the per capita energy consumption. Furthermore, they had to estimate the distances they cover with different kinds of transportation during a regular week. We, then, calculated the ratio of motorised private transport (i.e. going by car or motorbike) to distance covered with different kinds of transport (e.g. bicycle, bus).

On average participants (n = 10) pay 130.15 Euros per month (SD = 143.44) for their electricity. It is noteworthy that this is, by far, the highest value for all participating initiatives; the monthly costs for the other countries are around 30 Euros. This might be partly due to the fact that the standard deviation is quite high, indicating that there are those participants who pay far less and those who pay much more. The ratio of motorised private transport to overall transport in their regular lives is moderate (M = .40, SD = .37, n = 28), indicating that half of the distance is covered with less sustainable ways of transport.

Additionally, participants were asked to answer on how many days they eat beef, pork or chicken during an average week. The average times of their consumption of these three different kinds of meat were added together to give an idea of how many meals per week contain meat. The highest possible value for this scale is 18. Note, however, that the question did not explicitly ask for how many meals include the respective kinds of meat, but rather on how many days they eat them. Within this sample, the meat consumption per week is rather low with a group median = 3 (n = 26).

5.3. Main foot print results in the case study

Detailed information in the following link:

http://glamurs.eu/wp-content/uploads/2016/08/FP-reports-NL.pdf

6. Back-casting workshops and results

6.1. Introduction and methodology

For the backcasting tasks of GLAMURS, we organized two workshops, for which we invited people from citizen initiatives, government and knowledge institutes, based on their interest in sustainable lifestyles, citizen initiatives, and related subjects. More details on the methodology can be found in Quist (2016a, 2016b), while comparative evaluations of the first series of backcasting vision/scenario workshops and the second series of backcasting pathways workshops can be found in Quist and Leising (2016a, 2016b), respectively. The first workshop, a visioning workshop, was organized on November 26, 2015 by Jaco Quist, Wouter Spekkink, Udo Pesch and Eline Leising. The aims of the visioning workshop were (1) to explore opportunities for and barriers to sustainable lifestyles and consumption in the province of Zuid-Holland, (2) to develop visions for sustainable lifestyles and consumption in the province of Zuid-Holland for 2040, and (3) to zoom in on the role that local sustainability initiative can play in the envisioned future. The second workshop, a backcasting workshop, was organized on March 1, 2016, by Jaco Quist, Wouter Spekkink, Udo Pesch and Carien van der Have. The aim of the backcasting workshop was to build on the visions the came out of the first workshop to develop transition pathways, (policy) agendas and concrete proposals for projects that can be used to work towards a future based on sustainable lifestyles in the metropolitan area of Rotterdam-The Hague.

For both workshops we tried to get a balanced representation from civil society, government and knowledge institutes (see Table 6.1). We decided not to involve representatives of business for the workshops, because we initially because we perceived their link with the subject to be less obvious. In hindsight, it would have been possible to involve business representatives as well.

Table 6.1. Potential participants identified for the visioning and backcasting workshops.

Stakeholder category	***Examples of potential participants (organizations)***
Civil Society	• Repair Cafés • Energy initiatives • Urban agriculture initiatives • Umbrella organizations for bottom-up initiatives • Environmental associations
Government (and affiliated)	• Municipalities in the region (e.g., Delft, Rotterdam, The Hague) • Scientific Council for Government Policy • Netherlands Environmental Assessment Agency • Province of Zuid-Holland

	• Ministry of Infrastructure and the Environment • City Region
Knowledge and others	• Universities • Research institutes (e.g., Dutch Research Institute for Transitions, Energy Research Centre for the Netherlands) • Consultancy bureaus (e.g., Duneworks, Asis Research) • Independent researchers

We mobilized people from our own professional networks, as well as representatives of the initiatives included in our case study, with whom contact was established during our fieldwork for GLAMURS. Additional participants were found as a result of referrals by other participants. We mobilized participants by sending out invitations, followed by reminders. Whenever someone rejected our invitation, we asked them to forward our invitation to someone else in the same organization. A few days before the workshops we sent out an email with additional information (e.g., location, travelling details, program) to those who had confirmed their participation. Excluding the 4 facilitators, 18 people participated in the first workshop, of whom 9, represented civil society, 3 represented governmental (or affiliated) organizations, and 6 represented knowledge institutes. 11 participated in the second workshop, of whom 9 people represented civil society, 2 people represented (local) governments and 4 people represented knowledge institutions. 5 of the participants of the second workshop had not participated in the first workshop.

Both workshops were organized at the Art Centre Delft, which is located in a green area, near the university campus. We booked a large room where we could easily host up to 30 people. We arranged the tables and chairs in a square formation, and four flip-over stands were available in the room. An extensive workshop script was developed, and prior to the first workshop we also organized a test workshop. In both workshops, we worked a lot in subgroups (each subgroup had its own facilitator), and we followed all subgroup sessions with plenary sessions to share lessons and insights with the whole group.

The detailed programs of the workshops can be found in the appendix (tables A1 and A2). The first workshop consisted out of two main parts: (1) a brainstorm session on sustainable lifestyles, barriers for sustainable lifestyles, and the contribution of citizen initiatives to sustainable lifestyles, and (2) a visioning session in which visions on sustainable lifestyles and consumption in the province of Zuid-Holland for 2040 were developed. The principles of Sufficiency and Green Growth were introduced as possible starting points for vision development on sustainable lifestyles, and based on preferences for these principles, 3 subgroups were formed: One for Sufficiency, one for Green Growth, and one combining the two principles. Each group developed a vision based several visioning questions provided by the facilitators. The results were discussed in plenary presentations and discussions. Three visions have been developed this way: (1) sufficiency and local communities, (2) between sufficiency and green growth, (3) green growth through innovation and active citizens.

After the visioning workshop, the 3 visions were elaborated by researchers of Delft University of Technology. These were used as input for the second workshop, and were therefore distributed to participants of the second workshop one week before the workshop took place. The program was again divided in two main parts. The first part in the morning focused on a constructive evaluation of the three previously established visions, using methods inspired by the 'thinking hats' of De Bono. In the afternoon we engaged in a backcasting session, in which the visions have been complemented, concrete changes for the transition pathway have been sketched out and timelines have been established to create an overview of steps to take on the short, medium and long term.

Both workshops were closed with plenary discussions on the overall lessons to draw from the workshops. Also, the results generated in both workshops were relatively rough, and further elaboration was required to remove gaps and to make the visions and pathways more consistent. The visions and pathways as outlined below are the result of this further elaboration.

6.2. Results: Three visions

Vision 1: Sufficiency and local communities

Core and most important assumptions

A summary of the vision on sufficiency and local communities can be found in Table 6.2. The first vision is rooted in the principles of **sufficiency**, that is, in the idea that the footprint of our current society is too large, and that we should consume less in the future (enough for a good quality of life) to prevent that we exceed the carrying capacity of our planet. A related assumption is that there still is **enough time to realize a transition** with which we can significantly reduce our footprint, and that the transition will take the form of a **social tipping point**. This transition requires that **everyone is willing to take his/her role** in the new society. The vision assumes the existence of a **collective will** of local communities, which also requires a strong **social cohesion**, and **involvement of people** in their community.

The vision combines a strong orientation on **local communities** with **global connectedness**. This means that daily life unfolds primarily in the local community. In principle, everyone is **in control of his/her own time**, but many people also spend time within, and for their local community. Notwithstanding this local orientation, there is also an emphasis on global connectedness of local communities, which is important (among other things) for **harmonious relationships** between the different communities.

The consequence of having an economy that is based on **sufficiency** is that we **consume less**. This also entails a stronger **focus on quality of life**, which no longer depends on the products

that we own and/or consume. There is a stronger emphasis on **sharing** (or shared ownership), **repairing**, and **upgrading** products. The possibility to upgrade products also means that products are modified, rather than replaced. **Wellbeing becomes** a **much more important** indicator for how well we do as a society than welfare.

Lifestyle activities

Food is primarily produced locally (in local gardens), and food consumption is seasonally bound. Meat products and other exotic foods are a luxury (and therefore more expensive), and are therefore consumed only rarely. Not every community can produce every type of food locally, which means that some food products are traded from other communities. In every community there is a distribution centre, where products from outside the community are delivered (this includes food products as well as other types of products). Products can also be delivered to home, with electric means of transport. Food products are also shared within the local community.

In terms of **mobility** the most important change is that transport has been fully electrified and is clean. People mostly make use of public (or shared) transport. There is little commuting, because people live close to home, work fewer days a week, and have good possibilities for working from home. International travelling still exists, but it is a luxury of which people make relatively little use (possibly regulated through quota). In general, the principle of consuming less is also applied to the number of kilometres that people travel.

Table 6.2. Summary of vision 1:Sufficiency and local communities. Points in italic are additions from the second backcasting workshop.

Core and most important assumptions	• Our current footprint is too big. • There is enough time for a transition. • The transition will take the form of a social tipping point. • There is a collective will, and acceptance of this societal structure. • The society is based on principles of sufficiency. • The society is locally rooted, but globally connected. • An optimistic view upon human nature is assumed where everyone takes his/her responsibility. • Everyone is in charge of his/her own time. • There is less consumption and a higher quality of life. • There is enough for everyone, and we respect the carrying capacity of our planet.
Lifestyle activities	• *Food is produced in local gardens.* • Meat and exotic products are luxuries. • We only use electric (and primarily shared) forms of transport. • Our leisure activities primarily take place within, or at the borders of our local communities. Digital travelling is also possible. • 'Enough' is the new norm in the consumption of products. • There is a strong emphasis on sharing, repairing, and upgrading products. • We work fewer days a week and we invest time in our local communities. • There are specializations in local communities, but everyone is able to support a broader range of activities. • The quality of the living environment is high. • *Energy is partly generated locally, and partly through wind parks at sea, and solar*

	parks in sunny areas (at the non-local level). • *We make use of smart grids, energy storage and well-connected networks.* • *We take energy saving measures.*
Organization and division of roles	• Companies are less profit-driven and invest revenues back into local communities (social shareholders). • *Social shareholders have a bond with their company and the community in which the company is rooted.* • *Financial systems are local and not oriented solely on welfare.* • Companies are smaller in scale. • International trade is slowed down, but local trade is flourishing. • Knowledge is 'open source.' • *Governments act in service of citizens.* • *Governments focus on monitoring boundary conditions and facilitation.* • *Boundary conditions are set in a bottom-up way.* • Governments at the supra-local level ensure harmonious relationships between communities, as well as healthy infrastructures. • *There is education on sustainability at all levels of education.* • *Status no longer depends on ownership, but on contributions to the community.*

People usually spend their **free time** within, or close to their local community, which reduces the need for travelling. A condition for this is that the quality of the living environment is very high.

