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

Work Package 5

Deliverable 5.2: *Report on future lifestyle pathways and workshops*

EU FP7 SSH Call: 2013.2.1-1- Obstacles and prospects for Sustainable lifestyles and Green Economy. Grant Agreement number 613420

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Summary

- A participatory backcasting methodology has been developed for the GLAMURS project, entitled participatory backcasting for sustainable lifestyles and a green economy. It consists of two stakeholder workshops; a first workshop for problem exploration and development of visions for sustainable lifestyle and a green economy followed by a second workshop focussing on pathways and implementation.
- In seven regions studied in the GLAMURS project pathways and implementation workshops have been successfully executed using the developed format and guidelines with the flexibility to adjust to local aspects and available expertise in the organising teams.
- In order to get sufficient diversity in the generated visions, the distinction between a sufficiency society based on degrowth and moderation of consumption and a green growth society based on solving sustainability problems via environmental innovation and a circular economy has been used as an input for the vision workshops and the pathways and implementation workshops consequently.
- The second workshop round attracted on average 10-15 participants from civil society and bottom-up initiatives, government, and knowledge institutions, whereas the presence of business was lower.
- Methods applied during the backcasting pathways workshops are rather similar, but show some diversity, which all contributed to reaching the goals as set..
- Considerable learning has taken place among both participants and local case study team organisers.
- Fourteen pathways and implementations proposals based on the (elaborated) visions have been generated. In all workshops it was needed to process workshop results further and to elaborate on the pathways to provide a coherent and integrated storyline.
- Visions have been compared on several dimensions including (1) sufficiency versus green growth, (2) individual versus community orientation, (3) governance by government or market, and (4) urban versus rural focus. The combination of the first and fourth dimension appeared most useful to show diversity in the set of visions and reveals four clusters of visions.
- The four clusters of visions that emerged are: a cluster of four rural sufficiency visions, a cluster of four urban sufficiency visions, a cluster of four green growth visions, and a cluster of two "other" visions.
- Based on these four (sub)clusters pathways have been compared on (1) cultural-behavioural changes, (2) technological changes, (3) structural policy institutional changes and (4) organisational changes.
- It is recommended to elaborate the four clusters of visions further in order to develop pathways and recommendations that have not only broader relevance for countries in Europe, but also have relevance at the European level.

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Contents

PART 1: BACKCASTING INTRODUCTION AND METHODOLOGY

1. Introduction

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 from 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 results should be aligned with the objectives of the Europe 2020 strategy and the Resource Efficiency Flagship Initiative. The project will also develop and assess forward-looking scenarios and desirable visions for transitions through a combination of expert input, stakeholder input, and the involvement of citizens business, and government actors at the regional level.

The empirical work in GLAMURS is done in seven regions across Europe and consists of research at the regional level as part of WP4 and of in-depth collaborative research with citizen sustainability initiatives in the seven regions covered by WP5. The seven regions in Europe studied in GLAMURS are (1) Banat Timis; the region around Timisoara in Romania, (2) Central Germany; the region around the city of Halle, (3) the Danube-Bohemian Forest region in Upper Austria; (4) Galicia in Spain, (5) Lazio including Rome in Italy, (6) the Rotterdam-Delft-The Hague metropolitan region in the Netherlands and (7) Aberdeenshire in Scotland. For an account of regions and initiatives, see Omann et all (2015) (Deliverable 5.1) and for regional analysis see Deliverable 4.2 Dumitru et al (2016).

According to the GLAMURS Description of Work (GLAMURS 2013), the objectives of WP5 are to investigate sustainable lifestyle initiatives in seven regions across Europe in order to advance our understanding of (i) the determinants of the adoption and evolution of sustainable lifestyles and the resulting alternative consumption-production systems, (ii) the obstacles and prospects for the spread of alternatives from niches to regime and landscape levels, (iii) the changes in lifestyles, and the effects of these changes on (iv) levels of wellbeing and (v) on environmental footprints, so that more clarity is gained on how the initiatives in the case study regions can be strengthened and brought forward.

1.2 Backcasting for sustainable lifestyles and a green economy

In the empirical work packages of the GLAMURS project (WP4 & WP5) two series of stakeholder backcasting workshops for sustainable lifestyles and a green economy have been included. Task 4.3 (T4.3) guides the first series of workshops consisting of participatory backcasting scenarios workshops in all seven regions studies in the GLAMURS project, and Task 5.3 (T5.3) is meant for backcasting pathways and implementation workshops. These two series of workshops are connected in an integrated backcasting methodology that has been developed for application in the GLAMURS project, but have broader relevance for sustainability transitions at the level of regions and cities that want to include consumer lifestyle as well as economic aspects. The aim of the two tasks is to develop backcasting scenarios for sustainable lifestyles and a green economy at the regional level, and to develop backcasting pathways and implementation agendas contributing to bring about future sustainable lifestyles and a green economy for all case study regions. The description of the GLAMURS backcasting methodology for sustainable lifestyles and a compilation of results from six workshops across Europe has been reported elsewhere (Quist and Leising 2016a).

The current report on Task 5.3 comprises conducting backcasting pathways and implementation workshops for future integrated sustainable lifestyles for each case study region. The backcasting pathways and implementation workshops conducted in each of the case study regions build on the results from the qualitative and the quantitative analyses in WP 4 and 5 and will involve relevant stakeholders in each region. The workshops focused on how to diffuse, mainstream and integrate sustainable practices and lifestyles through developing transition pathways and implementation agendas and how these can contribute to the backcasting scenarios developed in T4.3 (and reported in D4.3 accordingly). Task 5.3 consists of:

1. Developing backcasting pathways and implementation workshop methods for the lifestyle niches as a follow up of Task 4.3;
2. Conducting backcasting pathways and implementation workshops in each case study region
3. Report and summarise results of the workshops and make a cross-case evaluation.

1.3 Outline of this report

This report makes up D5.2, which is the deliverable on T5.3. It consists of three main parts. The first part includes this introduction (Chapter 1). In Chapter 2 it presents the backcasting methodology for sustainable lifestyles and a green economy at the regional level as it has been developed for the GLAMURS project. It comprises both the backcasting scenario workshops of task T4.3 and the backcasting pathways and implementation workshops of Task T5.3. Chapter 2 also includes the practical guidelines for the second series of workshops. The second part consists of chapters on each backcasting pathway and implementation workshops in seven regions in Europe studied in the GLAMURS project. The third part finally compares the different results of the pathway workshops across the European regions both on its applied methods and actual results. This deliverable closes with overall conclusions and recommendations. As mentioned, results from

the first series of workshops can be found in another report from the GLAMURS project (Quist and Leising 2016a).

2. GLAMURS backcasting workshop methodology

2.1 Backcasting workshop methodology

2.1.1 Starting points for the GLAMURS backcasting methodology

The starting points discussed below have been discussed with the researchers of GLAMURS and are also the outcomes of discussions organised during partner meetings. More details on backcasting can be found in Quist (2016) and Quist (2013) and details on the GLAMURS backcasting methodology in Quist and Leising (2016a).

Backcasting as a workshop tool

To start with, in the GLAMURS proposal, as well as in the DOW, T4.3 and T5.3 have been described as Backcasting workshops, not as a full backcasting approach. That means that the emphasis here is on backcasting as a workshop tool in which relevant stakeholders gather. In the first series of workshops (T4.3) visions or normative backcasting scenarios for sustainable lifestyles and a green economy have been developed for each region studied. In the second series of workshops (T5.3) the emphasis has been on assessing and complementing the backcasting scenarios, in addition to define pathways and implementation and follow-up agendas. The latter should in particular lead to plans and agendas for stimulating the lifestyle domains that are studied in a specific region and should include benefits for initiatives, though not necessarily only for the initiatives under study. There seems to be more value to consider initiatives at the regional level as a cluster or a network, rather than as one specific initiative.

Focusing on backcasting as a workshop tool has two implications. The first one is that only qualitative elaboration can take place. As far as any quantification of the scenarios can take place at the regional level, this needs to take place in other work packages on environmental analysis or economic analysis, as also described in the GLAMURS DOW. Second, both series of workshops require preparatory activities and post-workshop activities in order to be able to get all results out of the workshops. For instance, it might be needed to extend the existing actor & stakeholder analysis from T5.1 at the regional level, depending on how much has been done at the regional level, to extend also on major lifestyle and consumption issues in each region before the first workshop, building on the regional analysis. The work done already as part of T5.1 can be used for the backcasting workshops. Furthermore, workshops mainly result in useful but rather fragmented results that need further elaboration by the case study research teams.

Visions of sustainable lifestyles

Another issue is how to generate several sustainable lifestyle visions at the regional level that show on the one hand sufficient diversity for a specific region and that at the other hand provide some similarities across the seven regions studied in GLAMURS. Therefore, it has been proposed not to work with an entirely free brainstorm around a question like "How can we get a sustainable lifestyle in 2050 in this region" in the first series of workshops, but to use major

dimensions that can make up a scenario logic that can be used for all regions and all lifestyle domains.

Originally two dimensions have been discussed:

1. **Sufficiency versus green growth & eco-efficiency**. Sufficiency stands for consumption and lifestyles in which the level of material consumption is strongly reduced, and in which quality of life is more determined by wellbeing, social relationships, more quality time, less time pressure. It can also be related to alternative economic models like degrowth, steady state (developed by Herman Daly), and Tim Jacksons (2009) plea for prosperity without growth. By contrast, eco-efficiency in consumption stands here for consumption that relates to green growth and the current discussions on circular economy. Green growth has been described as a path of economic growth that uses natural resources in a sustainable manner. It is used globally to provide an alternative concept to typical industrial economic growth. Circular Economy has been described as an economy producing no waste and extending the lifetime of products and materials before recycling. Key is here reducing environmental impact by technological improvement, without changing our excising lifestyle, way or life, or our economic logic in a fundamental way. Instead, the concept of green growth builds on developing so-called clean-tech industries (e.g. renewable energies, water production, bio-based industries), whereas the concept of circular economy builds on closing material cycles as much as possible through maintain, re-use, retrofit/remanufacture, and recycle products as much as possible.

2. **Collaborative consumption & do-it-yourself versus servicing-out or purchasing products** (the latter building on regular market transactions and traditional business models). On the one hand this dimension builds on developments in prosumers and collaborative consumption. This includes consumers or communities that increasingly produce services or products themselves and provide them to each other. Good examples can be found in energy (citizen energy cooperatives), mobility (peer-to-peer car sharing), and in Local Social Economies using community LET (local exchange trading) systems and local currencies in which services are exchanged and tools can be borrowed. On the other hand, this is contrasted by regular buying products and services via individual market transactions. However, a market orientation does not suggest that this cannot be part of a sustainable lifestyle, but that the sustainable lifestyle is based on sustainable products and services that are supplied by either SMEs or larger producers.

After discussions in the GLAMURS project, it was concluded that the distinction between sufficiency and green growth is more meaningful for stimulating diversity of visions in the backcasting workshops than the second distinction between collaborative consumption and regular purchasing of products and services via markets and transactions. Collaborative consumption and a market orientation do not necessarily exclude each other and can be combined in a single vision, whereas that is not the case for sufficiency versus green growth. Nevertheless, an intermediate position of socially embedded growth has been proposed (Smulders 2015), covering a position between green growth and sufficiency. Another meaningful distinction emerged after the workshops (see chapter 10) and is about the distinction between rural and urban contexts, as well as government focus versus market orientation (see chapters 3 and 10).

Stakeholder benefits and co-production of knowledge

Furthermore, the two series of workshops also contributes to additional stakeholder benefits and co-production of knowledge in the GLAMURS project through:

- Exchange of experiences and knowledge between initiatives in the case study regions
- Contributing to region-wide dialogue among relevant stakeholders, in particular stimulating discussion and exchange between bottom-up initiatives, regional authorities & relevant policymakers, as well as other relevant stakeholders in the region
- contributing to learning among stakeholders and commitment for the outcomes of GLAMURS research at the regional level, including support measures for initiatives in the lifestyle domains studied in a region
- Contributing to agendas, plans and proposals for diffusing the lifestyle and the topic of the initiative within region, and contributing to creating agency and support for that.
- Exchange of relevant experiences from cases across Europe, e.g. through dissemination at the workshops taking place. This can be done in addition to the stakeholder case study exchange program that is currently being developed within GLAMURS.

The backcasting workshops should also be seen as instruments for co-production of knowledge, as stakeholders have the opportunity not only to contribute through their knowledge and learn from each other, but also to articulate questions and issues that may need further attention in the case studies or elsewhere in the project.