Products have an extended lifetime (compared to the current situation) and are designed in ways that makes them easy to repair. In addition, products are designed in a way that makes it easy for people to upgrade their own products. If products reach the end of their lifetime, then they are easily recycled for use in new products. In general, people care less about owning products, and there is a stronger focus on the functions/services that products can provide. Thus, there is a shift from buying ownership rights to buying services that products provide. In addition, shared ownership of goods and services within communities is common.

In relation to the **balance between work and leisure** it was already mentioned that people work fewer days a week, and that work becomes more flexible in terms of working hours and working place. This also gives people more time to do 'unpaid work' within their local community. Instead of being dependent on commercial services, people primarily make use of services that are provided by community members on an informal basis. Within local communities there are specializations (for example, some people are skilled at gardening, others are skilled at repairing, and yet others are skilled at baking bread), but the capacities of people are broad enough to also be able to support the activities of others. In addition, it is recognized that not everyone can contribute at the same level. The contribution that someone makes to the local community depends on personal circumstances.

With regard to **housing and the living environment** there is a stronger emphasis on the local roots of daily life. People experience a high quality of the living environment within and around their local community, which means that spending time in the community is a pleasant experience. There is attention for local (traditional) ways of building with usage of materials

produced in the region. In this way regional diversity can also be seen in the housing stock, instead of the current global almost similar concrete housing stock.

Energy is generated primarily at the local level, and use is made of local heat networks. In addition, there are non-local forms of energy generation, such as solar parks in sunny areas (such as the Sahara), and wind parks at sea. For the generation and distribution of energy the energy infrastructure is heavily expanded, and networks are connected to each other across communities and across national borders. This also contributes to increasing the resilience of the network. Smart grids and storage utilities for energy are part of the infrastructure. People handle their energy needs more responsibly, and take energy saving measures.

Organisation and division of roles

In the envisioned society **companies** have large divisions that focus on repairing, client support, and selling functions that products can provide (instead of selling the products themselves). Many products and services are exchanged within local communities, based on an informal economy. Companies are generally of a smaller scale, have strong roots in communities, and have **social shareholders**. This means that shareholders do not buy and sell shares from one day to the next, but show a strong interest and involvement in the company that they invest in. Shareholders also take into account the collective interests of their local community, and have a long-term vision. Their bond with their company is based on the fact that they come from the same community, and perhaps because the shareholders are also employees of the companies. Companies regularly invest their revenues back into the local communities in which they are bedded. The way that companies engage in **marketing** testifies to a strong moral consciousness. Marketing is not just about selling products and services, but also about learning the wishes of the community. In this way companies comply with the core value of this vision: sufficiency. '**Financial**' **systems** are also local and not purely oriented towards welfare (there is a stronger focus on wellbeing). For example, within the local community it is also possible to trade time for goods. It also means international trade is slowed down because markets are completely local oriented. These local markets flourish just like in ancient times (e.g. middle ages, ancient Greek economies). Knowledge is '**open source**' and is therefore easily exchanged among communities. Among the reasons that people work fewer days are that people **consume less**, and that **status** is less dependent on what people own, and more dependent on what someone contributes to a community. Thus, people spend relatively little money, which also means that they do not need to work much to earn what they need.

The **pyramid structure** of our current society **is inverted** in the new society. That means that **supra-local governments** only monitor and maintain boundary conditions, that **local governments** have a facilitative role, and that both these layers of government are **in service of citizens**, who represent the executive power. Citizens have a strong say in collective matters and as a collective they have strong decision making power. In decision making, **collective interests are prioritized**. Monitoring the boundary conditions is a responsibility of supra-local governments, but the **boundary conditions are set in a bottom-up fashion**. New structures develop first at the local scale, and if they have enough mass they automatically reach a supra-

local level at which they serve as inspiration for new boundary conditions. Within these boundaries, there is **freedom** for markets and individuals to express themselves and to take initiative.

The main role of supra-local governments is to ensure that **harmony** exists between different local communities. This includes **welfare functions**, but also mechanisms by which governments make **empower people** to discover and take up their role independently. In this way, governments contribute to the combination of local roots and global connectedness of communities. In addition, supra-local governments **ensure healthy infrastructures**. In general, governments have a facilitating role, instead of operating in a top-down, regulatory manner. The focus of governments is setting boundary conditions that encourage self-organization. This requires, among other things, **advanced forms of participatory governance**, and **smooth contacts** between local authorities and residents.

Sustainability has become an important item at all levels of **education**. Education is focused making students more aware of their own talents, and their responsibilities and role in the community. Instead of adapting education to the "average" student, **education is customized**, so everyone has the opportunity to have his / her personal talents blossom. This also helps to ensure that everyone is / can discover his/her role in the community, without imposing that role in a top-down manner. This requires **personal guidance**, and **attention to the needs and interests of students**.

Status no longer depends on what you own, or how rich you are, but on the contributions that you make to your local community.

Vision 2: Between sufficiency and green growth

Core and most important assumptions

Table 6.3 offers a summary of the vision on responsible individuals in an urban setting. The vision is developed based on a combination of principles of green growth and sufficiency. The core principle on which the vision is based, is that we should strive for **autonomy** (originally referred to as autarky by the developers of the vision), but that we should also strive for **collaboration** and **support to those who need it**. This combination of autonomy and collaboration is rooted in the principle of self-sufficiency. The assumption is that individuals have a desire to be independent, and that they want to have control over their own lives. The vision also makes the optimistic assumption that **individuals are willing and able** to take their responsibility and be autonomous. To some extent this is also a **necessity**, because the **institutional structures** of our society (such as political and social institutions, but also resource flows) have become **fluid** and **fragmented**, which creates **flexibility**, but also causes **uncertainty**. For example, there is uncertainty about the amount of time that people can hold on to jobs, about where they will work in a couple of years, and what our society will look like by that time. The fluid institutional context requires people to be **independent** and

entrepreneurial, and requires them to discover, develop and utilize their talents. This does not mean that people are entirely egocentric. At a lower scale there are still **communities** (such as housing communes) in which people join forces, and ensure that the facilities and services that their community needs are in place. Even if they are members of a group, individuals are still responsible for **taking initiative** and assuming a **proactive attitude**. **Social cohesion** at the level of the city is important as well, and **people feel responsible** for the wellbeing of community members that have fewer changes of developing and utilizing their talents.

As is discussed in more details under the header of organization and division of roles, most **collective systems and services are organized at the level of the city**, which implies a downscaling of economic activity. This downscaling in itself also entails reduced environmental pressures. In addition, **city governments set boundary conditions** that stimulate individuals to make sustainable lifestyle choices. These boundary conditions serve to make **cities energy neutral**, and have a limited footprint in general. Smart solutions are also required for problems such as **spatial pressures** in cities, which arise as a consequence of the **increased number of people that live in cities**, while space is also needed for the **local production of goods and services**. Without making explicit in which direction these solutions should be sought, the vision assumes that finding solutions requires **advanced exchange of knowledge**, as well as **smart innovations**. This, in turn, requires **strong investments in education**.

Lifestyle activities

Energy is generated primarily at the local level, based on collective arrangements, but also on an individual basis, where possible. The boundary between users and producers of energy has become entirely diffuse (prosumers), and houses have become energy neutral.

With regard to **housing**, the vision implies that a larger share of the population will live in cities, and the population density will increase as a result. People form housing communes, in which they share facilities and exchange products and services (in addition to sharing). It is possible that people move regularly within the city limits, for example because they change jobs. In general, people try to live close to where they work.

This also has consequences for **mobility**. In addition to the fact that people live close to their work, the necessity of travelling is limited because (shared) services are concentrated on the neighbourhood level. People travel relatively short distances, but through a heavily populated city. Therefore, smart solutions are required with regard to infrastructure and/or public transport.

Products and services are produced and consumed locally. There is a strong emphasis on sustainable production, repairing, and reuse. In every neighbourhood there are Repair Cafés where people can repair broken products. People also have easy access to 3D-printers that can be used to create replacement parts.

Table 6.3. Summary of vision 2: Responsible individuals in an urban setting. Points in italic are additions from the second backcasting workshop.

Core and most important assumptions	• People strive for autonomy at the individual level, and social cohesion at the level of the local community and the city. • Autonomy stands for self-development, discovering, developing, and utilizing your talents, independence and entrepreneurship. • Social cohesion stands for helping people in the community that have fewer opportunities to develop and utilize their talents. • The society is flexible (institutional structures are fluid and fragmented). • A larger share of the population lives in cities • *The downscaling of the economy entails reduced environmental pressures.* • Advanced knowledge exchange and smart innovations ensure a limited footprint and limited spatial pressures.
Lifestyle activities	• People live in smaller houses, and they relocate within the city boundaries often, based on changes in other aspects of their lives. • *People live in communes and share services and products within these communes.* • People live close to their workplace. • *There is a Repair Café in every neighbourhood.* • *3D-printers are used to create replacement parts and for printing food.* • People travel short distances. • Energy is generated locally, for which commercial, as well as local collective arrangements are used. • Products, services and food are produced locally, and sometimes on a non-commercial basis (for example, help to those in need). • People can change jobs often.
Organization and division of roles	• Governance takes place at the level of the city, and there is only a small role for central government. • *The city government facilitates and empowers.* • *The central government performs elementary tasks, sets boundary conditions (including those relating to environmental and social sustainability), and maintains critical infrastructures.* • *Within the boundaries that are set by government, individuals have a lot of freedom to make their own choices.* • *There is a change of emphasis from the legislative power to the judiciary power in the trias politica, such that the opportunities that individuals have to stand up for their rights increase.* • *In addition to traditional courts, there are also smaller, more accessible judicial arenas.* • The production of goods and services is organized at the level of the city and facilities and services are concentrated in a smart way (downscaling of economic activities). • There are new reward systems to make sure that non-commercial services, provided in communities, are also recognized and rewarded. • *Cities are as self-sufficient as possible, and problems are solved within the borders of the city as much as possible, although exchanges and interactions between different cities, and between cities and rural areas still exist.*

Food is produced primarily locally, and for this aspect as well use is made of 3D-printing technologies. Not all food can be produced locally, and a regular supply of food from rural areas is still common.

The vision assumes that people also exchange services on a non-commercial basis (supported by new reward systems), and that social entrepreneurship is an important part of the **work life**. Employment at the level of the city increased, as a consequence of the increased concentration of production and services in cities. As indicated earlier, people live close to where they work, but change jobs relatively often.

Striving for autonomy does not only apply to individuals, but also to cities. **People take into account the collective interests** of their city, and most **collective systems and services are organized at the level of the city**, which thus entails a downscaling of economic activities. At the neighbourhood level, **smart concentrations of services and facilities** are created, which makes shared use and spill overs between learning and working easier. The **strong local orientation of the economy** can lead to, inter alia, the development of local currencies. Despite the local orientation of the economy, **exchanges** and **interactions** still exist **among cities**, and **between cities and rural areas**.

The vision assumes that **governance takes place primarily at the level of the city**, and that city governments are responsible for a larger geographical area than in our current society. Governance primarily takes the form of **facilitation** and **empowerment**. An example is the role of government in the area of energy production. The government stimulates and **facilitates local energy production**, and **safeguards** the **stability** of the power grid.

The **influence of the central government is decreased**. The central government performs **elementary tasks**, **safeguards boundary conditions** (including conditions related to environmental and social sustainability), **and** maintains **critical infrastructures** that the society needs to function. Within the boundaries set by governments, individuals have a lot of **freedom** to lead their life in the way that they see fit. There are **apolitical organizations** that have the prime responsibility for **maintaining the long term vision** of cities, and to **facilitate regular reflection** on new developments, and **possible adjustments** that are necessary to **adapt** to these developments.

Organisation and division of roles

One of the responsibilities of the city governments is to create and maintain mechanisms that **empower** people in deprived neighbourhoods. People do not just only work for themselves, but also sometimes do things for others (those who need it the most) on a non-commercial basis. This requires **new administrative systems** that allow us to keep track of, and reward what people do for each other on a non-commercial basis.

The **judicial powers** in society **have a larger role**, as a result of a change of emphasis from the legislative to the judicial power in the trias politica (a depoliticisation of justice). This change of emphasis gives **individuals increased opportunities to stand up for their rights**. For this they can use traditional courts, but there are also **smaller scale**, **more easily accessible judicial arenas**.

Vision 3: Green growth through innovation and engaged citizens

Core and most important assumptions

Table 6.4 summarizes the vision on green growth for change. The vision is a **fundamentally optimistic** one, in the sense that it is based on a strong belief that we will be able to change our society for the better through **technological and social innovations**. The vision expressed a strong **trust in the innovative power of companies**, as well as **engaged citizens**. The visions is **rooted in principles of ecological modernization**, but is **more radical** in the sense that it assumes that **green growth** is **used to realize changes in the value systems** underlying our society, which may go beyond ecological modernization. A concrete example of alternative value systems concerns the **reduction of the role that financial values play** in the way we go about our daily lives. Other values, such as leading a **healthy life**, and **environmental and social responsibility** of companies become more important. The efficiencies achieved through growth are no longer used to realize even more growth, but to **create possibilities for a more sustainable society**.

Table 6.4. Summary of vision 3: Green growth through innovation and engaged citizens.

Core and most important assumptions	• A fundamentally optimistic vision: Through technological and social innovations our we can change our society for the better. • Trust in the innovative power of companies, and in engaged citizens. • Green growth contributes to changing value systems. • Growth is nuanced by the recognition of vulnerabilities of our society and its natural environment, laid down in millennium goals for sustainability. • A democratic change process, through democratization of technology. • Waste does not exist, thanks to, among other things, new business models.
Lifestyle activities	• Energy for citizens and small industrial users is generated locally, we take energy saving measures, and we make use of smart grids. • Energy for large industrial users is generated sustainably, with (bio)gas and wind parks at sea. • *In product use there is a strong emphasis on repairing and reuse of materials.* • We eat insects, locally produced proteins, and cultivated products. • People only have electrical cars, and shared cars are the standard. • People primarily make use of public transport and bicycles. • The work life and private life are strongly intertwined. Social services are an important part of our work life.
Organization and division of roles	• *The increased economic efficiencies create space for other values, in addition to (or instead of) economic values.* • *Economic activities are based on new business models that follow principles of CSR, social entrepreneurship, circular economy, cradle-to-cradle, and the sharing economy.* • There is a 'remake industry,' where the emphasis is on repairing and recovering materials to bring them back into our circular economy. • As a result of new economic activities (such as a large remake industry) there are also new roles, such as the chain manager. • *Patents no longer exist, and knowledge is open source.* • There is an elaborate infrastructure for public transport, and bicycles, which makes

	infrastructures for cars partially obsolete. • In agriculture there is a focus on mixed production, rather than monoculture. • Buildings also serve as material banks. • We have a green tax system. • Cities are compact. • Houses are suited to every stage of a human's life course.

The emphasis on **growth** is also **nuanced** by the explicit recognition of the vulnerability of our society and its natural environment. **Biodiversity**, **geopolitics** (e.g., energy dependencies), **social equality,** and the **footprint** of our lifestyles are examples of aspects of vulnerability. To take these vulnerabilities into account, new, widely supported **millennium goals for sustainability** have to be devised, and serve as guides (or boundaries) for green growth.

The concepts of engaged citizens and technology that are at the basis of the vision are strongly interrelated. **Technology is seen as something that makes certain choices *for* you**. This raises the question about the nature of the **responsibility of people** when so much trust is invested in technology. This responsibility can be found in the development of the technology itself, and for people to be able to take that responsibility, a **democratization of technology** is required. Concretely, this means that technology is developed in a more collective manner. The fact that technology is presented as a major driver of change also implies that democratization of technology will contribute to a **more democratic change process**.

The ecological impact of our activities is reduced through **smart planning** and **closing loops**. Different activities that can feed each other (for example, through the reuse of energy and materials) are located in proximity to each other, such that it becomes easier to close loops. Economic activities are based on new business models that follow the principles of, **Corporate Social Responsibility (CSR), social entrepreneurship circular economy**, **cradle-to-cradle**, and the **sharing economy**. The concept of **waste disappears**.

Lifestyle activities

Energy for citizens and small scale users is generated close to home (houses as power plants). We make use of smart energy networks and closed loops, and we take energy saving measures that reduce the demand of energy. Houses are energy neutral.

With regard to **housing** people are flexible in the sense that they can easily move to another house if necessary (for example, when they have a new job). People may move relatively often, although this never has to do with the stage of the life course that they are in, as houses are suited to all life course stages. People make less use of private gardens, and instead spend more time in public green spaces.

In **product use** there is a strong emphasis on repairing and the reuse of materials. Here 3D-printers may play an important role, by helping in the creation of replacement parts. There has been a shift of emphasis from business models that are based on buying ownership to models that are based on paying for the functions and services that products perform (you no longer pay for a bicycle, but you pay for transport).

Our **diet** has changed. We eat insects, we primarily eat locally produced proteins (meat replacements), and we eat cultivated products.

For our **mobility** needs we no longer make use of fossil fuel driven cars. Instead, cars are electric, and can drive autonomously. In addition, cars are often shared, partly based on commercial services. People primarily make use of public transport and bicycles, for which a new infrastructure is established. Health, as a value, will play an important role in our mobility choices, and as a result physical exercise will be an important aspect of mobility.

The boundaries between **work life** and **private life** have become diffuse. Through technological developments a system emerges in which it is not clear which activities belong to leisure time and which activities should be seen as work. Activities are aimed primarily to satisfy the need for self-empowerment, instead of the need for income. The values that people hold dear and want to express play a larger role in the way they spend their time. These values can be expressed through, among other activities, participation in citizen initiatives, which makes citizen initiatives (and other collectives), to some extent, the 'new work.' In work there is an increased emphasis on the service sector of our economy. Sometimes people provide services on a commercial basis, but it is also common to engage in social service provision, something that is also recognized and rewarded.

Organisation and division of roles

One of the starting points of the vision is that our economy will become more efficient (doing more with less). However, the gains achieved with efficiency are not necessarily invested in more economic growth. Instead, the **efficiency gains are used as a means for creating more space for other values**, besides economic values. For example, economic growth will be 'in service of' sustainability of our society and its natural environment. At the same time, there is hardly a separate economic system left in our society; activities are aimed to fulfil **different personal** and **societal values**, while always taking into account the **carrying capacity of our planet**.

New **green and social business models and strategies** are introduced that, akin to principles such as Corporate Social Responsibility (CSR), social entrepreneurship, circular economy, cradle-to-cradle, the sharing economy, and others. By adopting these models, businesses also **take up functions** that were **previously fulfilled by citizen initiatives** to promote environmental and social sustainability.

There will be a comprehensive '**remake industry**,' where the emphasis is on repairing products and reusing materials. As a consequence of the introduction of new business models (the remake industry, circular economy, cradle-to-cradle, the sharing economy), the labour market will also change. For example, new jobs will be created, such as the **chain manager** that is responsible for organizing closed material and energy loops. The democratization of technology presupposes that **patents no longer exist**, and that **knowledge is open source**.

In **agriculture** we engage in mixed production, instead of monoculture. Agriculture remains intensive, but takes place at a smaller scale, and in closer proximity to cities, which makes it

easier to close loops. For the generation of energy for **large scale industrial users** we make sue of wind at sea and (bio)gas plants, combined with Carbon Capture and Storage (CCS) systems. For **smaller scale users of energy** we use technologies such as energy generating greenhouses and cogeneration. Energy production takes place close to users, which makes it easier to optimize energy systems by closing loops.