Linking the workshops of T4.3 & T5.3

Another starting point is that the WP4 workshops and the WP5 workshops are connected in a combined backcasting methodology. Moreover, in both workshops there must be time to discuss issues and barriers for initiatives and their lifestyles, in order to generate (sufficient) stakeholder benefits to them, not only between initiatives, but also with other relevant stakeholders (e.g. government officials). So, both backcasting workshops will be organised at the regional level. One additional advantage is that both workshops will have the same target group consisting of key persons on sustainable lifestyles and sustainable consumption in the region (policy makers, researchers) in combination with key people from the initiatives under study as well as related initiatives.

2.1.2 GLAMURS backcasting methodology for sustainable lifestyles and a green economy

Based on the starting points discussed above, T4.3 and T5.3 have been turned into the following backcasting methodology for sustainable lifestyles and a green economy. It consists of a strategic problem orientation that is conducted in T5.1 and a backcasting pathways and implementation workshop that is reported in this deliverable.

STEP 1 Strategic problem orientation	**Done as part of T5.1**
STEP 2 Backcasting vision workshop	**T4.3 consisting of:** A. Method Development B. Workshop Preparation stage C. Vision Workshop day D. Post workshop activities E. Cross case comparison & preparing D4.3 (TU Delft)
Steps 3-5 Backcasting pathways and implementation workshop	**T5.3 consisting of:** A. Method Development B. Workshop Preparation stage C. Backcasting Workshop day D. Post workshop activities E. Cross case comparison & preparing D5.2

Table 2.1: Backcasting workshop methodology for the Glamurs project

2.2 Task 5.3 Backcasting pathway workshop guidelines

2.2.1 Overview and introduction

Goals for the second series of workshops include:

- Assessment and further development of future visions for sustainable lifestyle visions at the regional level and an inventory of issues and potential solutions for the region through backcasting techniques.
- Participation of a wide range stakeholders to not only inform build awareness and learning among the stakeholders involved with respect to the future vision, the consequences, the agenda and the views and perspectives of others.
- Learning by stakeholders, through defining pathways and a follow-up agenda of activities for various groups of stakeholders in line with the envisioned desirable future.
- Specific agendas and proposals for the lifestyle domains under study and diffusion of the associated lifestyles.

The table below distinguishes subtasks A-E and mentions activities for each subtask that have been conducted for preparing and conducting workshops as well as for processing workshop results after the workshop and reporting to participants as well as within the GLAMURS project. Details for steps and activities can be found in this Deliverable D5.2 (Quist and Leising 2016b).

A. Method Update TU Delft	1. Developing methodological updated for T5.3 workshop based on experiences and results of T4.3 workshops
B. Workshop Preparation stage all case studies	1. Additional round of vision specific stakeholder identification 2. Stakeholder re-engagement 3. Practical workshop organisation and development workshop program 4. Writing input document
C. Worksop day all case studies	1. Welcome and introduction 2. Presentation of visions & other outcomes of 1st workshop 3. Evaluation of visions & further development of visions session 4. Development of pathways, agendas and implementation proposals 5. Subgroup presentations, final discussions and evaluation 6. Drinks & informal gathering
D. Post workshop all case studies	1. Evaluation among participants and among organisers 2. Report in country language 3. Further elaboration/processing of the visions 4. Summary report in English
E. Cross case TU Delft	1. Comparing process (learning & participation) & applied methods across cases 2. Comparison of workshop backcasting and pathway results in case studies 3. Compiling Deliverable

Table 2.2: Phases, steps and activities for T5.3 Backcasting & pathways workshop

2.2.2 Subtask A: Method Development

The result of this subtask is the current chapter.

2.2.3 Subtask B: Workshop Preparation stage

B. Workshop Preparation stage all case studies	1. Additional round of vision specific stakeholder identification 2. Stakeholder re-engagement 3. Practical workshop organisation and development workshop program 4. Writing input document

This subtask is largely similar to the first series of workshops.

B1 Additional round of vision specific stakeholder identification

Based on the stakeholder identification for the first workshop, it can be checked whether the developed visions point to new stakeholders that were not included in the first workshop, but could be engaged in the second workshop. This means that (partly) new participants joined in the second workshop. This is considered as a feasible and valuable option as long as significant share first workshop participants could attend the second workshop too.

B2 Stakeholder re-engagement

Participants needed to be (re)mobilised, in particular if the previous workshop was more than six months ago, which was not the case in any of the GLAMURS regions.

B3 Practical workshop organisation and development workshop program/script

This subtask is similar to the first workshop and can be found in D4.3. A location and room needed to be reserved four to eight weeks before the workshop. The venue could be at the university or institute or outside. It was important that the location allowed both for plenary sessions for all participants and for working in smaller groups of 4-5 persons. Group work can be both in separate rooms (if available), or in the main room. Obviously, catering (coffee, tea, lunch, drinks after) needs to be organised. Another important consideration was the preferred positioning of the participants in the location: in a square, around tables, or regular.

Whereas a program outline is given below, it has been recommended to make a more detailed workshop script of 3-5 pages, which shows the program at the level of quarters of an hour. This detailed script also contained the questions for different parts of the workshop day, as it allowed for focusing on the (social) process of the workshop. The facilitator also included elements like name badges, paper, flip-over (sheets) and other brainstorming material and details about minute taking or recording plenary discussion sessions.

B4 Writing input document

This subtask is similar to the first workshop and can be found in D4.3. Before the workshop day, information needs to be provided to the participants about practicalities, the program, some information on the project and the developed visions in the first workshop. The practicalities also covered a checklist on equipment needed during the workshop, like flip-overs, tape to hang sheets, recording equipment, laptop and beamer.

2.2.4 Subtask C: Workshop Day

C. Workshop day all case studies	1. Welcome and check-in, introduction 2. Presentation of visions and other outcomes of first workshop 3. Evaluation of visions and further development of visions session 4. Development of pathways, agendas and implementation proposals 5. Subgroup presentations, final discussions and evaluation 6. Drinks and informal gathering

C1 Welcome and introduction

This part of the workshop was intended for the participants to get to know each other and the GLAMURS project, especially when new participants were present in the second workshop.

C2 Presentation of visions and other outcomes of the first workshop

To get all different participants at the same 'entry level', the outcomes of the first workshop were presented. The emphasis was on the visions since these were central in the second workshop

for elaboration. The developed first workshop visions were also part of the input documents sent to the participants before the workshop.

C3 Evaluation of visions and further development of visions session

This part of the workshop had not only a "content" purpose, but it was also meant to get participants (re)acquainted with the vision results of the first workshop. The vision assessment session could be done plenary if there were not more than three visions, whereas it could also be done in sub-groups. In that case an exchange between the different session results was needed. The evaluation technique proposed here builds loosely on Edward Debono's six thinking hats method, on which plenty of sources can be found on internet[1]. The core of this method is to approach an issue from different angles or perspectives in order to identify a better solution or response to this issue; each hat has a different colour, which is connected to a different perspective. For the backcasting and pathways workshop, a modified version was proposed, in which not six but four or five hats were used. For each vision the following qualitative questions could be asked, but it was recommended to limit to four or five questions:

- What is your first (intuitive) response to this vision? What do you (dis)like about this vision?
- What is positive about this vision?
- What is negative about this vision?
- What is missing in this vision?
- What is novel and interesting in this vision?
- What is critical for this vision?

This evaluation could be done both in a plenary session and in sub-groups. If sub-groups were formed a feedback session was recommended in which the groups exchange results. If evaluation was done in a plenary setting, it was also recommended to have a final concluding discussion on main points and suggestions of the three visions as inputs for the afternoon vision session.

Practical

When using the method based on the thinking hats, timing and keeping time is essential. With two visions, four questions and 5 minutes for each question the evaluation can be done in 40 minutes, which allows for some flexibility. However, if using the fifth question with three visions, then 75 minutes are needed, which takes nearly twice as much time.

Other evaluation tools

A range of other (vision) evaluation tools can be applied. This is possible, as it is about the objectives, but tool and results need to be explained sufficiently in order to allow for a comparative evaluation.

The results of this session were lists of evaluation remarks and improvement suggestions for the visions.

[1] Other constructive evaluation methods exist too, and can be adjusted for vision evaluation.

C4 Backcasting and development of pathways, agendas and implementation proposals

For the afternoon session on backcasting and pathways, four phases can be distinguished:

1.Making groups for each vision

2.Working in groups on further vision elaboration and backcasting

3.Follow-up work in groups on development of concrete actions, pathways and concrete implementation recommendations and proposals

4.Making presentations by each group

C4.1: Making groups

It was suggested to do this part in groups of four to six persons. It was recommended to let participants choose the vision they want to work on, and to allow more than one group to work on the same vision. When working with more than two visions, participants could be asked to give a first and second preference. Of course, it is important that backcasting is applied to all visions generated in the first workshop, so there should be at least one group working on each vision.

C4.2: Working in groups on further vision elaboration and backcasting

Three groups of questions could be distinguished: (1) questions asking for assumptions or conditions and questions aiming at further vision elaboration building on the issues identified by the case study teams, (2) real backcasting (what-how-who) and (3) questions asking for staging activities in short-term, midterm and long-term, as well as concrete activities and proposals that can be started right away.

The first group of questions asks about assumptions for further elaboration of the vision. The vision-elaboration questions should be seen as examples, and could be extended with other questions. However, it was realised that extending the list with questions requires additional discussion time.

- What are important assumptions or conditions for this vision?
- How do people life their everyday life in this vision (e.g. with regard to the GLAMURS lifestyle categories)?
- What is the role of other actor groups (e.g. government, business) in this vision?
- What is the role of citizen initiatives in this vision?

The second set of questions asks for backcasting elements (changes, actions-activities and actors, also referred to as WHATs-HOWs-WHOs).

- **What** changes are needed (in different domains, see also Table 2.3)?
- **How** can these changes be realised? What actions and measures are needed to bring about changes?
- **Who** should do these activities (government, citizens, NGOs, other)?
- **What** are drivers and barriers for this vision?

WHAT (change elements)	HOW (activities)	WHO (stakeholders)
Cultural-Behavioural Changes		
Technological Changes		
Structural-Policy Institutional Changes		
Organisational changes		

Table 2.3: Example of result table for the backcasting discussion

The four categories named in Table 2.3 are meant as broad categories (and as a checklist):

- Cultural-behavioural changes include all changes related to culture, paradigms, societal values and behaviours.
- Technological changes include all new innovations and infrastructures needed for bringing about the envisioned society.
- A structural-policy-institutional change is a category that includes changes in the economic or social structure in a society including regulations, policy changes or economic principles. Structural changes may also include changes in the industrial or service sectors, e.g. the rise of new sectors like urban agriculture and the decline of existing sectors (e.g. meat industry).
- Organisational changes are more at the level of how the provision of services and products are organised. Prosumers are an example, or how to do this in a community-oriented sufficiency society.
-

C4.3 Pathways and follow-up proposals

The third set of questions deals with staging (short-term, midterm and long-term) and with defining specific proposals and ideas that can be started right away:

- How can activities from the backcasting discussion be planned on a timeline and what needs to be done on the short term (till 2020), midterm (till 2030), and long-term (2040), distinguishing between (1) bottom-up initiatives and civil society (2) government and policy makers, (3) research and knowledge organisations, (4) producers and utilities? What are in particular opportunities and actions for bottom-up initiatives?
- What are specific proposals and ideas that can be started right away and will fit in envisioned sustainable lifestyles?
- What can be recommendations for different actor categories (government, civil society, bottom-up initiatives, firms, research)?

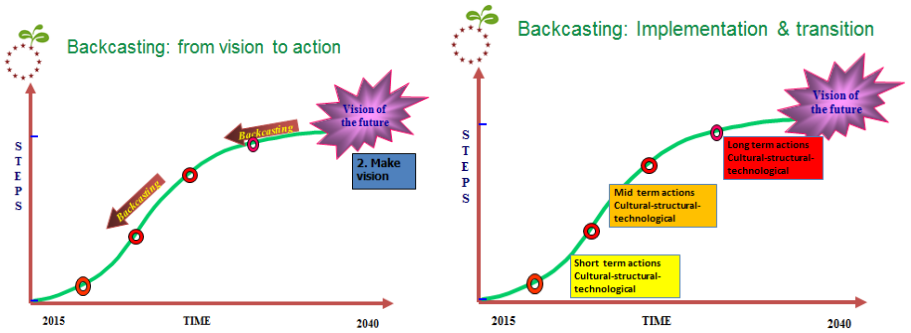

Figure 2.1: Example of the S-curve for transitions (left) added with activities (right).

The proposed table below (Table 2.4) is quite detailed, and can be complemented with a transition S-curve (see Figure 2.1) on which post-its with activities can be stuck. Sometimes it can be more useful to put midterm and long-term together, as it can be quite time consuming. Alternatively, flip-over sheets can be provided on which transition or backcasting S-curves have been drawn and on which groups could stick notes with activities or write them simply on the sheet (see Figure 2.1 above for both backcasting and defining activities and pathways). This gives more an overarching picture, whereas the table below are more detailed and comprehensive.