The vision builds on the assumption that **cities are compact**, without implying that we make use of high-rise buildings. Houses are assumed to be **suited to all stages of the life course**. This means that buildings dedicated to specific life course stages (student housing and care homes) disappear. Buildings are also **material banks**, which means that we know exactly what materials (and in what quantities) are present in buildings. These materials can be reused if the building is no longer used. Cities have an **elaborate infrastructure** for **public transport** and **bicycles**.

6.3. Results: Three pathways

Pathways to vision 1: Sufficiency and local communities

Required changes

The vision outlined above implies several changes that need to take place at the short, middle and long term (summarized in Table 6.5). The general desire with regard to **culture and behaviour** is to no longer have our quality of life depend on our consumption and our economic welfare, but on happiness in a much broader sense. This means that we need new indicators to measure how well our society is doing in terms of happiness, and that we need inspiring examples that show what a life that is rooted in wellbeing looks like.

Table 6.5. Summary of changes required according to vision 1.

	What (changes)?	How (activities)?	Who (stakeholders)?
Culture and behaviour	Governance should be focused on wellbeing instead of welfare.	Development of wellbeing indicators.	Statistical agencies , accountants
	Weaken vested interests of business	Stimulating social entrepreneurship and social shareholdership (rewards).	Citizen initiatives and governments
	Live a simpler life and do more with less.	Education (make limits to growth more visible) and inspiring stories.	Education and citizen initiatives

Institutional structures	Pyramid of governance needs to be inverted.	Make supra-local governments responsible for monitoring, make local governments responsible for facilitation, and making citizens the executive force. Also ensure good communication between levels.	Government and citizen initiatives
	Greening our tax system.	Lower taxes on labour and increase taxes on resource use.	Government
	Make limits to growth explicit.	Set quota for emissions and mining.	Government, local firms
	Develop new markets.	Other ways of consuming (collective purchasing).	Citizen initiatives
	The generation of money needs to be better regulated.	Experiments with new money systems like local currencies or time banks	Government, bank
Technology and knowledge	Good technologies for smart grids and energy storage are needed	Investment in research and development for these technologies. Developing specific educational programmes and stimulating entrepreneurship.	Knowledge institutes, education
	Sustainable agriculture needs to be advanced more	Create awareness via education and develop research, development and educational programmes.	Knowledge institutes, education
	The economic sciences should be embedded in ecology and natural sciences and vice versa.	Review current educational programmes.	Knowledge institutes, education
	Companies need to develop more sustainable, repairable and reusable products.	New business models (products as service), data transparency, additional R&D for recycling infrastructure.	Business

The core changes in the area of **institutional structures** are inversion of the governance pyramid and the associated focus on monitoring boundary conditions. Boundary conditions in several areas (limits to the creation of money, and quota for emissions and mining) have to be set at the highest possible level (international agreements), but at the same time they need to be developed in a bottom-up fashion. That means that new ideas first need to emerge from local communities, and then need to gain mass, which makes it possible to derive new boundary conditions from them at a higher level. This process requires communication between the various layers of the inverted pyramid of governance.

The changes in the area of **technology and knowledge** are aimed at making our economy more sustainable. Some elements of ecological modernization are present in the envisioned changes in this area.

Transition narrative

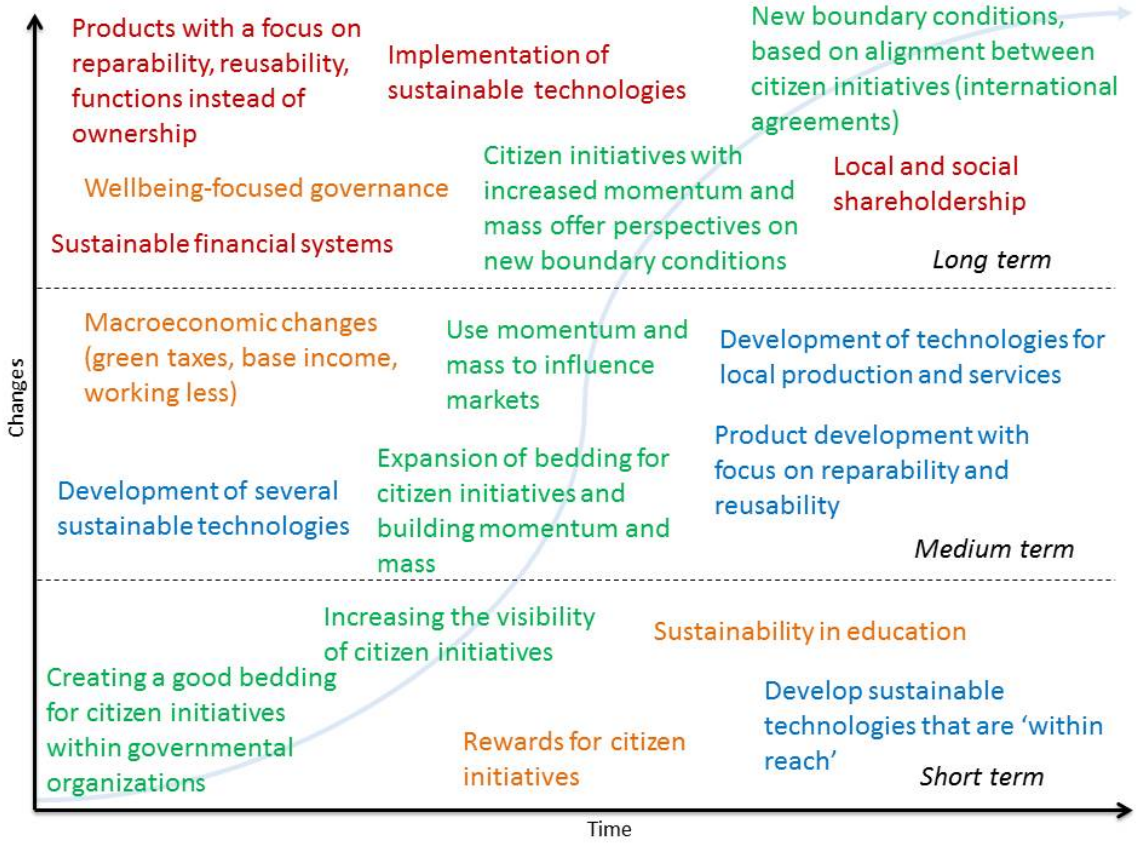
Figure 6.1 offers a visualization of the transition curve, which gives an impression of the stepwise changes that need to be made in order to make steps into the direction of the envisioned society. In broad outlines, the changes included in the transition curve match the changes described in the previous section, although the changes are formulated in more general terms. The different colours indicate whether the changes are primarily the responsibility of citizen initiatives (green), governments (orange), knowledge institutes (blue), or business (red).

In the transition curve for this vision, the activities for which citizen initiatives have prime responsibility take a central place. At the **short term**, this includes the **creation of a better bedding for citizen initiatives**, for example by pro-actively approaching governments and ensuring that these create positions and functions that enable better facilitation of citizen initiatives. Partly, this is simply a matter of **increasing the visibility** of citizen initiatives. Although this requires action by citizen initiatives as well as government, it is primarily the citizen initiatives that have to be pro-active in creating a better environment for themselves.

On the **medium term** the improved bedding for citizen initiatives need to be expanded and rooted. Moreover, citizen initiatives on the medium term need to **exert more influence on the economy**, for instance by putting pressure on markets via collective procurement. On the long term citizen initiatives will have gained momentum and mass in such a way that they are able to offer **perspectives on new boundary conditions for society**. Based on alignment between citizen initiatives new boundaries conditions are actually established by means of international agreements.

The activities of citizen initiatives do not take place in a vacuum, and activities of other actors in society are necessary to develop a context in which citizen initiatives can fulfil their role. In the **short term** this involves, for example, **changes in education** (responsibility of governments), the creation of an environment that rewards (participation to) citizen initiatives (responsibility of governments), and the **fast development of sustainable technologies** that are 'within reach', and could be used by citizen initiatives in a relatively short term (responsibility of knowledge institutes). In the **medium term**, actions by governments are also necessary to make (possible) **changes in the economy**, in line with the **influence that citizen initiatives have on markets**. In addition, **sustainable technologies** need to be developed by knowledge institutes, which in the **long term** can be implemented by companies that apply **new, sustainable, and social business models**. The **new economic structures** that are gradually built up, will be **bedded in society** in this way, for which governments are partially responsible as well. For example, they should apply approaches to **governance based on wellbeing, instead of welfare**.

Figure 6.1. Transition curve for vision 1. Green = citizen initiatives, blue = knowledge institutes, orange = governments, red = business.



Pathways to vision 2: Between sufficiency and green growth

Required changes

The vision outlined above implies several changes that need to take place at the short, middle and long term. These are summarized in Table 6.6. With regard to **culture and behaviour** the proposed changes strongly reflect the idea that more autonomy and responsibility for individuals is to some extent necessitated by processes that are not fully under our control, but that at the same time we can consciously make several changes that prepare individuals for becoming more autonomous and responsible. To some extent, there is a feedback process between behavioural changes and institutional changes, because institutional changes necessitate behavioural changes and vice versa.

Table 6.6. Summary of changes required according to vision 2.

	What (changes)?	How (activities)?	Who (stakeholders)?
Culture and behaviour	More autonomy and responsibility for individuals.	Mostly necessitated by changes in institutional structures (see below) that require a response from individuals. Individuals may be pro-active in anticipation of the increasing fragmentation and fluidization of institutional structures. How to be a responsible individual is a matter of learning-by-doing.	Citizens (individuals)
	Establish vision of responsible individuals in a flexible society.	Different parties can promote the vision of autonomous and responsible individuals, emphasizing that institutional development also necessitate this change (sense of urgency). .	Government Citizen initiatives Apolitical organization
	Our ideas about talents and skills required for a successful career have changed.	Mostly a process of learning-by-doing, where learning is about new values with regard to talents and skills. Educational institutes also have a role to play (see changes in technology and knowledge)	Educational institutes Citizens (individuals)
Institutional structures	There is a stronger emphasis on judicial powers in trias politica.	The role of government is made smaller, with a focus on setting and safeguarding boundary conditions and critical infrastructures, and leaving a lot of freedom for individuals to act within that. New, accessible judicial arenas are also established.	Government
	A smaller central government; an increased emphasis on local government	Central government reduces focus to elementary tasks (e.g., health care, security, critical infrastructures), and the responsibilities of local government are increased, with a strong focus on facilitation, rather than regulation.	Government
	Apolitical organizations are established to maintain and monitor vision.	Citizen initiatives adopt this role by taking responsibility for promoting the vision, reflecting on new developments, and taking the lead in societal debates on the vision and new developments.	Citizen initiatives
	Small scale companies become more prevalent.	Although large scale companies continue to exist based on supra-local economic affairs, products and services at the level of the city are offered by small scale business (often independent entrepreneurs).	Citizens (individuals)
Technology and knowledge	There should be technology that facilitates independence and self-sufficiency.	Could be stimulated by making it a broad research agenda for knowledge institutes. Technologies can also be developed (and experimented with) in a bottom-up way, by citizen initiatives.	Knowledge institutes Government Citizen initiatives
	People should learn to develop and nourish their talents.	Requires a different design of our educational programs, with a stronger focus on learning-by-doing, and with good opportunities for generalist educations as well as specialized educations. People should have the freedom to choose an approach that fits their needs and desires.	Government Educational institutes

The **institutional changes** should contribute to expanding the space that individuals have for taking responsibility for their own lives. The changes should be implemented consciously as the vision assumes that institutional structures will also become more fluid and fragmented by themselves. The apolitical organizations are introduced to ensure maintaining a long-term vision on society, while the vision also has to be adapted in to new developments. There is an explicit choice not to make political organizations responsible for this, because these tend to have a short term vision.

The changes in **technology and knowledge** are dedicated to preparing people for participation in society, and are therefore closely related to behavioural changes. The image of man underlying the vision is that of responsible individuals, and a condition for realizing this image is that people are well 'equipped' to take their responsibility. In the way that education is envisioned, the principles of autonomy and responsibility are also reflected, as they presuppose freedom in choosing the specific ways in which people are educated (or educate themselves). It moreover presupposes freedom of choice to the extent that this involves the development of generalist knowledge, or specialist knowledge.

Transition curve

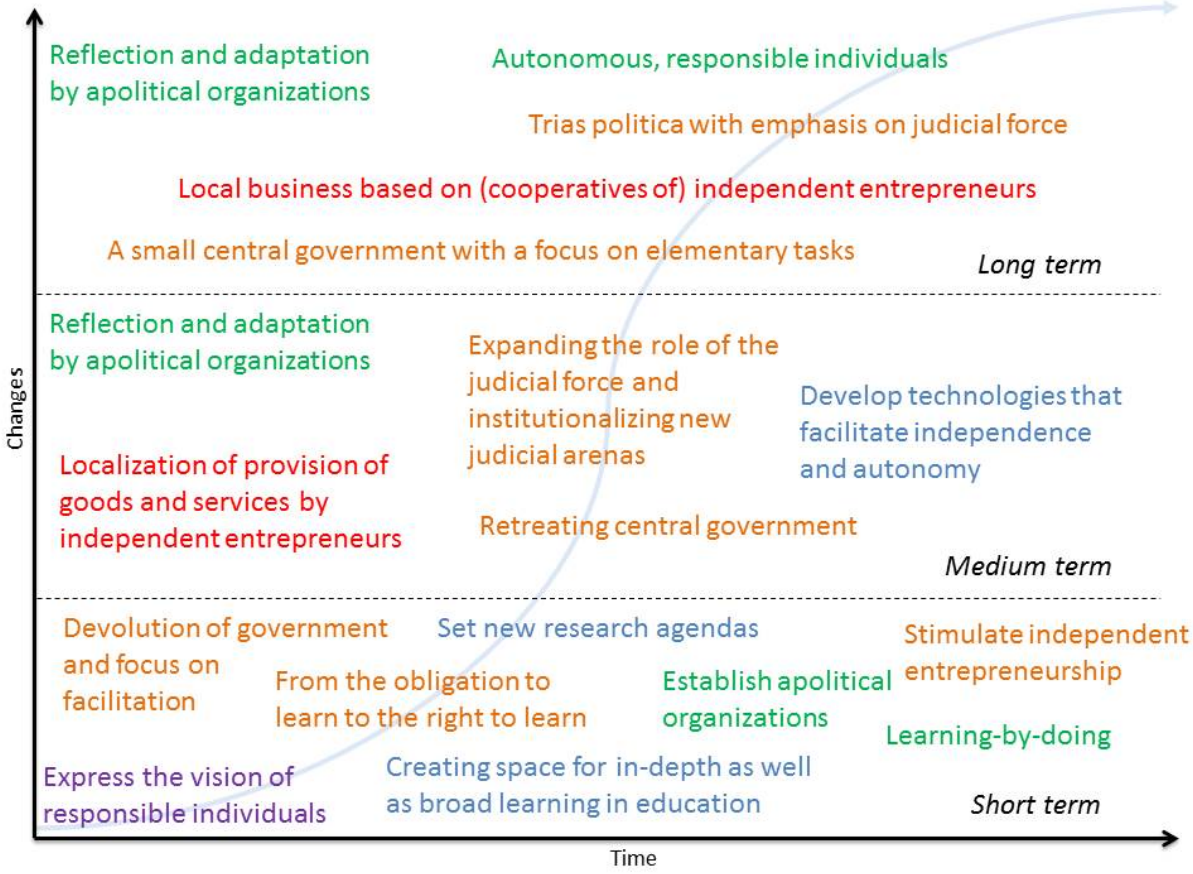
The changes summarized above are based on the assumption that the increased fluidity and fragmentation of society is (to some extent) inevitable. Therefore, the changes focus primarily on preparing individuals to take part in the envisioned society (see Figure 6.2). On the **short term the vision of autonomous and responsible individuals itself should be promoted**, one aspect of which is to **highlight the necessity for individuals to become more autonomous and responsible** as a result of institutional changes that are already unfolding (i.e., increased fluidity and fragmentation). A wide range of actors may play a role in this of which a few examples are mentioned. First, **apolitical organizations** (that are built on citizen initiatives) are of particular importance in **claiming responsibility for the vision and maintaining it on the long term**. The establishment of apolitical organizations is a short term step in an **iterative process** that **continues throughout the entire transition**. The iterative process entails **reflection on and adaptation of** the vision, in the light of other societal developments. Second, **governments** have a role to play in the promotion of the vision by **stimulating independent entrepreneurship**, in order to facilitate the localization of provision of goods and services.

Third, **individuals** have a role to play by pro-actively engaging in a **learning-by-doing process**, through which they learn how to be autonomous and responsible. Other changes on the short term refer to activities necessary to cre**ate an environment in which autonomous and responsible individuals can thrive**. This includes **reforms in education**. The government should steer more towards an education system where **learning** is **not an obligation**, **but a right** that everybody can make use of in a way that fits his/her needs. Education institutes themselves should focus on creating flexible educational programs that offer **opportunities for in-depth learning** (to develop specialist knowledge), as well as **broad learning** (to

develop generalist knowledge). Institutional reforms are started on the short term as well, and may involve, among other things, the devolution of government, accompanied by a shift of emphasis of (local) government from regulation to facilitation. Knowledge institutes (in collaboration with government) should introduce research agendas that focus on creating technologies that facilitate independence and self-sufficiency.

On the **medium term** the role of central government is reduced, following the devolution that was started on the short term. The **central government reduces its focus to elementary tasks**, such as the provision of health care and the maintenance of critical infrastructures. **The role of the judicial power is increased,** in order to create an environment in which individuals have the space to **take up their own responsibilities**, and **stand up for their rights**.

Figure 6.2. Transition curve for vision 2. Green = citizen initiatives, blue=knowledge institutes, orange = governments, red = business, purple = everyone.



Based on the stimulating measures that government takes on the short term, on the medium term local, **independent entrepreneurs start taking up a more prominent role in the provision of goods and services at the local scale**, which is partly f**ed by technologies that are developed to facilitate independence and self-sufficiency**. This is how the vision of autonomous and responsible individuals expresses itself in business.

On the **long term**, this should lead to a situation where there is a **small central government**, focused on **elementary tasks**, and a **larger judicial power**. Local business is based entirely on (cooperatives of) independent entrepreneurs. Globalized forms of business still exist and are necessary to supply cities with the resources required for the economic activities that take place at the local level.

Pathways to vision 3: Green growth through innovation and engaged citizens

Required changes

The vision outlined above implies several changes that need to take place at the short, middle and long term (see Table 6.7). The changes in **culture and behaviour** primarily express a need for a different meaning of technology. Technology is an omnipresent element in our world, and we cannot leave technological development in the hands of business and government. The development of technology should be democratized, and this should serve as an instrument for the further democratization of our society. The reference to changing value systems points for a strong nuancing of the original principles underlying green growth. This change highlights the idea that a more efficient economy should not necessarily contribute to more growth, but offer room for the expression of other values that still have a relative subordinate position in our current society. This is also reflected in the types of business models and strategies that businesses should adopt. These promote a stronger sense of social and environmental sustainability among companies.

The changes in **institutional structures** are partly in support of the changes in culture and behaviour. To allow alternative value systems to play a larger role, we need to have room to experiment with these systems, and government has to create this room. Governments can also make a contribution to the democratization of technology and technology development by reducing the monopoly of business on technological development. In institutional structures the nuancing of original principles of green growth are also visible. At the same time, firms themselves need to change as well, by adopting green and social business models and techniques, thereby rebalancing economic/financial values with other values. This goes hand in hand with the explication of widely supported millennium goals at a higher scale. These millennium goals articulate recognition of the vulnerability of social and natural systems, and the limits to growth. Like the new business models, the millennium goals address the social as well as environmental dimension of sustainability.