Activities & results till 2020	**Activities & results till 2030**	**Activities & results till 2040**
Public Interest-Citizens Initiatives-Consumers-Civil Society Domain		
Citizens-consumption till 2020	Citizens-consumption till 2020	Citizens-consumption till 2040
Government-policy domain		
Government till 2020	Government till 2030	Government till 2040
Research & knowledge domain (including technology development)		
R&D till 2020	R&D till 2030	R&D till 2040
Business-Industry-Producers-Utilities Domain		
Production till 2015	Production till 2030	Production till 2040

Table 2.4: Example of result table for the timeline discussion

C5 Subgroup presentations, final discussions and evaluation

Similar to the first workshop, small groups needed to present their results in a plenary, preferably using a flip-over sheet or otherwise PowerPoint slides. A final discussion moreover was needed as a "check-out", to get responses on how the workshop had been perceived, what had been the usefulness, what participants had learnt, and what they take home. In particular interesting was to discuss explicitly what ideas and proposal and next steps could already be taken up by participants or their organisations. Then follow-up and agenda "implementation" could already start.

Alternative methods for backcasting and pathways/implementation

What is presented here is one method that has been widely tested and used. However, other and related methods are around and in general the proposed methods needed to be adjusted to local culture and the skills and experiences in the local case study team. In addition, alternative methods can contribute to testing a larger set of tools within the GLAMURS workshops.

C6 Drinks and informal gathering

Finally, the opportunity was given for informal discussions among the workshop participants.

2.2.5 Subtask D: Post-workshop activities

5.3D. Post workshop all case studies	1. Evaluation among participants and among organisers 2. Report in country language 3. Further elaboration/processing of results 4. Summary report in English

This structure is similar to the first workshop part; a more detailed format – in line with the T4.3 summary report format – will follow.

D1 Evaluation among organisers, also based on participant feedback

This was done during case study team meetings after the workshop.

D2 Report in country language

The reports (as presented in a shortened version in Chapters 3-9 have first been written in the country language.

D3 Further elaboration/processing of results

In general, the workshops results are rather fragmented and conceptual and need to be processed and elaborated by the case study teams. This includes further development of pathways

and determining follow-up recommendations and proposals. This part includes feeding relevant results into WP6 and WP7. This has become a separate activity that will go on after completing this deliverable and will be reported on elsewhere in the GLAMURS project.

D4 Summary report in English

The format is shown in Appendix A. These reports were the main inputs for the chapters in Part 2 (Chapters 3-9).

2.2.6 Subtask E: Cross-case comparison

This will be done as part of preparing this deliverable and consists of the activities tabulated below.

5.3E. Cross case TU Delft	1. Comparison of workshop results in case studies 2. Comparing experiences & learning across cases (among organisers & by participants) 3. Compiling Deliverable D5.2

E1 Comparing process and methods across cases

Results from all workshops have been compared on the following aspects:

1. preparatory activities
2. participation and process aspects
3. applied methods and whether and how this related to the content results
4. observed learning and reflections.

E2 Comparing visions and content results

Visions have been compared on how they relate to the proposed distinction between (1) sufficiency and green growth and on other dimensions like (2) individual versus community orientation, (3) market versus government orientation, and (4) the extent in which visions were rural or urban. For each dimension the visions were ranked on a 7 points scale. Whereas first estimates were made by the editors of this report, a check among all case study teams that organised the backcasting workshops was conducted in order to get this confirmed or adjusted. This was done by using an easy-to-use tool in a spreadsheet program. It needs mentioning here that the sufficiency versus green growth distinction was used as an input to the workshops, whereas the other dimensions emerged from the vision results. They are meaningful, but were not considered before the workshops.

E3 Compiling deliverable D5.2

The result is the current report.

PART 2: RESULTS OF PATHWAY WORKSHOP PER REGION

3. Vision workshop results Austria

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3.1 Introduction

On 26th of February 2016 the Austrian case study team organised the second back casting workshop of the GLAMURS project. The aims of this workshop were (1) to refine the developed vision as well as (2) to define concrete steps (pathways) in order to make the vision come true by the year 2040. Again stakeholders from initiatives, the civil society, business, faming, schools and government, who are interested in the given subject, were invited to this second workshop. With one exception the participants already took part in the first workshop. The workshop was facilitated by Ines Omann, Wolfgang Mader and Paul Lauer and was held in the Gasthof Haderer in Lembach, which is one of the partner companies of the Bioregion, one of our initiatives. In this chapter we outline the activities that we performed in preparation of the workshop, and we present the results that have been achieved at the workshop, which are mainly the pathways for the eight lifestyle domains.

3.2 Workshop preparation

Updated stakeholder analysis

The stakeholders we identified for our workshop are similar to the ones for T4.3. Also for the second workshop we tried to get a balanced representation from local policymakers, knowledge institutions, initiatives and SME's. As almost all the participants of WS1 were willing to also take part in WS2, the composition of stakeholders stayed the same.

Stakeholder mobilisation

Identically to the first workshop the stakeholders were invited via mail and phone by Klaus Diendorfer, manager of the Leader region. As many of the stakeholders were interested in taking part right away, the process of mobilisation again was rather short.

3.3 Workshop results

Overall program and welcome session

The workshop took place at "Gasthof Haderer" in Lembach (Mühlviertel), one of the partner SMEs of the Bioregion, one of our GLAMURS initiatives, on the 26th of February 2016 from 1:30 pm to 8:30 pm. A dinner followed the meeting. The following schedule is used:

- Address of welcome
- Check-in and reflection
- Refining the vision of WS1
- Crossover from the vision to the pathways
- Group work on the pathways
- Presentations of the pathways
- Conclusions and „What's next?

Address of welcome

Klaus Diendorfer, manager of the LEADER region Donau-Böhmerwald (DBW), welcomes all the participants and expresses his gratitude for their willingness to make the vision of DBW 2040 concrete. The facilitators Ines Omann, Wolfgang Mader and Paul Lauer also welcome the participants and thank the LEADER team for organising the second workshop and for the good cooperation in preparing this workshop once again.

Check-in and reflection

Wolfgang Mader starts a first round of check-in and asks the participants to briefly share their feelings about the first WS and their main impressions:

P1 goes into the WS with enthusiasm. So far she found the process interesting and characterised by good group dynamics and a positive atmosphere. P2 bought a Fölser jeans right after the last WS – as a symbol that the vision's implementation had started already. The most exciting topics for him are the planned land use control and the recycling of buildings. P3 is looking forward to further exciting discussions. So far he sees the result as quite „optimistic and positive".

P4 also looks forward to the new process and emphasises her personal interest in a common vision. For her the profundity of the ideas is visible already. P5 has built his company around the resource flax since 1988, for example for heat insulation. He has a good feeling concerning this coming day and would like to stress the need for an „education for the heart" („Herzensbildung").

P6 is sceptical, because the results so far do not really differ from those of various research institutions. For him, the feasibility of such a vision must be the central concern of this workshop.

With a pleasant feeling and a positive mood P7 approaches today's group work. She says she gained a lot from the first workshop. Furthermore she noticed that only a few representatives of businesses, producing companies and building industry take part in the process. She asks facilitator Wolfgang Mader, if there was a reason for that. He answers that this was not a deliberate decision, but rather a result of the negative replies of some stakeholders.

P8 is „proud of the region" and is very optimistic with regard to this „free thinking circle" – which she absolutely sees as a circle of the privileged – that these ideas can be taken to the outside world. She would like to put a special emphasis on an intergenerational community and on the question by which (political) means family care can be defined and treated as work.

In the opinion of P9 the great challenge will be to bring all the optimism of the process into action. He suggests bearing in mind how we will look back on this workshop in 25 years. Will this common attempt really have been a starting shot? P10 perceived the work so far as inspiring and exciting, but he has found the circle of the invited not to be representative. Various regulars´ tables in the region will have to be won over for the vision – that would be an ambitious and useful goal. The vision that had already been developed nevertheless gave him a good feeling.

A good feeling from the last workshop that is what P11 has got as well. She enjoyed the good didactics and methods and is quite happy with the core of the matter. But she is also worried about the group's lacking representability. She would like to avoid that this work becomes a parallel universe, from which large parts of the population are excluded or which is not tangible for them. So for her it is about the specific approaches and about setting out the path to 2040.

For P12 visions are like his daily bread, with which a lot can actually be achieved. He states the good developments since the Chernobyl disaster as an example. Even if there is an imbalance among the stakeholders in this group, the ideas and their realisations discussed here can serve as important beacons.

P13 is the only participant who was not present the last time and is therefore new to the process. The region and its development are close to his heart and he sees the emigration of young people out of the region as an important challenge. For him, it is about a future for the young, so they can stay and want to do so.

P14 compares the vision development in this group with the work of homeopaths who have to stand against the omnipresent traditional medicine in the first place, and its scepticism against everything that is different. Thanks to the honest openness of the group he feels to be in the right place and is optimistic to be on the right track to have an effect in the long run.

Wolfgang Mader thanks for this round of reflection and considers it as an exciting challenge to test the vision for its ability to survive a regulars' table (table in a pub where people meet regularly and chat about themes that are relevant to them, often politics).

3.4 Main results backcasting and pathway session

3.4.1 Revising the Vision of WS1

Paul Lauer introduces the merged vision of the first workshop to the participants as a "commemorative speech to the DBW region at the festivities in 2040". In this way, the participants shall have a chance to let their **own vision resonate** and to notice possible discrepancies and shortcomings.

Figure 3.1: The merged vision of the first workshop.

Open round of feedback

Wolfgang Mader emphasises the central concern of this second workshop not only to make the vision's implementation concrete, but also to find a **consensus on the common vision** in a first step. Therefore an open round gives space to put unanswered questions and expressions of non-approval on the table – by following methods of sociocracy[2] (http://www.sociocracy.info/).

The round of reflection can be summed up as follows: Not completely clear remains the handling of **consumption** and the topic of **growth** in general. Does the vision oppose the dogma of economic growth, or does it not? With regard to the shift to E-mobility and a general focus on renewable energies the question arises, where „all this energy" is supposed to come from. **E-Mobility** is not to be seen as a remedy, even if renewable.

For quite some participants **the feasibility of the vision** is in doubt, or the vision is considered as not concrete enough. In the case of mobility, the wishes and ideas are clearly seen, but the possibilities of an actual realisation have not enough been looked upon so far. Similarly, this is noted in the area of education and in the handling of work, where the differentness of the education system does not seem to be comprehensible.

A general concern is expressed that the financial world, the political system, democracy or education are not considered throughout all areas to a necessary extent. However, all participants see that this would have burst the schedule.

Despite all the approval to the vision's attractiveness and coherence quite some questions remain unanswered – be it the question of the monetary system and an own currency, the role of the media and communication in general, or the state of democracy with regard to a widespread disenchantment with politics.

Reaching consent

In a next step the main topics of the discussion are summarised by Wolfgang Mader. Together an attempt is made to agree on a continuation with the existing vision and on the next steps.

Regarding consumption it is agreed to focus on sharing, which would at least reduce consumption. The question of growth shall be dealt with in the following steps in more detail. The question, whether we can be happy without consumption or economic growth, is supposed to play a major role. The group already agrees that there are several examples that a reduced consumption increases happiness. Now it is about a more thorough examination of these examples and, if possible, recreating them.

[2] According the website sociocracy is "a whole systems governance method that makes collaboration, self-organisation, and distributed authority practical and effective. It is applicable in corporations as well as in neighborhood associations. It requires transparency, inclusiveness, and accountability—the characteristics of any good method of governance. Combining the values and traditions of democracy with the methods of sociocracy produces a deeper democracy."

In the case of scepticism towards the vision's feasibility the group comes to the conclusion that the process has basically just started and that the vision should be given time to unfold itself in a clearer way. After all it is the most important task today to concretely design the vision and to draft a first schedule for its implementation. That such a vision leaves many questions unanswered at the moment is only natural for the development process. But everyone is motivated to use the following hours for a first clarifying step. The existing vision can only be understood as a starting point.

In the topic „energy and E-mobility" the participants are aware that it will be especially difficult to take the majority of the population along in a process of change. But of course it is about creating a motivating and positive image through the vision to have a chance of also winning over the regulars' tables for planned new solutions. At the centre there will therefore be possible pathways which consider the special changes of the region. E-mobility, a good network of cheap public transportation and political adjustments in the field of housing sprawl will be especially important here. Long distance travel will have to be reduced sooner or later. A general rethinking of content and wanderlust (desire for travelling) will be necessary. Several participants wonder if many people only want to travel to faraway destinations because they are unhappy at home.

Furthermore it is agreed to focus more on the topics of education and work in the following steps (pathways). This also applies to financial politics and society's understanding of democracy in general. Especially because the participants also agree that for the vision of DBW 2040 they would like to rethink democracy and thereby include the population more into decision making.