Changes in **technology and knowledge** are only addressed in a very broad sense, which is unsurprising given the fact that the democratization of technology also implies that the direction of technological development should be determined 'along the way.' New technologies should also lead to better possibilities to express, and put into practice alternative values systems.

Transition curve

The changes described involve the creation and adoption of new technology, business models and strategies, and value systems. Some clues are offered in the vision on the types of business models that are to be developed, but in general there is some uncertainty as to what specific types of technologies, business models, and value systems are desirable. Therefore, the need for experimentation is strongly emphasized in the description of necessary changes (see Figure 6.3). These experiments should be conducted at the **short term**, and usually take the form of **bottom-up citizen initiatives**, because these are able to experiment with alternative technologies, business models, and value systems at a relatively small scale. A general guideline for the experiments is that they should contribute to social and environmental sustainability.

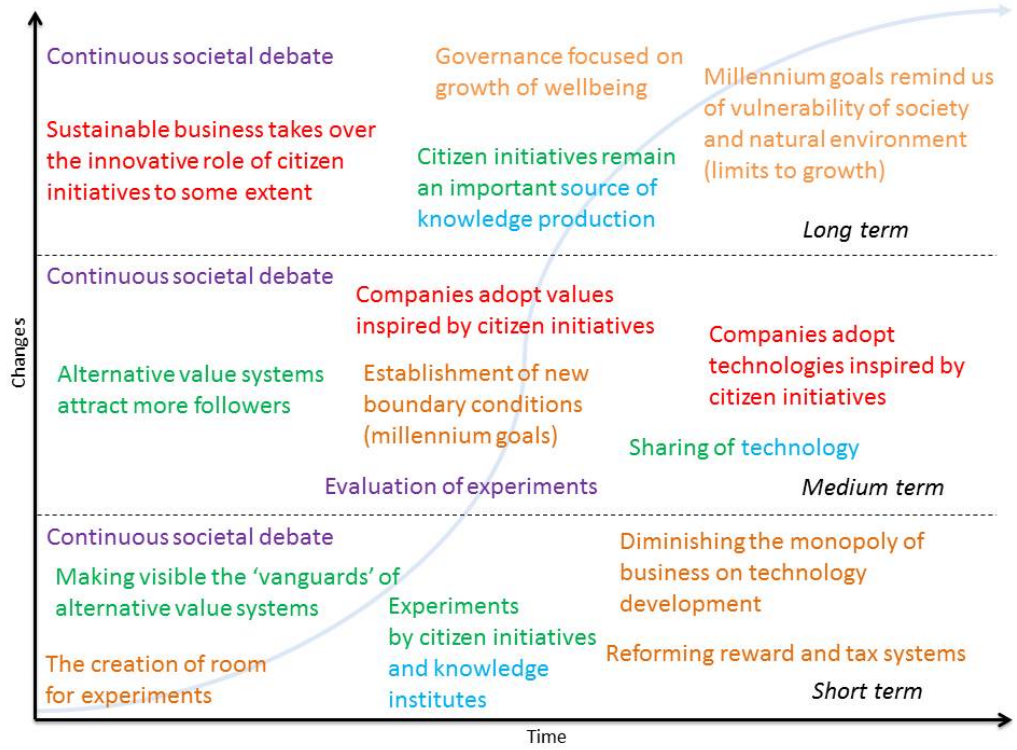
Table 6.7. Summary of changes required according to vision3.

	What (changes)?	How (activities)?	Who (stakeholders)?
Culture and behaviour	Technology needs to be democratized.	Abolishing patent systems and making knowledge open source. Citizen initiatives should take the initiative in experimenting with new technologies.	Government and citizen initiatives
	More space for other value systems.	Experimentation with alternative value systems.	Citizen initiatives
	Business should become more socially and environmentally responsible.	The experimentation with, and adoption of green and social business models and strategies, based on (among other things) experiments created by citizen initiatives.	Business
Institutional structures	Creation of room for experimentation.	Support to experimenting citizen initiatives with subsidies and political and administrative backing. Knowledge institutes should also facilitate experimentation through citizen initiatives by providing support to citizen initiatives.	Government and knowledge institutes
	Creation of room for social innovation and social entrepreneurship	Reducing monopoly of large companies on technological development by abolishing patents, open sourcing knowledge, and stimulating data transparency.	Government
	Establishment of millennium goals for sustainability (social and environmental)	Established through a democratic process, based on the results of experimentation.	Government and citizen initiatives
Technology and knowledge	Technology needs to have a democratizing effect.	The development of technology that allows for more direct democracy, based on stronger collaboration between citizen initiatives and knowledge institutes.	Citizen initiatives and knowledge institutes
	Technology must be aimed at empowering people to express	Experimentation with new technologies by citizen initiatives, in cooperation with knowledge institutes (coproduction of knowledge).	Citizen initiatives and knowledge institutes

	alternative values.		
	Technological development should make a contribution to our capacity to reach millennium goals.	Experimentation with new technologies by citizen initiatives, in cooperation with knowledge institutes (coproduction of knowledge).	Citizen initiatives and knowledge institutes

Governments should create **room for experimentation** by providing support in the form of subsidies, as well as political and administrative backing. Subsidies are necessary to finance experiments that citizen initiatives cannot finance themselves, and political and administrative backing are needed to make sure that citizen initiatives find seamless connections with governments at both the administrative and political levels. Political backing especially should help to prevent that citizen initiatives and public servants run into 'policy constraints' that the public servants cannot solve (because of lack of discretionary power). With regard to technological development, governments should also **create a better level playing field** for citizen initiatives by **diminishing the monopoly of business on technological development**. This can be achieved (at least partly) through the abolishment of patents, and by stimulating open source knowledge through regulatory measures.

Figure 6.3 .Transition curve for vision 3. Green = citizen initiatives, orange = governments, red = business, blue = knowledge institutes, and purple = all.



Knowledge institutes must also contribute to the creation of room for experimentation by **providing support to citizen initiatives**, in an attempt to achieve co-production. Governments perhaps have to act as a broker between citizen initiatives and knowledge institutes. Although the exploration of alternative value systems also proceeds through experimentation, a slightly different approach is used here. Experimentation again takes place primarily in the form of citizen initiatives, whom in this case serve as **vanguards of alternative value systems**. The government can stimulate these by **reforming our reward and taxing systems** in a way that creates a rebalances **economic/financial values with the other values** that are promoted by the bottom-up citizen initiatives. Greening our tax system should be part of this process.

On the **medium term experiments are evaluated**, and the results should feed into some form of societal debate on **new boundary conditions** for growth (social as well as environmental), which should ultimately culminate into widely supported **millennium goals**. The experiments, and the increased cooperation between citizen initiatives and knowledge institutes that this entails, will lead to a **different playing field** in which citizen initiatives and knowledge institutes are the most important partners in the production of knowledge and technology. Instead of claiming intellectual ownership over knowledge an technology that they produce, citizen initiatives and their partner knowledge institutes should nurture a culture in which **technology is shared,** among different initiatives, but also among initiatives and business. The results of experimentation and the millennium goals inspire **companies to adopt and apply technologies for sustainable development**. Thus, in the new playing field for knowledge development, firms are more dependent on the cooperating citizen initiatives and knowledge institutes as sources of inspiration. To some extent, **new businesses may be formed** as an outgrowth of citizen initiatives (citizen initiatives that transform into businesses on the medium term).

The vanguards of some **alternative value systems** should have **amassed a following** by now, by mobilizing more people. In an interplay with the emergence and development of alternative value systems, more time has been created **for other activities** besides work, which creates opportunities for expressing the alternative value systems, which takes place partly in citizen initiatives. Companies are also influenced by the alternative value systems, which means economic and financial values are balanced more with other values in business models and strategies.

On the **long term, businesses have to some extent taken over the innovative role** that citizen initiatives played on the short and medium term. This means that some of the niche functions performed by citizen initiatives are now integrated into regular business. Business itself is based on a value system in which **economic and financial values take a place equal to other values** that relate to social and environmental sustainability. This more balanced value system is **also reflected in the wider governance structures**, where the focus is no longer on stimulating economic growth, but on the growth of wellbeing in a more general sense. The **millennium goals for sustainability are still in effect**, and serve to remind us of the vulnerability of our society and its natural environment, and the limits that these put to

growth. Citizen initiatives have not disappeared entirely, because the development of technology and knowledge still takes place in cooperation between citizen initiatives and knowledge institutes, as a consequence of **democratization of technology**. Business also still depend on the lessons they can draw from experiments performed in the context of citizen initiatives.

Throughout the entire transition process a **societal debate** takes place. The need for this debate is based on the idea with which this section started: There is uncertainty about the exact steps to be taken in the future. Therefore, similarly to the second vision, a **continuous reflection** is needed on the progress made with experiments, as well as other developments. There is also uncertainty about the shape that alternative value systems will take: It is not possible now to indicate which alternative value systems are (or will be) important, but the assumption is that **economic values will be balanced more with other values**. The emphasis on democratization also entails an **emphasis on bottom-up action**, although **actions by governments are also required** to shape a good context for bottom-up action, and to translate bottom-up action to new boundaries for further growth on the long term.

6.4. Conclusions and discussion

Conclusions on the visions

With regard to the resulting visions, an interesting outcome of the first workshop is the diversity of the visions with regard to the images of man that they assume, where vision 1, on sufficiency and local communities, for examples assumes that people are socially / community oriented, while vision 2, on responsible individuals in an urban setting, is heavily oriented towards individualism, and assumes that people have a desire to be independent. The visions also make different assumptions about where the limits to growth (or planetary boundaries) are, and to what extent we have already gone beyond these limits. Vision 1 is rooted in the assumption that we may already have gone beyond the limits of growth, and therefore promotes a radical change towards degrowth. In contrast, the vision 3, on green growth through innovation and engaged citizens, assumes that there is still plenty of time to make changes that will ensure that we stay within the limits to growth on the long term. Indeed, this difference in assumptions about the limits to growth is to some extent already embedded in the distinction between sufficiency and green growth.

The second workshop been successful in delivering further elaborated visions, backcasting analysis for these visions, as well as outlines and elements for pathways and follow-up. Although in broad outlines the visions that were provided as input were maintained, in the backcasting workshop several nuances were introduced to the visions, and the visions have become less 'extreme' than their original versions. Nonetheless, vision 1 still leans most clearly

towards a society based on principles of sufficiency and de-growth, while vision 3 leans most clearly towards a society based on principles of green growth and ecological modernization. We had more difficulties in elaborating vision 2 and situating it amongst the others, as it combines several of the core principles from the two other visions, while also introducing principles that cannot be found in either of the two other visions, such as the radical individualization of society. For this vision it was also more difficult to develop a clear narrative, which currently still leaves more loose ends in comparison with the other two visions.

In general, vision 1 appears to speak to a desire of some of our participants to do more within local communities, and to (re)claim responsibility over the provision of goods and services. This localization reflects developments already ongoing in contemporary society, where citizen initiatives provide goods and services that were traditionally provided by markets (e.g., food, energy, repairs), thereby also 'bringing things closer to home.' Vision 2 also builds on trends that are currently ongoing in Dutch society, such as the shrinking welfare state and the necessity of people take responsibility for matters that used to be the responsibility of government. To some extent, vision 2 extrapolates these trends, and therefore reads like a 'warning' that we might have to take care of ourselves in the future, and become responsible for our own wellbeing. Vision 3 seems to build on principles of ecological modernization, and thereby implies the least radical changes in our current society. In its final form, vision 3 expresses a desire to live in a society where economic values still have a place, but are no longer the only leading principle in how we live how our societies are governed.

Two of the visions (1 and 3) promote an altered balance between economic values (e.g., growth) and other values systems. In our interpretation, this can be understood as a critique on the economic thinking of contemporary society. What is also interesting to observe here, is that in both visions the transition to an altered balance between economic and other values is thought to develop in a bottom-up way, in which citizen initiatives have a leading role. This points to an underlying belief that citizen initiatives are 'niches' where alternative value systems may find a place (cf. Seyfang and Smith 2007), and from which they may eventually penetrate into society at large. Also, in both visions this focus on an altered balance between values entails a transition to a governance system where the focus on welfare is replaced by a focus on wellbeing.

In the visioning workshop of November 26th 2015 we had a discussion about 'limits to growth' and the extent to which the visions take these into account. This discussion also returned in the development of transition pathways during the backcasting workshop. In the pathways for visions 1 and 3 the 'limits to growth' are recognized and anchored in the form of boundary conditions (vision 1) and millennium goals (vision 3). These are thought to emerge from the activities and experiments carried out by citizen initiatives, and the lessons that can be drawn from them. However, the exact mechanisms through which the boundary conditions and millennium goals are to be set, monitored and sanctioned are not entirely clear. There are thus some blind spots with regard to the governance mechanisms around these conditions and goals.

As becomes clear from our conclusions so far, civil society in general, and citizen initiatives more specifically are usually thought of as origin points and leading agents for several positive changes that were envisioned in the backcasting workshops. In visions 1 and 2 this is also explicitly linked to empowerment of citizens, which in turn entails a smaller government that is focused on facilitation and elementary tasks. With the risk of being overly speculative, we think that this might be related to a more general disillusion in the Netherlands with the role that governments play in the sustainable development of our societies, combined with a belief that more can be achieved if more power rests in the hands of organized citizens.

The pathways that were developed for visions 2 and 3 include mechanisms designed to deal with the inevitable uncertainties of the transition processes, such as continuous societal debate (vision 3), and reflection on, and adaptation of the vision by apolitical organizations (vision 2). Interestingly, this points out that the participants that developed these pathways recognize the inevitable uncertainties that the transition pathways are enveloped in. To some extent, the explication of the pathways is at odds with these uncertainties. It is worthwhile paraphrasing one of our workshops participants here: These change processes are very much like driving in the mist. We have a general sense of where we need to go, but we can see only 50 meters ahead of us, and we continuously have to adapt to what we encounter on the way, by which we may also alter our route.

Methodological reflections

In the first workshop we found that the dichotomy between sufficiency and green growth was very useful for both composing groups and in helping groups to develop diverse visions that build on disparate assumptions. The groups were very capable of building on the principles of sufficiency and green growth, and developing interesting and relevant visions. The sets of questions were very helpful for the group work, and the fact that each sub-group had a facilitator contributed positively to the results. The flip-over presentations were useful input for the closing discussion. As usual, the visions generated were highly conceptual and incomplete at first, and further elaboration was required for them to be suitable as input for the second workshop, and for the modelling tasks of the GLAMURS project.

During the second workshop, we found it quite challenging to do a thorough evaluation of all the visions. We noticed that it was perhaps too much for the participants to evaluate all three visions, as the amount of feedback the stakeholders generated decreased somewhat as the session progressed. Nonetheless, the evaluation helped the participants to develop a better understanding of the visions, and it gave them inspiration for the further elaboration of the vision that occurred in the afternoon sessions. Instead of doing the evaluation in facilitated sub-groups using post-its of different colours and given the smaller number of participants, it would have been possible to do this evaluation as a plenary discussion, which would have allowed for more discussion, less redundancy, but would possibly also have required more time in the program.

The further elaboration of the vision helped to fill in some of the gaps that were left in the visions after the visioning workshop. The introduction of nuances in some cases also meant that the visions drifted away somewhat from what was developed during the first visioning workshop, and in the elaboration of the visions we had to restore the connection between the results of the two workshops a bit. However, as with the first workshop, the results were rather rough and needed further elaboration and checking after the workshop.

In the preparations for our visioning and backcasting workshops we have chosen not to involve representatives of business. In hindsight, it would have made sense to involve representatives of companies that themselves working on the development of visions for lifestyles and consumer behaviour. The lack of their involvement may have caused the role of business to have been downplayed somewhat in the development of pathways for the visions, although in the elaboration of the visions and pathways we have made several attempts to introduce more ideas on the role of business.

7. Key insights and policy relevance

7.1. Key insights for the Dutch case study

Initiatives

- In the Netherlands the case study team has worked with the local energy initiative Vogelwijk Energie(k) in The Hague and with 3 Repair Café's in Delft, Schiedam, and The Hague.
- Repair Cafés are freely accessible meetings that are organised several times a month (sometimes weekly), where people gather to fix broken objects and share knowledge and experience on repairing with each other, with support from specialists such as electricians, seamstresses, carpenters, and bicycle mechanics who are involved as volunteers. Repair Cafes also have a strong social function for both the volunteers and the visitors. The Repair Café of Delft was started in 2012, the Repair Café of Schiedam in 2014, and the Repair Café of The Hague in 2011.
- Major challenges of the Repair Cafés is include that the national Repair Café foundation will focus on the international diffusion of Repair Cafes and will end support for local Repair Cafes in the Netherlands. This requires Repair Cafés in the Netherlands to develop new networks (possible at the regional level) as a replacement. Another challenge is that manufacturers design their products in a way that makes them difficult to repair and sometimes easy to break down. The national Repair Café foundation has worked together with European-level consumer organizations to lobby for improved reparability of products.
- Vogelwijk Energie(k) is a citizen-initiated energy initiative in the Vogelwijk district of The Hague (http://www.vogelwijkenergiek.nl/). Starting in 2008 it has currently around 250 members in the society and around 60 members in the associated energy cooperative that has the same board (members) as the society. The initiative is a frontrunner in the Netherlands among local energy initiatives and The goal of this initiative is to make the district carbon neutral by 2040.
- One of the main challenges that the current board members of the initiative see for the coming years is to mobilize a "second wave" of people to contribute to sustainability in their district and secondly to realize a low carbon footprint for the houses and buildings in the district that are around 100 year old. Another challenge is how to collaborate with other initiatives in the city and keep a good balance between the time spend on the own initiative and the time spend on collaboration with other local initiatives and ngo's at the national level working also on local renewable energy. One challenged that has been

solved is how to combine an energy cooperative and an association for the neighbourhood, which has been solved by establishing different legal entities having the same board members.

- Various governance arrangements were found. Repair Cafés have local autonomy, but need to use the logo and name, whereas support is provided by a national foundation. The Vogelwijk energy initiative had a hybrid governance structure in which an energy cooperative and a district society have been established next to each other, but have the same persons in the board in order to keep the two parts connected. In Rotterdam a third governance arrangement was found among urban agriculture initiatives, where collaboration is emerging with the goal to become a local social movement that can facilitate a long-term strategy and transition for local urban agriculture.

Netmaps

- The networks associated with the initiatives are quite dynamic, both in terms of the types of organizations with whom the initiatives have relationships, as well as the nature of the relationships that may change over time from positive to negative. This is not captured very well with the graphs.
- The netmap workshops were primarily useful as a learning experience for the initiative members present; they gained a better overview of the network in which they were embedded. They identified much more partners and relationships than they initially expected.

Interviews

- Motivations to join an initiative do not have to relate solely to environmental sustainability. Other types of motivations (e.g., helping other people) can be equally important, or even more important for some volunteers.
- Initiatives can contribute to wellbeing of volunteers, because of the joy of helping other people, being able to express your talents, and be recognized for that. We observed these effects primarily in the Repair Cafés. Wellbeing effects were hardly observed in the case of Vogelwijk Energie(k).
- Initiatives strengthen sustainable behaviour, but they not necessarily change it very much, with a few exceptions. When people talk about the origins of their behaviour, they usually refer to long-term developments, such as their childhood (how they were raised, and the broader context of the time in which they were raised), education or professional life. This suggests, that sustainable attitudes and behaviours may actually develop over a longer period of time.
- Sustainable behaviour does not have to be driven by the desire to be 'green.' Other drivers, such as health and convenience (e.g., for cycling) have been reported as well. So many behaviours are not performed because people want to be green, but still make a contribution to more sustainability of their lifestyle.