Opinions on the vision and decision in consent

In a final round of statements the consent decision on the vision is to be prepared. The following comments are made:

- Feeling of enthusiasm; hope that realisation succeeds; doubts that vision is too utopian; wondering how it can be implemented.
- Vision is perceived as too radical; anxiety because it has been written down now and therefore it will have consequences; uncertain about possible consequences.
- Positive feeling because the changes of the past 20 years are considered as positive and the possibility to shape one's own and the region's development is received thankfully.
- Feeling of inner content and warmth
- The vision (and its presentation) is facetiously compared to a new revelation of the Gospel of John. The region's potential is to be recognised and used. Direct democracy and the media's possibilities are to be used to pull all the right levers.
- Expression of flexibility: also visions have to be handled flexibly; some things will be implemented quickly, others later. In any case it will inspire collective action.
- Wish that this vision is designed as excitingly as the mobile phone 25 years ago. Everyone has to like this vision!
- Scepticism whether the vision can already create clear images in people's heads; there has to be an openness for alternatives and other visions have to be taken into

account, have to be thought of or have to be included; the way itself is a right one nevertheless.

- The fight against an exuberant democracy should be at the centre of the vision.
- Wish that the vision leaves room for everything we do not know yet. Visions from the past should be read and analysed, many things happened of which nobody knew beforehand.
- Vision as a source of energy; motivation to work on it with commitment; doubts should be put aside for now, action should iron out the many „BUTs" and change them to „ANDs".
- Enthusiasm about the speech and the vision's state; pride; visions need energetic people; contentment creates drive
- Question about the necessary factors to quicken the vision's implementation

After this round of reflection on the existing vision the group comes to a decision: all the participants agree on accepting the vision and making it the basis for further steps.

3.4.2 Crossover from the vision to the pathways

To make the crossing from the existing vision to the elaboration of the specific pathways, **central questions** - also inspired by the previous round of reflexion - are written on flip chart sheets and are put on the walls of the room. The participants now have the chance to dedicate the next hour to answer these questions individually. They write down their **personal answers** to the respective questions onto the sheets and they can comment on answers given by others.

After everyone had time to answer the questions the participants are asked to get themselves an overview of all the given answers. Then everyone can distribute three points per question on the answers they resonate with the most. The **answers highlighted by the participants** can be summarised as follows:

Question	Highlighted answers:
1: Which societal and cultural changes are necessary for our vision?	more willingness for talks between political and religious groups and other people
	cultural openness and tolerance towards being different
	create and live connections to one's own environment, the people and the resources
	more individual responsibility
	conscious dealing with societal problems and challenges
2: Which technical innovations does the vision's realisation need?	learning from nature
	we are closer to the vision with less technic
	simple solutions that bring independence from corporations
	spatial planning has to be rethought
3: What has to be done to kill the vision?	doing nothing
	fuel fears
	building fences
	having no courage
4: Who are „allies" for making the vision real? Who could be essential supporters and partners?	everyone we can inspire for it
	including nature in decision making processes
	our children
	the crisis
	clubs, cooperatives, circles

	pioneers from other regions
5: Finance system 2040 – What's new, what's different?	there is still a currency system based on money and there is a regional currency, the „Mühlviertler“
	time as currency (“Zeitbank”)
	Sufficiency; we ask „What do we create with money?“ not „How can money create even more money?“
	regional banks with regional finance cycles, real cooperatives
	value of regional banks with a simple business model is recognised and strengthened again
6: What are critical bottlenecks for achieving the vision?	individual pursuit of self-realisation and the use of others/resources
	political interests and power
	gridlocked and rigid structures
	resistance from the powerful/globalisation
	personal time resources
	laws, norms and bureaucracy
7: What makes the region with the realised vision especially attractive in 2040?	being able to live a happy life („Voi lebm können“)
	living a good and happy life („Voi lebm") becomes more important than earning well
	self-aware, independently thinking, upright people
	migration to cities has been reversed
	the region has a vision for 2060
	uncomplicated, direct ways to contribute in shaping the region
	happy inhabitants
8: What old habits and routines do we have to let go?	passing the buck
	negative thinking and complaining
	taking everything as given
	wanting to have more than wanting to be
	overvaluation of things
9: What changes in behaviour are indispensable for realising the vision?	finding gratification less in having and more in being
	being courageous!
	living change consciously.
	putting aside patterns
	from „I“ to „we“
	tolerance
10: The role of media and communication for our vision?	media belong to the civil society, not to politics or business
	inform, not mislead
	positive reporting and embedding readers
	abolishing advertisement
	accompanying, not judging
11: What roles do sustainability initiatives play for the vision's implementation?	they become the norm
	they are manageable and show that it works
	create role models and are think tanks
	imitation is easier
	being a catalyst, combining things and opening spaces
12: What economic system and which surrounding economic conditions help on the road to the vision?	the importance of small and medium businesses increases, because they can secure jobs in the long term
	the economy remembers its original goal, to serve the people
	totally new system of taxes and subsidies, ecologic and social
	regional and sustainable
13: Which institutional changes are important for the vision's	laws, norms, rules, organisations
	subsidiarity and self-responsibility, only hand matters to higher institutions that the region cannot handle itself, abolishing double and multiple jurisdictions

implementation?	sustainability assessments for laws and norms
	it needs less but clearer laws and norms
	norms with common sense and for regional needs
	debureaucratisation
14: What political system and which surrounding conditions are necessary?	more self-responsibility and less control
	reducing dependencies
	encourage children to think by themselves and praise them for that
	Citizens' councils are to be included before decisions
	new processes of democracy

Table 3.1: Results of Spes Give

4.3.4 Pathways

Group work on the pathways

The participants form four groups by themselves. Each group gets two prepared flip chart sheets. The sheets provide a structure for the pathways, **short- medium- and long-term steps** for achieving the vision's goals in one of eight fields:

- values and lifestyles
- new forms of work
- regional resilience: nutrition
- regional resilience: energy and housing
- sustainable mobility
- new forms of education
- regional economy and consumption
- other (open space)

Figure 3.2: The developed pathways.

The groups also get cards in four different colours to **assign responsibility for the concrete steps** to stakeholders from politics, business, initiatives and individual/family level. For this task and the preparation of the presentations the groups are given 90 minutes.

The 8 pathways

In ten minutes per group the four groups present the concrete steps of their two pathways.

Pathway 1: Values and lifestyles

Until 2020 many projects and initiatives from civil society, politics, organisations and business will aim at **promoting intergenerational living** and learning. Thereby values will be handed on from generation to generation and experiences will be shared. In this sense, also **financial support** will be given for the construction of public housing for intergenerational living and communities.

Until 2030 innkeepers will get **tax rewards** if they follow environmental criteria and focus on regional products in their purchasing. The inn culture will have the task to provide a **space for societal debates**, to live culture and tolerance. **Marketplaces** will also be designed in a way they can **provide open spaces** to support clubs, initiatives, and projects etc., and to facilitate a lively exchange between these. Even financial support will be connected to this encouragement of an open and tolerant exchange as a service for the community. Those companies, which focus solely on international business without taking regional distinctiveness and needs into account, will face special taxes in the medium term. On the opposite site, **incidental wage costs will be reduced** for all companies which offer solutions for regional challenges and which put their businesses in the service of a mutual and environmentally aware interaction.

In the long term, it is of importance for the change of values and lifestyles that more **cultural exchange** and tolerance is experienced and practised. For this purpose steps will be taken until 2040 so all adolescents will have **spent some time of their lives in other cultures** before they turn 20. Cultures come closer to each other this way and misunderstandings will be prevented. The foreign will become familiar and thereby become part of the culture of DBW. This exchange will **be paid for by industry and business,** because the value for society has been recognised.

Pathway 2: New forms of labour

New systems of evaluation are at the beginning of the change of the perception of labour. Every form of labour should be recognised and valued equally. In addition to all services and products, especially various forms of care, e.g. in the family, and forms of knowledge transfer will be integrated into the understanding of labour.

Taxation wise, there will be reduced incidental wage costs, whereas **machines, resource use and financial transactions will be taxed more heavily**. Within families and communities there will be a **„time account"** that is supposed to facilitate mutual help and doing business outside the monetary system. This way, communities can easier agree internally on what work is done by whom. In companies a form of **participation in the decision making** will be established immediately. Through democratic structures everyone in the company, up to the medium level,

will be included in the decision making process. This makes the employees to **take more responsibility**, they would have to support an eventual readiness to take risks as well.

Steps in the medium term would also include a **basic income for everyone**. Then it would not play a role anymore if someone engages for the common good by wage labour, services, care or further education. Until then it will be a central point of joint efforts by politics, civil society, initiatives and business too **distribute work fairly** and not let machines take away the work of humans at every possibility only because it seems more cost efficient. The calculation will be done differently, **social costs will be included**. So it is also in the sense of these efforts to evaluate care and assistance labour financially without putting the financial value itself to the forefront.

Pathway 3: Regional resilience: food

Regarding food production, an immediate **change in land use** planning is necessary that protects agricultural land from becoming sealed. The treatment of land should be regulated in terms of a self-sufficiency of the respective regions. The whole **agriculture** has to be **adapted to current environmental challenges**. For this there will be abundant offers for courses to facilitate a lively exchange of experiences and knowledge.

Numerous projects by politics, initiatives and business will make **buying regional food** attractive for families from the region. By interplay between these and various educational projects the creation of **awareness** will be intensified. This will be accompanied by a rethinking and recalculation of the **real costs of products**. If environmental costs are considered, internationally produced goods are in a clear disadvantage when compared to regional ones.

Until 2030 it will be possible to pay the wages partly, e.g. 30% of them, in a **regional currency**, so local economic cycles are strengthened in this way as well. The improved land use allows continually letting land be fallow so **the soil can recover**. All festivities are supplied by regional products and all public institutions have pledged to cook **99% of their food regionally and organically**.

Later, in the time until 2040, **environmental education** will be an important part of all education plans, from kindergarten to university, as the foundation of a healthy and organic nutrition. **Cooking classes** are compulsory for all public employees and are well received. For the DBW region especially **rural eco-tourism** has become an important economic factor that is supported by all stakeholders in the region.

Pathway 4: Regional resilience: energy and housing

In the field of housing and energy, changes start with an **inventory of existing buildings** and a needs assessment connected to it. Thereby it can be identified, in accordance with the inhabitants, which renovations make sense, what expansions of building land are acceptable and so on. The handling of building land will be more **transparent** from now on, so for example it will be possible to look up the current and future **land-use plans** on the internet. Especially land designated for future building must be apparent to everyone and there must be the possibility to raise objections. Producers and distributors of building supplies should be established on a regional level (for instance for flax).

Through the establishment of **builder-owner round tables** a broad exchange and the passing on of experiences will be possible and a flow of information in the interest of the whole region will be started. The enormous potential can be used through this **network** and learning processes can be initiated. The urban sprawl will be stopped by such initiatives and networks, existing sites will be upgraded or modified. The construction of „single-family house wastelands" will be prevented and collective and **intergenerational housing** will be especially valued.

Until 2025 a **tax on kerosene** will impede too extensive flight travel behaviour of the population, the resulting income will be used for regional energy and housing projects**. Value-added chains** will be created and extended in the building industry until then. In general, building culture will much more focus on the question **how existing buildings can be used further**.

By regional social **networks for craftspersons**, similar to Facebook, a collective approach to projects will be facilitated. Furthermore there will be exchange platforms for living space on the internet, so owners of housing in cities and in the countryside can enter into an exchange. A regional „**land use control**" facilitates agreements between settlements on a transparent handling of construction projects. Building culture as a whole will be looked at under different quality requirements, so the wellbeing of the inhabitants will be the top priority. The **use of rainwater** will be compulsory until the year 2030.

Until 2040, **cooperation between various farming cooperatives** in the realm of building and energy generation will have become the norm. These cooperatives have been strengthened and thereby also have created new storage facilities. These new structures create an effective form of **heat storage**, so it is even possible to use heat in winter that was generated in summer.

Pathway 5: Sustainable mobility

Until 2020 there will be **active taxation advantages for environmentally operating businesses**. Any incentives for private car ownership will be abolished, the **attractiveness of public transportation** will be considerably increased in turn, e.g. through separate bus lanes, cheaper tickets and so on. There will be incentives for **E-mobility** as well, **free parking** in cities for example. Tax advantages will also be granted for private households which can prove to have an especially sustainable manner of mobility. Furthermore the implementation of **car sharing** concepts in the private domain in settlements and municipalities is to be promoted in this way. Economically, a total change of gas stations into **E-charging-stations** will be fulfilled.

The topic of sustainable mobility will be included in **basic education** and the importance of a rethinking and reshaping in this realm will be emphasised. Through kindergartens and adult education centres there will be courses about mobility topics offered for parents. There will also be incentives to participate at those, e.g. coupons for spa weekends.

Until 2030 the **Mühlkreisbahn** (regional train line) is to be **connected to Linz main station** (closest major train station with links to the rest of Austria). Commercial shared taxis will provide comfortable and fast travel if needed, with the support of a **well-coordinated mobility management centre**. A car sharing network will cover the whole Mühlviertel region by 2025. This will prove to be very effective thanks to the respective municipalities in collaboration with owners

of local gas stations. Even land-use plans will incorporate regulations that attractively design and ensure car sharing concepts in municipal settlement policy.

In the long term, the Mühlkreisbahn will be equipped with **individual cabins** that render any other individual transportation obsolete. Through an elaborate system of entering and exiting these cars in Linz the various mobility needs can be fulfilled ideally. Additionally, state-of-the-art-technic will provide a **virtual system of calling and delivering automobiles**. This system allows for a collective fleet of automobiles that will reduce the number of cars to a minimum. The DBW region will therefore celebrate a "**Volkswagen**" (people´s car) that actually deserves this name.

Pathway 6: New forms of education

In education, the next years will bring major changes already. **Non-formal education** will be of decisive importance for the regional education system and will expand the classrooms. Offers from fire brigades, Alpinist associations, organisations for nature conservation, social organisations and so on will enrich educational offers and will bring those closer to challenges of everyday life and to the social challenges of our time.

Education should also care more about **regional matters** and should in this regard show ways for young people to live a happy life in the region, e.g. **regional education pathways**. There will also be incentives and possibilities for university graduates to have careers in and around the DBW region through the work of initiatives and networks. The enormous advantages and **potentials of the region** and its young brains will be used in these terms and will be deployed, where it makes sense for society and the people working there.

Professional training will put more emphasis on **social skills**. For the training of specialists regional networks will be established to promote and secure the crafts also regionally, which so much enrich the region's life**. Universities** will be **much more linked to the region** through regional projects. In this regard also the upgraded network of public transportation will play its part to make the various schools and projects easy to reach.

One of the top priorities in all educational paths will be **learning in, alongside and of nature**. The region experiences itself as deeply rooted in its nature and this symbiosis is to be shown to the population from the cradle on. To experience nature and be close to it will be part of all education and training.

Until 2030, securing and passing on the **knowledge of older generations** will be part of the common teaching plans, similar to the topics of values and lifestyle. There will be no lack of possibility for all education paths to intensify the exchange of experiences between generations. In general, there will be **compulsory praxis days** in schools to facilitate the transition of young people from school into the working life, into their work in and for society, and to make this more attractive. There will be **more room for creativity** and all those ideas which on first sight contradict old habits will be given a chance. Tolerance of other ways of thinking and thinking out of the box will be promoted in this understanding of education and will be put into the service for an open society.

This will only be possible by **reducing hierarchies in the administration** and thereby increasing the **self-responsibility of the various schools**. All those projects which especially make sense from the point of view of the micro level of the respective school, region or community can thus be realised. Higher administrational levels will only provide a frame that is to be filled. Schools provide themselves with what they need in other domains and organise various services by themselves, e.g. cleaning or cooking, thereby strengthening the community. Local potential can be used this way and individual strengths of the students can be promoted.

The readiness to further **educate one self-responsibly** the whole life are promoted and supported by a personal „education account". All educational institutions and teaching persons are obliged to supervision and are in contact to those economic branches that will be important for the further lives of their students.

Pathway 7: Regional economy and consumption

One of the first regulations in the domain of regional economy and consumption will be the **prohibition of plastic bags** or a heavy taxation of those. There will be several changes in taxes anyway, to not let the buying of factory-new products be the best choice. As soon as all **ecological costs are included** in the price of a product, the products itself are valued and taken care of again because their generation has become much more expensive. **Second-hand buying** will drastically increase and all respective subsidising systems will be redesigned in a way that they help to try using a product as long as possible.

Furthermore it is important in this domain to also **de-bureaucratise** broad areas of political decision making and to make complex systems of laws more straightforward. The system of subsidies will orientate itself much more along the support of **economic cooperation** and especially help collective projects like municipalities, families or companies.

In the medium term, households will be supported by initiatives and networks in their attempt to supply themselves with needed machines or tools via **sharing communities**. An elaborate network of sharing communities in the possession of well-tended material will make buying these products for oneself highly unattractive.

Clubs will be supported if they pledge to act **socially and environmentally responsible** and if they try to supply themselves regionally. Incidental wage costs will be generally lower. This loss in public income will be more than compensated by an **eco-tax**. Waste treatment will be more regulated in the future. Because a fight against the throwaway society has been started and precautions and possibilities have been created to produce as little **waste** as possible, the remaining waste will be **heavily taxed**.

The changes of the past years will have created a code of honour for all businesses in the DBW region that has made a fair treatment of employees and the awareness of social and environmental challenges deeply rooted in the companies' interests. A **cooperative economy** instead of pure competition is on its way to become real. Profits are merely seen as a tool to achieve something and are not placed above social and environmental needs.

From 2040 onwards exchange platforms will be essential. Amazon and Willhaben (an Austrian small ads website) will have adapted their business models to the changed way of consumption and support less resource intensive economic patterns. Businesses in the DBW region produce more products that are for at **least 70% made of regional raw materials**, the same goes for the food industry.

Pathway 8: Open domain

Aside from other domains the open domain provides space for the implementation of a **compulsory job orientation year**. The early experimentation in various fields allows exploring **one's own potentials** and needs. Everyone's strengths are recognised and supported early on, and where strengths and potentials can be used, sources of happiness are uncovered.

Civil society initiatives seek the support of public institutions to make the region **more aware of mental problems of its population**. For this reason, health measures will be established for mental illnesses, the topic will be freed from taboos. **Public discussion** will take place to further the raising of awareness and to make various problems at the heart of society a topic of debate in a courageous and open manner. **Stronger regulation of TV programmes** will prevent the programmes to be dumb, those documentaries will be supported that are of use to society.

Until 2030 virtual adult education centres will have become a popular platform for discussions on the internet. Like already mentioned in other domains, the **exchange of experiences between generations** is an essential part of community life. The elderly are often and gladly included into the everyday work of schools to share experiences and thereby contributing to problem solving. The changes will also have made it possible that **breastfeeding in public** has become the norm and has no trace of a taboo anymore.

Around the year 2040 the region has managed to establish a **collective, socially responsible and environmentally aware being together** that follows the premise „Mir redn's aus und san zufrieden" („We talk about it and are content.").

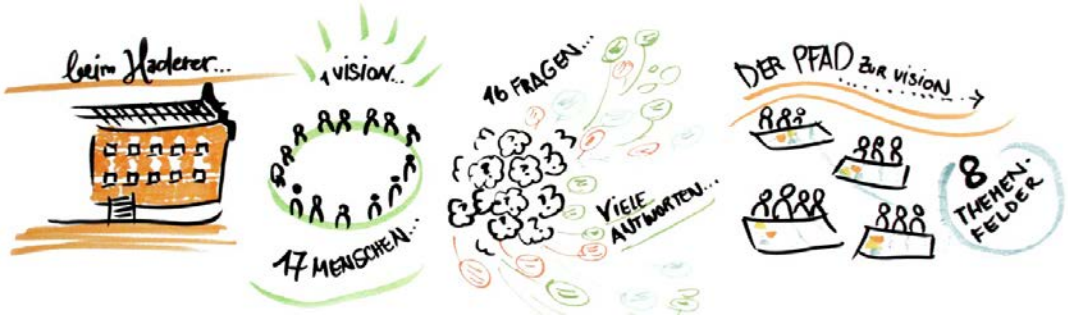

Figure 3.3: Pathway 8: Open domain

3.4.4 Summary of the main steps ahead

Until 2020	Until 2030	Until 2040
Values and lifestyles		
Financial support of projects of cooperative housing and intergenerational living	Fiscal privilege for innkeepers (and other companies) following environmental criteria	Facilitation of cultural exchange; young people are expected to spend time in other cultures; financially supported by industry
Creating open spaces for intergenerational exchange of experiences	Spaces for living "a new culture"; in cooperation with innkeepers; marketplaces for new ideas	Various initiatives focus on practicing intercultural tolerance and change of values
Facilitating spaces for social discussion on current challenges	Higher taxes for firms not following social and environmental criteria	
New forms of labour		
All forms of work are recognised & evaluated equally, combined with basic income	Taxes on resources, financial transactions and machinery	30% of wages are pain in regional currency
Reduction of incidental wage costs	Time banks, local exchange trading systems	Social costs as part of economic transactions
	New forms of participation for employees in the corporations	
Regional resilience: food		
New land use planning and land development plan! Sealing of land reduced	Public events only with regional, organic food	Education projects with schools, agriculture and trade businesses
Courses for all interested in agriculture to meet the environmental challenges	Public organisations cook with regional and organic ingredients	(organic agro-tourism as engine for economic development)
Initiatives on subsistence, food coops, permaculture, regional shopping		
Regional resilience: energy and housing		
Inventory of existing buildings and need for restoration	Regional spatial account	Use of regional material for construction; cooperation between agriculture & production of building materials to close circles
Transparent treatment of building land	Start of co-housing projects	Obligatory use of rain water
No regional sprawl anymore	Regional Facebook with profiles of craftspeople	Quality requirements for buildings
Meetings where people who plan to build houses exchange their knowledge & experiences	Kerosene tax→ money used for regional energy & housing projects	Subsidies for cooperative energy supply
	Exchange systems for building land in the internet between cities and the countryside	
Sustainable mobility		
No incentives anymore for private individual mobility; cheaper public transport (bus lanes, very cheap tickets)	Courses on sustainable mobility in kindergarten, schools, with parents	Communal settlement policy with focus on car sharing
Incentives for E-mobility: fee parking…	Until 2025 the regional train is connected to the main station in Linz (long term with cabins)	Various initiatives focus on practicing intercultural tolerance
Tax reductions for household with sustainable mobility	Mobility centre for collective taxis	Online car calling system

behaviour		
All gas stations are also E-stations	car sharing net covering the whole region with E-cars	
Private car sharing systems are subsidised		
New forms of education		
non-formal education in schools together with association, initiatives such as fire brigades, alpine clubs etc.	Regional associations to educate special skilled workers	Schools get more autonomy, supply themselves, less hierarchies
Regional education pathways to show perspectives for a good life in the region	regional projects with universities	Everybody gets an education account
Bring social competences in all forms of education	Knowledge and skills of older generations is transferred (in the syllabi)	Obligatory supervision for all teachers
Learning with, in & from nature!	Obligatory practical days in schools	
Regional economy and consumption		
Prohibition of plastic bags	Subsidies for buying used products and repair	Code of honour in companies: appreciative acquaintance with employees; environmental care (at least 70% of resources of regional origin); profit only to reach the goal of sustainability
Support of cooperation between companies, communities and civil society	Alternative currency (der Mühlviertler) in combination with time banks	
	Cooperatives and sharing platforms for machines, tools	
	Associations only get subsidies, if they act with social and environmental care	
	Environmental tax reform	
	High taxes on waste	
Model Region „Pure living“		
One year of job orientation	Cooperation of civil society and public institutions to address psychological problems and to overcome them → ‚health street' for psychological problems, public discourse	
Virtual adult education centre as discussion platform	Prohibition of dumb TV programmes	
	Intergenerational exchange	

Table 3.2: Summary of the steps in the pathways

3.4.5 Final reflection and "What's next?"

At the end of the second workshop day, the group looks back on a long process and the results produced together. The participants have **agreed on a vision** and have worked on a first schedule for steps in the short, the medium and the long term across many questions.

In order to not let these potentials and energies get lost, the question "how does the group and the individual stakeholders want to go on" is central for the last part of this workshop. The following questions are asked by Wolfgang Mader in a final round of reflection:

How does it go on? What can the region do with these results? What should the region do next? What does the region want to do? How can this collective action strengthen the region?

The statements regarding these questions can be summarised as follows:

P12: take the concept and bear it in mind and integrate it for every project as far as possible; should especially be incorporated by mayors; take the Swiss democratic system as a role model; work towards the right point of time for the implementation of every suggestion, because only the implementation can be the goal; mainly politics is responsible; clubs can support, but suggestions are not binding and might therefore not be implemented by them; incentives should be deployed smartly, thus good projects will be realised; dissemination to decision makers; not the consumer alone makes a choice, something has to come from top-down.