- People that have made sustainable behaviour part of their routines, report that it takes limited efforts to engage in those behaviours, while other people suggest that certain environmental behaviours would require sacrifices that they are not always willing to make (e.g., of financial security and comfort). Thus developing more sustainable routines, and considering pro-environmental behaviour as 'normal' is very relevant here.
- The respondents from our initiatives are generally unsatisfied with how the Dutch government deals with the sustainability challenges, and some even see their initiatives as stepping in, where the government lags behind. Most people seem to see value in bottom-up initiatives, making use of the energy available in society, but also believe that governments have an important role to play in facilitation, which they are not always doing very well.

Focus groups:

- Lifestyle satisfaction: A clear commonality among our regional focus groups and our initiative level focus groups is that the discussions on lifestyle satisfaction focused heavily on various things related to work. Some of the people in the regional level focus groups experience pressures in their work, while there were also several people that saw their work as a source of satisfaction. In the initiative level focus group all people seemed to fall in this latter category.
- Desired lifestyle changes. In all focus groups the desired lifestyle changes also referred largely to things related to work, although at the initiative level there seemed to be less desire to actually make changes in the working life, often because they had already made changes in their working life. Instead, the desired changes related more to how the participants relate to the social system of which they are part. For some people this simply means saying "no" more at work (this was largely in hindsight, as it was mentioned primarily by the retirees), and for others it meant trying to be more independent in terms of money. The people in the regional level focus group either desired to work less in order to increase the time they have for leisure, or they desired to work more to increase their job security and financial security. However, the latter people also acknowledged that this would have negative consequences for their leisure time, which they saw as something undesirable.
- Time-use and wellbeing: a striking difference between the regional level focus groups on the one hand and the initiative level focus groups on the other hand is that time-use was discussed much more elaborately in the regional level focus groups. Much of this discussion revolved around the difficulty of combining work and leisure with the chores that need to be done around the house. Another large theme had to do with the relationship between time scarcity/affluence and food habits. Other topics discussed in relation to time pressure include mobility, expenditure and the role of modern technology (e.g. social media) as a contributor to time pressure. In the initiative level focus group the discussion on time pressure revolved almost entirely around the idea that the time you

spend on work cannot be spend on other types of activities. As discussed before, social and societal pressures were also identified in the discussion.

- Drivers to sustainable lifestyle choices: In both types of focus groups drivers are a mix of contextual and individual drivers. Contextual drivers include primarily infrastructural elements, such as the way that public transport is organized, the way that cities are planned (it is faster to travel through a city by bicycle), the occurrence of traffic jams, and the availability of parking spots. Individual drivers include the attitude of people towards public transport and cars, and the satisfaction that they get out of driving a car, or using public transport. Although it is difficult to prove, based on the fact that the topic was discussed less elaborately in the initiative level focus group, some participants to the regional level focus group seemed to have a stronger tendency to choose travelling by car over travelling by bicycle or by public transport. Other drivers that were discussed in both groups concern those related to choices in the food domain. In the regional level focus group the drivers of product-use were also discussed, specifically focusing on the separation of wastes. Here, contextual drivers were more dominant, as the participants emphasized that the separation of wastes should be facilitated properly by the government.
- Barriers to sustainable lifestyle choices: In both types of focus groups we discussed barriers to sustainable lifestyle choices in relation to work. In the regional level focus group the discussion focused more on the barriers to working less on the one hand, and barriers to working more on the other hand. In the regional level focus group some of the barriers in the domain of energy related to personal preferences (individual barriers) that often had to do with the aesthetics of windmills and solar panels. At the initiative level, the barriers related more to contextual factors, such as the fact that solar panels are usually not worth the investment or the fact that insulation of houses is not always attractive. In the initiative level focus group the influences of upbringing were also discussed in the context of barriers to sustainable lifestyle choices. In this context, it was discussed that upbringing can also act as a barrier, in the sense that nowadays young people are no longer brought up with social norms relevant to pro-environmental behaviour.

Backcasting:

- Three visions and associated pathways have been developed, all in an urban setting. The first vision is entitled “Sufficiency through local communities”, the second one “between sufficiency and green growth through networks of individuals, and a third vision entitled “Green growth through innovation and engaged citizens”
- The three visions have different underlying images of man. The vision on “sufficiency through local communities” assumes that people are generally socially and community oriented, while the vision on “responsible individuals in an urban setting” assumes a more individualistic type of human being, with a desire to be independent.
- The three visions also have different assumptions about the limits to growth (planetary boundaries) and how close we already are to reaching these (or even crossing them). In this

regard the vision on "green growth through innovation and engaged citizens" is more optimistic about our ability to prevent us from crossing planetary boundaries, while sustaining a certain level of growth. By contrast, the vision on "sufficiency through local communities" promotes a de-growth scenario, based on a much more pessimistic outlook on close we are to the planetary boundaries and the need to end economic growth.

- The visions on "sufficiency through local communities" and "green growth through innovation and engaged citizens" both promote a 'rebalancing' of values, where economic values are down-weighed somewhat, and other values such as wellbeing become more important. This can be interpreted as a critique of the value system(s) underlying our current-day society. In the transition narrative, both visions promote a change towards an altered governance system, where a focus on welfare is replaced by a focus on wellbeing.
- In the transition narratives for the visions on "sufficiency through local communities" and "green growth through innovation and engaged citizens" there is an element that refers to "limits to growth", which are made explicit by setting boundary conditions or millennium goals. These are thought to emerge from the activities and experiments carried out by citizen initiatives, but the exact mechanisms through which they are established, monitored and sanctioned are unclear.
- In general, in all three visions citizen initiatives are assumed to be important and leading change agents for positive changes in the transition narratives. In the visions on "sufficiency through local communities" and "responsible individuals in an urban setting" this is explicitly linked to the empowerment of civil society, combined with a reduced role for government.
- In the visions on "responsible individuals in an urban setting" and "green growth through innovation and engaged citizens" the transition narratives explicitly included mechanisms designed to deal with uncertainties of the unfolding transition process. In the former vision this mechanism takes the form of apolitical organizations that reflect on changing circumstances, and adapt the vision accordingly. In the latter vision the mechanism is continuous societal debate.

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Appendix A: Some data on three Repair Cafés

Based on Kropcheva et al. (2015) and follow-up contacts with the Repair Cafes in Delft, The Hague and Schiedam, the following information, including Table A1-A3 can be given. In general, a Repair Café meeting is organized once a month (but sometimes more often) by a team of around 15 volunteers. The organizers are typically also involved in the repair tasks themselves. Numbers derived from the annual Report 2013 of the Repair Cafés. In the report itsuggest that the Repair Cafés contribute to saving 2,250 kg of CO_2-emissions every month, which (if aggregated to a yearly reduction) is approximately equivalent to the amount of CO_2-emissions of 4 households. It is also estimated that the average household can save about €75,- per appliance repair costs and the lifetime of appliances is estimated to be extended by 25%.

Table A1: Quantitative characteristics Repair Café Delft.

Repair Café Delft	
Number of monthly participants	60-70
Characteristics of participants	Average age: around 50; Annual income 30.000 Euros Slightly more male participants
Number of volunteers	Around 30 of which 12-18 are active
Opening hours	Every first Saturday of the month from 11.00 - 15.00
Location	Science Centre Delft (part of TU Delft)
Other organisations involved	Gamma (providing tools), Gemeente Delft and Science Centre
Main items repaired/expertise	Mainly electronics; strong “technical” expertise
Theme, prevailing culture	"tech" atmosphere

Table 2: Quantitative characteristics Repair Café Schiedam.

Repair Café Schiedam	
Characteristics of participants	Average age: around 65; Annual income just above 30.000 Euros; Slightly more male participants
Number of volunteers	15 volunteers
Opening hours	Every third Saturday of the month from 9.30 - 12.00
Location	"Meeting centre" in Schiedam
Other organisations involved	City of Schiedam / Het vrijwilligerscafe
Main items repaired/expertise	Almost only electronics
Theme, prevailing culture	Urban atmosphere

Table 3: Quantitative characteristics Repair Café Den Haag.

Repair Café Den Haag	
Number of monthly participants	40-45
Characteristics of participants	Average age: around 60; Annual income around 30.000 Euros Slightly more female participants
Number of volunteers	20 active volunteers & 10-15 less regular attending volunteers
Opening hours	Final Saturday of the month from 11.00 - 13.00
Location	Variable: from energy fairs to community centres and city farms
Other organisations involved	Rabobank / Stadsboerderijen (city farms)
Main items repaired/expertise	Mainly electronics and some clothes
Theme, prevailing culture	Itinerant repair headquarters of the city

Appendix B: Workshops programs

Table B1. Program for visioning workshop of November 26th, 2015.

Time	*Activity*
9.00.-9.30	Walking in, coffee and tea
9.30-10.00	Check-in & introduction
10.00-10.30	Introduction to Glamurs-project, with focus on research in the Netherlands
10.30-11.00	Break: coffee & tea
11.00-12.00	Drivers of & Barriers to sustainable lifestyles (problems, drivers, opportunities)
12.00-12.30	Plenary feedback & discussion on brainstorm
12.30-13.30	Lunch break
13.30-14.00	Introduction of program for the afternoon
14.00-15.00	Vision development and backcasting session in subgroups
15.00-15.30	Break: coffee & tea
15.30-16.30	Plenary feedback & discussion on visions
16.30-17.00	Closing discussion and comments on follow-up
17.00-18.00	Drinks

Table B2. Program for backcasting workshop of March 1st, 2016.

Time	**Activity**
9.15 – 9.30	Walking in, coffee and tea
9.30 – 10.00	Check-in and introduction
10.00 – 10.30	Introduction to Glamurs & presentation results of vision workshop (26-11-2015)
10.30 – 11.00	Break: coffee and tea
11.00 – 12.00	Creative/constructive evaluation of 3 visions in subgroups
12.00 – 12.30	Plenary feedback and discussion
12.30 – 13.30	Lunch break
13.30 – 14.00	Introduction of program for the afternoon (backcasting and implementation session)
14.00 – 15.00	Backcasting and implementation session in subgroups
15.00 – 15.30	Break: coffee and tea
15.30 – 16.30	Plenary feedback and discussion on backcasting and implementation session
16.30 – 17.00	Closing discussion, follow-up and check-out
17.00 – 18.00	Drinks