P5: implementation is partly written down in the pathways already, responsibilities can be seen there; everyone has to take responsibility for one of the fields and we will have to carry it to our own communities and serve as disseminators; the responsible persons can organise thematic evenings on the individual topics in the communities or regions; further training of the respective persons in the chosen areas and continued work on it, responsible persons should work in pairs or small groups to be able to exchange, reflect and complement each other; one topic for a single person can be too much of a burden

P8: distribute main responsibilities for topics; for a continuation it will need much awareness within the LEADER project of „What do we do?"; keeping in mind: thinking until 2025 and linking to existing structures; the bioregion and other regional organisations: these have to take responsibility as well, not only voluntary work; ideas have to be carried on in institutions with a proper management; working groups for the different topics of the vision; using the network of the district and other existing possibilities, what networks are there and how can these be carried on?; linking networks, superordinate structure is important; working groups need people from this workshop because they have internalised the vision.

P2: questions, if the vision is a consensus in the region, does it stand a regulars' table discussion?; it makes sense to handle it in small pieces and not everything at once; processing must be well planned. P6: in the beginning it should already be thought about the aftermath; the way to go and the support for it must be there; even if only one or two points are implemented, it is already a success and can serve as a role model, this way one project after the other can be worked on.

P11: finds it exciting when paperwork turns into projects; at least one or two projects should be implemented in the near future; working groups should be established, including external support; topics should be worked on further and not vanish; the time spent would have been pointless, if nothing would grow from this; the positive mood should be taken from here to keep working on it straight away.

P8: reflexion after some time; only a sign about a vision at the entrance to a town is not enough. P3: burnout from voluntary work is dangerous; the vision can be supported by the majority, but has to be communicated to everyone, e.g. via a newspaper column for one month; broad media coverage for the region, a lot can arise from this and many can be reached; maybe a sign at the village entrance is not too bad, it would show that the region deals with this topic.

P11: sees herself on the way to this vision; she takes those points that she finds most striking and links them with persons, groups and organisations; passing on and offering help to deal with regional challenges; let's talk and help each other; great group, no minute was wasted; there is no danger that this vision will vanish; together we can change things; she will continue in her field.

Ines Omann: do not wait for things from higher levels, become active yourself and get help from outside; get support from other sources as well and take self-responsibility; but, please bear the limits of each individual in mind. Wolfgang Mader: use region's steering team; thematic evenings as a good chance; appeal to the group: maybe a renewed meeting, the question of how to continue should be discussed, how can this result be further processed? It is great to know we want to do something that is "Voi lebm". It is important how something is presented and to whom; officials have to be won over, otherwise there will be blockades. P13: thanks for the invitation; enriches in commitment; implementation becomes easier if one knows one is on the right track and not alone.

3.5 Conclusions and reflections

Conclusions and reflections on the workshop

There is a **strong ambition to continue the work,** which was started with the two workshops. Many of the participants are interested in **taking further steps** in order to bring the visions and its pathways **closer to other parts of the population**. There are already plans of working groups and following events. While working on the pathways it became rather obvious to the participants how **complex** the situation gets, when they see themselves confronted with putting the **main responsibility** for the defined steps to specific actors. They realised that one is tempted to put responsibility mainly to **politics** – wanting politicians to change things by law and tax reforms. It was interesting for us to follow discussion within the group, whether the first impulse should come from civil society or politics and economy. Many participants were faced with the **dilemma** longing for a debureaucratisation on the one hand and seeing the remedy in rules and edicts on the other side.

We once again realised that the **provided structure** in form of the eight subject domains and the time frames (steps until 2020, 2030 and 2040) helped the participants a lot to grasp the different tasks. The more we tried to leave spaces open, the more they seemed to get lost in the process. Somehow we managed to find a good balance of providing a **structure** on the one hand and keeping the structure **flexible** and open on the other hand.

All in all the participants did a great job in creating their visions, revising and refining it and defining short-, medium- and long-term steps during the two days of the workshops. However, seeing the pathways and reflecting on the possible steps ahead, one feeling arose in all of us: the pity, that we already reached the end of our workshop-process. So many things would be worth looking at more closely and **more time for making the pathways more concrete** would have made a big difference. Therefore, we as facilitators hope that the sparks of this process will be thrown out and carried further by the broader population of the region.

Methodological reflections

Regarding the methods used in our second workshop, we can say that the time we used for revising and refining the developed vision was key for the further process. Thereby all the participants had the impression that they continue working on their vision – goals they all agreed on. The method we used for complementing the vision with additional inputs (open questions) served as a crossover to the work on the pathways (sociocray and Spes give). The broad and open questions built a solid fundament for elaborating on concrete steps. Finally, the intense round of reflection on the question "how to proceed" allowed us to direct the present energies at launching initiatives right away.

3.6 Sources and references

Lauer, P., Omann, I. (2016) WP5, Task 5.3 – Summary report of Second Backcasting Workshop in Austrian Case Study for GLAMURS, internal report, Helmoltz Centre for Environmental Research.

4. Pathway workshop results Germany

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4.1 Introduction

The German case study team organised the second backcasting workshop in Halle on March 9 2016.

4.2 Workshop preparation

Participating actors

In total, 14 participants from 11 different organisations attended the second backcasting workshop. Compared to the first workshop with 21 participants this was a decrease, but the number of organisations remained almost the same (12 in the first workshop). Table 4.1 shows the composition of participants from different fields and organisations (the number of participants from each organisation is given in brackets behind the organisations' names).

NGOs/civil society/initiatives	Research	Government	Business
TTH (2)	Fraunhofer IWMH (1) (research centre working with City of the Future-programme)	Dienstleistungszentrum Klimaschutz Halle (1) (Service Centre for Climate Protection Halle)	HAVAG (1) (public transport company in Halle)
Villa Jühling e.V. (2) (church-run education and project centre)		Halle University´s Office for Support of Business Foundation (1)	Science2public (1) (science communication company working for City of the Future-programme)
Peißnitzhaus e.V. (1) (restoration and revival of an old building in Halle)			business advisor (1)
			freelance businessman (1)
			Ludilux (2)
total: 5	total: 1	total: 2	total: 6

Table 4.1: Organisational background and number of workshop participants

Stakeholder mobilisation

The participants of the first workshop were invited to join the second workshop as well. Additionally, invitations were also sent to some persons who had not taken part in the first workshop, with an emphasis on local politicians and businesspeople.

Practical workshop organisation

For the second workshop, participants were sent a summary of the visions developed in the first workshop and a two-pager about commonly proposed strategies for a sustainable future, like green growth or post-growth systems.

Like the first workshop, this one also took place in rooms of the Franckesche Stiftungen, a foundation dedicated to creating social innovation and transformation through education. The foundation owns a campus with several buildings for educational purposes in Halle. This was regarded as "neutral ground" by the participants. For the workshops, we were allowed to use multiple rooms, allowing us to spatially separate groups working on different visions.

4.3 Workshop results

Overall program and welcome session

Participants and stakeholders of the second backcasting workshop in Halle arrived between 8.30 – 9.15 a.m. at the workshop venue. Name tags were prepared beforehand or could be created right before entering the central room in which the workshop took place. Beverages like coffee and juice were provided as well.

At about 9.15 a.m., Anke Blöbaum (OvGU) welcomed the participants and started the workshop. All participants introduced themselves briefly, followed by a short presentation of the GLAMURS project by Anke Blöbaum. Participants were informed about the structure of the day, as well as organisation details including data protection. They were encouraged to ask questions. Starting the second workshop, the attendees were asked whether they had remarks concerning long-term reverberations of the first workshop and if they had noticed subsequent changes. None of the attendees had remarks, so the next part of the workshop began.

In the first content-related part of the workshop, the two visions developed during the previous workshop were presented using posters. The first vision covered the field of mobility while the second vision focused on networks participatory structures. Starting with the mobility vision, each vision's core assumptions, introduced life styles and changes, structures and the distribution of roles were summed up. The mobility vision poster also included prepared questions needed to be answered in order to make the vision come true.

Following this introduction, participants were asked to choose which one of the visions they would like to elaborate. Two groups were formed to further develop one of them. The facilitators tried to gently guide the discussions according to the qualitative questions from the methodological guidelines for Tasks 4.3 and 5.3. In the mobility group discussion, the four main

questions were answered, while the participants in the participation vision group strongly focused on what was missing in the vision and on adding their new ideas.

After a short break, the next stage was initiated: Deriving and developing specific actions to alter the current situation in accordance with the visions. First of all, participants chose which vision goals they would like to discuss. A rank list was created by giving each participant three votes. The votes could be placed on a prepared list of goals. There was a short break in form of a lunch break. Some of the participants changed groups afterwards. In the next step, the goals were elaborated.

Afterwards, the method of backcasting was explained in a plenary session. The presentation was facilitated by the use of a poster showing the figure of a timeline. Based on the theoretical input, each group was asked to develop a timeline of actions to realise their vision. They were asked to arrange their ideas according to the time horizon (short term, medium term or long term) and relevant actors (bottom-up initiatives and civil society, government and policy makers, research and knowledge organisations, and producers and utilities) as proposed in the methodological guidelines. The timelines for the two visions were presented by the groups in the following plenary session. Some results of each timeline were briefly discussed by the participants.

In the end, possible next steps to put the ideas and visions into practice were collected. The actions were noted down on a flip chart and people were asked to volunteer to be responsible for starting the action in question. Furthermore, upcoming events and already existing movements were listed in order to spread this information among the participants and their networks. Afterwards participants had the opportunity to gather informally, while the workshop venue was rearranged.

Main results vision evaluation and discussion session

In the following section main results from the vision evaluation and discussion section can be found. Table 4.2 presents results from the mobility vision, the vision on networks and participation follows.

Mobility vision

Question	**Results**
What is your first response?	• more bike lanes are needed • "Everything in the vision is already known." • in general, it is a good idea to reduce CO^2 emissions, but we need to discuss how we can shape "urban life" in a different way • we need to talk about broad strategies • the vision is created with a perspective from the inside (city centres)
What is positive?	• focus on non-motorised locomotion • strong & consequent demands for transportation by bike and foot • good starting point
What is negative?	• too much emphasis on transport by foot and bike • certain areas/topics are not included in the vision o mobility and elderly people

	○ mobility and (single) parents with kids/ families ○ transport of goods • vision does not have an overall view • "cannibalisation"/competition of sustainable means of transport (i.e. bike and tram) • thoughts about the surroundings of Halle are not included • decentralisation: people move to villages outside of the city but still do a lot of activities in the city (centre) • people living in rural areas and in cities have different needs of mobility
What is missing?	• mobility for leisure activities • development of strategies with focus on quality of life vs. reduction of CO_2 emissions • What is good life in Halle? • economic sincerity of mobility costs (apply real costs of transport e.g. of taking a plane) • temporal and spatial aspects of transport of goods • long-term objectives (in favour of sustainability) • "Green" policies for mobility • how to develop subsequently pilot projects and how to obtain external funding

Table 4.2: Results of the evaluation of the vision on mobility

The discussion was very fruitful and even brought up several new aspects, which are summarised in the following table (Table 4.3).

Policymaking	Uncovered Challenges	Specific Claims and Needs
• it is important to think comprehensively as well as "outside of the box" • smart communication of sustainable innovations and planning, otherwise it might backfire; people may feel patronised • to encourage citizens to consider car sharing, riding bikes, using public transport as the only reasonable way of (close-distance) mobility • present and explain	• long-distance coaches are "cannibalising" the public transport and are bad for city centres • it is important to formulate objectives: e.g. it is closer to walk to the next bus stop than to walk to your parked car • think-tank: how can innovative ideas influence urban planning (the 'how' is important), trigger a discussion • combining pull and push factors • engineers should be	• need for detailed urban planning of parking spaces for bikes • change the interior design of public transport to allow to take along bikes • ending the preference for cars in urban planning[3] • increasing the attraction of cycling all over the city (crossing the river Saale as well → change infrastruc-ture (bridges) accordingly) • investments to modernize traffic could at the same time be used to

[3] This heading turned out to be problematic and caused debates after the lunch break when new members - unaware of prior considerations - joined the mobility group. A neutral proposal might have been "creation of a fair treatment of all transport users", since the main object was to remedy the discrimination of pedestrians and cyclists (as experienced by the participants).

results of workshops (GLAMURS/ Zukunftsstadt) to city council members, provide them with knowledge and innovative/sustainable ideas	included in discussion • Ecological & financial limit for people should adjust to the same level ("green" electricity, Solar house)	support a new system • target and influence local politicians (often a voluntary job)

Table 4.3: Additional remarks made in the evaluation discussion of the vision on mobility

As one general result, two strategies for a sustainable mobility were formulated.

1. End usage of fossil fuels and move towards mobility powered by renewable energies:
   - technological change and innovations
   - reduce political dependency from oil-producing countries
   - reduce mobility itself (sufficiency strategies)
2. Mobility which cannot be shifted needs to be carried out in the most efficient way (efficiency strategies):
   - traffic will not be sustainable if only engine technology is changed
   - efficiency and sufficiency strategies need to be combined

Participation – Networks vision

Question	Results
What is your first response?	• "Everything is nice"
What is positive?	• Units of 500 people (per quarter) • More participation efforts than currently seen • Vision implicitly contains values • Self-sufficiency in the quarters
What is negative?	
What is missing?	• values are to be defined in order to derive goals • communication of values (outwards): values as opportunities, not as restraints • Which values are shared, and which are not? • space for the formation of a shared identity • communication of the advantages of the vision on an individual level; quality of life (definition), time usage (work – voluntary engagement) • How many people are necessary for the vision to function? → critical mass • demographic question • unconditional basic income
What is novel & interesting?	• change from materialism to more ideational world view (values are contained implicitly) • barter as economic foundation
What is critical?	• Who will support the groups regarding grass root democratic processes of decision-making? → achieve legislative responsibilities

Table 4.4: Results of the evaluation of the vision on participation and networks

Backcasting analysis and pathway and agenda session

In the following section the main results from the backcasting, pathways and agenda session can be found. To sub-groups worked separately on the two visions. The first subsection contains results from the mobility vision and results connected to the vision on networks follow in a second subsection. To present results in a concise manner two tables were used. The tables are structured to show the different actor categories and the selected time periods.

Mobility vision

Activities & results until 2020	**Activities & results until 2030**	**Activities & results until 2040**
Public Interest-Citizens Initiatives-Consumers-Civil Society Domain		
Citizens until 2020	Citizens until 2030	Citizens until 2040
• design & implementation of campaigns aiming to induce a debate on visions of mobility →e.g. car-free days, street festivals	• reoccupation of road space, broad willingness to do so • contributions to a change of the value system[4]	• contributions to the creation of fossil-free transportation • creation of vivid urban spaces
Government-policy domain		
Government until 2020	Government until 2030	Government until 2040
• coherent vision of urban development (incl. concrete indicators) • monitoring regulations • development & selection of local indicators; open questions: can this happen objectively? Which of the existing indicators are to be selected on a local level… • advertising sustainability in order to contribute to a change of values • adapted division of responsibility between police &the office of public order • keep up the "the polluter-pays"-principle[5]	• adjusting traffic regulations • extending no-stopping zones • adjusting federal traffic law in some cases • equal budgets for different transport modes • CO2-emittation leads to an restriction of space • stricter environmental zones • establishing pilot projects and model projects → e.g. in order to look at things from the perspective of a pedestrian	• increase parking fees

[4] Everyone was aware of the importance of this idea. Due to the large scale of the topic of value change it nevertheless turned out to be difficult to collect detailed ideas matching the complexity of the topic in the limited amount of time. All actors have to contribute to the value change; this position became clear during the discussion. Still, the potential contribution of the civil society was rated as especially high. This might be due to their large independence and economic constraints.

[5] The debate indicates that this demand seems to be more controversial and complex than might be expected at first glance.

• redesign parking lots • create more parking spaces for bicycles, incl. secure boxes in residential areas, the city centre and the central station • restrict car parking space • road maintenance on cycle paths (in particular those on bridges across the Saale, esp. in winter) • priority switching of traffic lights in favour of bicycles • develop/reconstruct the city in favour of pedestrians' needs		
Research & knowledge domain (including technology development)		
R&D until 2020	R&D until 2030	R&D until 2040
• assess the current state • scenarios: surveys investigating affordable concepts regarding the transformation of the city centre (real cost scenarios incl. resource consum-ption) → especially concerning politics &retail • analysis of the potential of the present infrastructure and of different means of transportation • advertising sustainability in order to contribute to a change of values	• communication of external cost, example: in Germany, the annual death toll directly related to car use is higher than the death toll of people dying of smoking tobacco.	
Business-Industry-Producers-Utilities Domain		
Production until 2020	Production until 2030	Production until 2040
• entrepreneurs from the private sector create parking spaces and boxes for bicycles • advertising sustainability in order to contribute to a change of values	• specific innovations leading to a fossil-free infrastruc-ture and public transport	• modular adjustable public transport, e.g. change to smaller trams at night • innovations and investments facilitate overall fossil-free transportation • sealing rails: reconstruction of tram tracks in order to secure them for cyclists

Table 4.5: Result table for the timeline discussion of the vision on mobility

Since this term is used a lot in the following section, a short definition is given. Quarter projects =

- quarter: residential areas/districts of the city forming units of about 500 people
- self-organised and self-administered joint projects

The following table (Table 4.6) contains more general ideas for the backcasting. The second table (Table 4.7) in this subsection captures more concrete ideas of the pathway session.

WHAT (change elements)	HOW (activities)	WHO (stakeholders)
Cultural-Behavioural Changes	Quarter projects • community garden • meadow for bees/beekeeping project • joint medicinal herb garden • youth club • choir (e.g. "Singing at the campfire" at Preißnitzhaus[6]: party with colleagues) • clarifying group: regular meeting to solve problems unconventionally, group is formed before problems emerge, inner change • new ways of using urban spaces (self-sufficiency, relaxation) • regular informal gatherings • sports/games	Citizens
Technological Changes	Quarter projects • self-sufficient energy supply • communication forum/information channel • encounter spaces/house in the quarters (similar to Preißnitzhaus) • bulletin board "Giving and Taking" • wood workshop, also for furniture, repair shop	
Structural-Policy Institutional Changes	Quarter projects • cross-generational school • school of visions • corner shop with local reference (supply with local goods, collaborations among quarters) including a bulletin board for goods • public and local education • plenary assemblies to discuss common topics • Quarters enabled to make decisions autonomously • local referendums regarding quarter projects • 50% of taxes are at a local level → decisions on how the money is spent are made on a local level as well	Citizens The role of politics was discussed fiercely: some participants viewed politics exclusively as an obstacle, others wanted to integrate politics in order to circumvent blockades

[6] The Preißnitzhaus is a local meeting venue in Halle where intercultural and intergenerational events take place.

	• new economy (economy evolves by itself)	
Organisational changes	Quarter projects • central office: networking, communication, consisting of a group of people • multiple parallel projects (not too big) → smaller units in order to enable communication within and between the projects • 1-2 representatives per 500 inhabitants OR 80 people per group (enables everybody to communicate with everybody) • the executive board consists of eight members	

Table 4.6: Result table for the backcasting discussion of the vision on participation and networks

Activities & results until 2020	**Activities & results until 2030**	**Activities & results until 2040**
Public Interest-Citizens Initiatives-Consumers-Civil Society Domain		
Citizens until 2020	Citizens until 2030	Citizens until 2040
• implementation of scientific results • citizens mobilise businesses and industries • cross-generational meeting places • forming networks (e.g. for childcare) • start showing personal engagement	• developed concept of how people can support each other (strategies for health, working structures) • altered educational system (focus on environment, creativity, cross-genera-tional communication) • decisions on making investments	• developed conscience: individual (human) as a part of the organism earth
Government-policy domain		
Government until 2020	Government until 2030	Government until 2040
• mobilise supporters	• making benefits of the 'social added value' visible & calculable, matching so-cial added value financially • tax money to flow back into the quarter projects	• tax money partially stays in the quarters • developed conscience: individual (human) as a part of the organism earth
Research & knowledge domain (including technology development)		
R&D until 2020	R&D until 2030	R&D until 2040
• assess resources and needs in the quarters • size [of quarter?] • Which quarters are suited • Where to start? • What is the personal focus of commitment from which people can develop?	• Means to make the 'social added values' ascertainable	• developed conscience: individual (human) as a part of the organism earth
Business-Industry-Producers-Utilities Domain		

Production until 2020	Production until 2030	Production until 2040
• mobilising supporters in business and industry (upon request of citizens)	• companies' desired image: • creative encounter places are present (→ enable employees) • 'social added value' beyond the company • Corporate citizenship • Appreciation of social commitment, e.g. less taxes	• developed conscience: individual (human) as a part of the organism earth

Table 4.7: Result table for the timeline discussion of the vision on participation and networks

Additionally, these are some results that could not be matched to the categories:

- 2020: Spaces/Rooms
- 2030: social added value; conscience for the value of human cooperation/relations 2040: Developed conscience: Individual [human] as a part of the organism earth.

Main results of final discussion

In the final plenary session, the facilitators of each group, Ines Throniker and Anke Blöbaum, shortly presented the main points of the timelines. Participants were encouraged to ask questions. Some aspects were briefly discussed. In the mobility vision's group, there was some uncertainty on how specific their goals needed to be defined. In the networks – participation vision's group were questions and doubts on the financial plans.

In accordance with the process-oriented goals of the workshop of stimulating networking among the participants and facilitating the implementation of visions and new ideas, actions concerning this matter were collected in the end. Actions for next steps towards a more sustainable Halle and the names of those who volunteered to be responsible for their implementation were noted down on a flip-chart. Furthermore, upcoming events and existing initiatives were added to this list.

Finally, all participants gave a short feedback on the workshop day and their impressions. In summary, they appreciated that different important stakeholders such as representatives from economy (e.g. HAVAG) and politics were involved in the backcasting workshop. Also, participants made positive remarks on the method of backcasting and commented they enjoyed to learn a new methodological approach. They were in favour of thinking in different periods of time to reach a certain goal. Furthermore, participants felt that they got to know the method well and commented on the high quality of the workshop facilitation. Moreover, many participants wished to continue working to together and developing further projects for a sustainable Halle. However, there were some critical voices about the usefulness of the backcasting workshop in the long run and how results (i.e. the Backcasting workshop) could be integrated and implemented beyond the context of GLAMURS.

4.4 Post workshop results

In this section results of further development of visions are described. The vision on mobility follows the content connected to the vision on participation and networks.

4.4.1 Vision 1: further development vision - mobility

Evaluation of the vision by the participants

In general, participants agreed that reducing the emission of carbon dioxide was the overall goal to be realised. It was argued that the vision so far did not provide a sufficiently broad perspective and that an overall strategy was necessary to achieve the goal of CO_2 reduction. A two-step strategy for sustainable mobility was proposed: First, mobility itself should be reduced and shifted to means of sustainable transport (sufficiency strategies). Secondly, mobility which cannot be shifted should be carried out in the most efficient way. Additionally the usage of fossil fuels should be put to an end and be substituted by mobility based on renewable sources.

Beside the overall objective of CO_2 reduction, more specific objectives were formulated as well. The participants pointed out that the vision so far lacked considerations regarding transport of goods, leisure mobility and mobility of vulnerable groups like elderly people or children. They suggested broadening the perspective of the vision in terms of including rural areas as well instead of only planning from within city centres. Differences in mobility between urban and rural areas were emphasised.

The group supported the focus of the vision on non-motorised locomotion. They aimed to end preference of cars in urban planning processes and to meet the needs of pedestrians and cyclists. In order to implement necessary changes, influencing environmental/structural factors was proposed as an important pathway. For example, parking space for cars should be decreased while parking space for bicycles should be increased. It was remarked that planners need to be careful not to play off different sustainable means of transportation against each other.

Apart from structural changes, a smart communication of sustainable innovations/plans was deemed important in order to prevent reactance and avoid that people may feel patronised. Furthermore, debates regarding what people see as a good life in Halle and how to design urban living were called for.

Development of an agenda

The group was informed that it would be necessary to differentiate between relevant purposes of mobility and actors in order to develop pathways towards the realisation of the vision. Participants named work/education, shopping, leisure and accompanying someone or different settlements as purposes for mobility.

Participants agreed that there are a great number of different actors relevant for mobility ranging from local stage to the European Union. Table 4.8 shows the actors in civil society, government, research and business influencing mobility.

Civil Society	citizens, civil society, lobby groups e.g. ADAC (German lobby group for cars (and car use)), ADFC (German lobby group for cycling), FUSS (German lobby group for pedestrians)
Government and administration	Stadtplanungsamt (urban development office), city administration, different offices on state and federal level, European Union
Research	educational institutions, cultural institutions
Business	provider of public transport services (HAVAG, DB, teilAuto/CS), automotive industry (incl. car dealers), retail and trade businesses, providers of housing, public and private employers

Table 4.8: Relevant stakeholders for initiating changes in the mobility sector

Development of pathways and proposals

The group discussed how the preference of car traffic could be ended (detailed information about specific steps can be found in Table 4.5). The actions proposed for the developed pathway can be summed up under the following four keywords: usage of alternatives, promote collectivisation of transport, use push and pull factors (to hinder vs. to promote/to support fair shares) and to reduce competitors for sustainable transport.

Aspirations aimed at the short term period included scientifically capturing the current state of transport and determining possible potentials for a far distant future. A coherent vision for the development of Halle should be formulated. Short term actions included actions such as changing the traffic light circuit and reconstruction measures.

It was easier for the group to formulate short- term and middle-term goals. It was a slightly bigger challenge to overcome barriers and come up with a more innovative thinking to develop strategies for a new(er) and more "visionary" mobility vision. It took the group a big share of time to agree on a greater objective. Therefore, there was no time left to translate additional objectives proposed in the vision into more specific steps for the backcasting pathway (e.g. urban decentralisation, diverse urban centres within city's, support lobby-groups, energy production and so forth.

4.4.2 Vision 2: further development visions – networking - participation

Evaluation of the vision by the participants

Participants in the networking – participation group strongly focused on their idea of discussing values. They emphasised the importance of defining values and broadening the vision by explicitly including values. The term 'value' was not defined in the discussion nor discriminated from goals which were also to be included in the vision. However, different categories of values were collected, religious values on the one hand and shared and non-shared values on the other hand. The group proposed social responsibility and less materiality to be shared values in the future. Money should decrease in its importance, which would lead to a value change. This value change would supposedly be facilitated by the young generation, since young people are already

less materialistic according to the participants. Shared values are also supposed to function as starting points to engage corporations in the vision's future order.

In accordance with these thoughts, participants highlighted the importance of including spaces for value-related discussions as well as spaces for the formation of a shared identity into the vision. As a specific implementation, the student groups aged 16-18 (which were described in the first workshop already) should be given such spaces. They should be guided while thinking about the meaning of life and committing themselves to values and thereby forming their identity.

Another aspect of the vision elaborated was the amount of time spent on work. Participants developed the idea of using time as a currency and sharing working hours by proposing a barter system of work performances. Everyone should engage in the field which suits his or her skills best. An unconditional basic income is supposed to enable people to do so, while ensuring at the same time that nobody is paid less than fair value.

Participants agreed with the idea of grass root democratic processes of decision making as described in the vision. They indicated that supporting structures should be initiated in order to make these processes actionable.

Furthermore, the importance of communicating values and the benefits of the vision were emphasised. People should understand the increase in quality of life provided by the changes; for example the benefits of complementing work with voluntary engagement. The results of this session are lists of evaluation remarks and improvement suggestions for the visions.

Development of an agenda

The group chose quarter projects as an aspect of the vision to work on. Different quarter projects were collected and are listed in table 4.6.

Development of pathways and proposals

While developing the timeline, participants already discussed broader headings for each stage. For the first stage – until 2020 – creating and finding spaces or rooms were identified as the main object. The research domain is supposed to identify the objectives of quarters which enable them to function, e.g. size, and assess the needs and resources existing in the quarters. Citizens and initiatives are responsible for finding appropriate quarters. Furthermore, citizens are supposed to create cross-generational meeting places.

Until 2030, a 'social added value' should be implemented and people should develop a conscience for the value of improved human cooperation. Companies are supposed to create social added value for the society. The added social value is to be made ascertainable by means developed by the research domain and made visible and calculable as well as matched financially by the government. Citizens are to develop a concept of how people can support each other and also an 'education of the humans and their heart' conveyed by an altered educational system.

By 2040, a developed conscience of individuals understanding themselves as a part of the organism earth is to be common ground in all domains.

4.5 Conclusions and reflections

Impressions and observations from the backcasting workshop in Halle

The workshop was attended by 14 participants from different backgrounds. Some had already participated in the first workshop, which was useful in keeping the original spirit alive. Having someone from the city council and someone from the local public transport company in the group helped to increase perceiving the workshop as both legitimate and serious.

The general mood in the plenary sessions was characterised by openness and a spirit of being interested and caring about the discussed topics. In the group sessions on mobility, there were lively discussions which sometimes drifted away from the main goals. It proved to be tricky to keep things in check. Some men clearly dominated the discussions, while the women were in general more reluctant to speak up and formulate bold ideas.

During the vision evaluation, the participants of both vision groups came up with lots of additional ideas and preferred debating those over the original visions. Since the composition of the whole group had changed (compared to the first workshop) the new members of the group did not identify themselves with the visions formulated in the first workshop.

Participants in the mobility vision group seemed to find it difficult to imagine a future in which some of the current obstacles to change were removed ("We've already tried that. It didn't work."). The main focus of attention was on ideas that seemed realistic in the short to medium term. Moreover, most ideas were envisioned for the domains of government/policy and industry, while surprisingly little was suggested for the realm of civil society. During the development of the pathway it was difficult for participants in the mobility group to focus on one specific topic and to formulate interim goals. Instead, the discussion (partly) went on about which topics to focus on. In the phase of the pathway development, it seemed to be very difficult for the participants to formulate specific steps and they continued to discuss on a more general content-related level. It would have been helpful to include methods to strengthen the identification with the vision (the evaluation of the vision doesn't seem to have worked as a method), to have more time for the evaluation of the vision or to work with exactly the same group.

The members in the participation vision group used the workshop as an opportunity to exchange their opinions regarding broader, societal topics at different levels. Discussing value change in general and spaces for spiritual development was very important to them and was also included in the table of the development pathway. The group members could not identify with the very concise steps of developing a pathway. They took benefit out of the opportunity to engage together in an intense discussion (this might be explained by the structure and interest of the German case study participants in general). However, in the end they were able to relate some parts of their discussion to the Backcasting pathway (for results please see table 4.7).

A different workshop design might have helped to deal with the breadth of the visions and ideological differences (e.g. clear assumptions on prevailing trends – e.g. economic development

and values). Perhaps a clear identification of the main obstacles ahead of realising the vision would have helped to think outside the box and find more brave and visionary ways to imagine steps in the medium to long term range. Smaller groups (5-6 people) might have been better suited for a more structured and balanced discussion.

It was interesting to note that little was said about the role of different generations in shaping the visions and actions (although someone in the final plenary session mentioned the importance of learning from and being inspired by children). "Religious actors" (e.g. church, other religious groups) were not mentioned (one might have expected them to play a role in the vision on participation, especially given the weight put on "spiritual development") which was surprising since spiritually coloured topics popped up here and there in the discussions beforehand.

4.6 Sources and references

Bücker, J., Krause, K., Petri, M., Schulte, M. (2016) WP5, Task 5.3 – Summary report of Second Backcasting Workshop (Pathway Development) in German Case Study for GLAMURS, internal report, Helmholtz Centre for Environmental Research, Germany.

5. Pathway workshop results Italy

Ambra Brizi, Fridanna Maricchiolo, Giuseppe Carrus & Angelo Panno (Roma TRE University)

5.1 Introduction

The Roma Tre University organised the backcasting workshop on March 3rd 2016. It was the second of two meetings with the purpose of deepening the development of the two visions elaborated in the first meeting, through the back-casting activities and the pathways. A reflection on the results was done at the end of the day. The workshop was facilitated by Ambra Brizi, Fridanna Maricchiolo and Angelo Panno, and it had a duration of around 5 hours. It took place in the premises of the Department of Education of the Roma Tre University.

5.2 Workshop preparation

Inviting stakeholders

In total, 8 out of 12 participants were already present at the first meeting. Some of them are representatives of the initiative "CoRAgGio", which is the main focus of our case study activities. Some of them also participated in other GLAMURS' activities such as focus groups, net-map networking analysis, and in-depth interviews. Participants were recruited from various disciplinary fields and expertise areas, such as: professionals in the field of environmental issues (e.g., urbanists, landscapers, agronomists, environmental psychologists, engineers); academics with strong interest in sustainable lifestyles; representatives of government and affiliates; citizens interested and active in sustainability activities, members of the local community and civil society.

A week before the workshop, we performed a test workshop. First, we prepared a presentation about the GLAMURS project, its main goals and principal results, and a brief summary about the workshop day, about the first meeting, and fixing the duration of each section. We established the respective roles. We also organised all the material for the workshop (coloured post-it, pens, markers, a photo camera, an audio recording device) and printed on paper all the necessary material, including the questions to be asked to the participants during each workshop section.

Practical workshop organisation

We organised our workshop at our Department in the Roma Tre University, which is located in the city centre of Rome. We arranged tables and chairs, and the flip over stands were available in the room as well as a PC and projector. We arranged the same materials also in a separate room for the sub-groups sessions. Fridanna Maricchiolo and Ambra Brizi wrote a detailed script for the workshop, which contained the following information:

- Reminder for the participants (with a detail programme and location)
- Materials
- Papers to write down salient aspects during the discussions
- A summary of the roles
- Programme

We discussed all together the script. Ambra Brizi and Fridanna Maricchiolo prepared the presentation for the workshop. In the room where the meeting took place, we hanged up the poster titled "Agricultural cooperative 'Co.r.ag.gio.', an example of urban agriculture in Rome (Italy) as a resilient strategy against urban climate change", which was recently presented at the Conference on "Nature-Based Solutions to Climate Change in Urban Areas and their Rural Surroundings", held in Bonn (Germany), on November 17th-19th 2015.

The overall program of our workshop was the following:

09.00- 9.30	Welcome, Check-in, introduction to GLAMURS project
09.30-10.00	Presentation of visions and other outcomes of the 1st workshop
10.00-11.15	Evaluation of visions and further development of visions session
11.15-11.30	Coffee break
11.30-12.45	Development of pathways, agendas and implementation proposals in 2 sub- groups
12.45-13.45	Final discussions and evaluation in plenary
13.45-14.30	Lunch and informal gathering

We arrived in the meeting site before the participants to check that all the materials and the room were well organised. Participants arrived at about 9 am. We gave them stickers with their name to attach on. When all the participants arrived, Fridanna gave a welcome and greetings to the participants, and a brief introduction about the GLAMURS project and the Italian team involved in it. After that, she described the day activities and then she explained the back-casting methodology and the day organisation. Then she presented a summary of the visions developed during the first workshop. After this, we started the vision evaluation in a plenary session, during which participants gave their impressions about each vision, and their possible development. After this exchanging task, we had a coffee break. After that, we divided the participants in two sub-groups (leaded by Ambra Brizi and Fridanna Maricchiolo, respectively) to discuss about the back-casting questions. The workshop proceeded with the pathways and agenda session. After a coffee & tea break, the results of the sub-group sessions were presented and discussed in a plenary discussion.

5.3 Workshop results: applied methods

Vision evaluation and elaboration

This part was facilitated by Fridanna and Ambra in a plenary session. After a brief presentation of each vision, we asked to the participants the following questions about the visions that were generated in the first back-casting.

- What is your first (intuitive) response to this vision? What do you like about this vision, and what you do not like?
- What is positive about this vision?
- What is negative about this vision?
- What is missing in this vision?

Sufficiency Vision

First Response

Many questions came up immediately when we introduced the vision: Is this vision utopic or desirable? Is this vision economically sustainable? What about the bureaucracy? In the following parts, we deal with these questions.

What is positive?

Developing more local farms, and so more local production, especially inside the cities, it was expressed as a very positive aspect of this vision. Participants had different opinions about the agricultural production in the regional area. For some of them it was possible to have a local food production with few hectares and to produce food for an entire city. For other participants it was very difficult. Bureaucracy should be simplified and the administrative devolution should help the citizens.

What is negative?

The participants were concerned that the personal creativity could not be evaluated in this vision. One participant described it as too utopic and not applicable. It is a vision that could be applied only to small territories.

What is missing?

In this vision, it is not considered the population growing trend and the immigration phenomenon in contemporary European society. It is too concentrated on the local distribution and it does not take in account the global vision. The participants hypothesised that, under certain circumstances (e.g., food consumption and mobility reduction), the vision is applicable. Also the relocation was not considered.

Green Growth Vision

First Response

Participants had positive and negative first impressions. They would like to have smart cities that could facilitate our daily life tasks but, at the same time, the new technologies were described also as a possible negative instrument (e.g. people could spend more time in a technological home instead and less interacting with other people).

What is positive?

Many positive aspects were addressed. Participants gave great attention to the evaluation of the city as a place where it will be possible to meet people (e.g. squares, more green spaces), where there will be a mobility simplification (fast trains, less cars, less traffic, more public transportation), where the local purchasing processes will be intensified (more organic local farms in the cities, more information about food). Also the welfare system will be more equal and efficient, with a better distribution of incentives and support to all the citizens in need.

What is negative?

The participants underlined the possibility that the cities can become too big and the suburbs may turn into South-American favelas or sleeping districts. Also, they are concerned that the quality of life can become too low if the welfare is not well distributed.

What is missing?

It's important to have an active citizenship, to value and appreciate more the own territory, to have more green spaces accessible for all. Also, thinking about the urban redevelopment (e.g. less architectural barriers), giving to all the citizens the same facilities is an important element.

Backcasting analysis and pathway development

The participants were asked for their preferences for one of the vision and two subgroups were formed for each of the two visions. Each group was facilitated by one of the facilitators. The backcasting session consisted of two main parts.

In the backcasting questions, participants were asked to write down their answers the following questions:

1. *What changes are necessary (cultural-behavioural, structural-economic, structure-governmental, organisationally, technologically)?*
2. *How can these changed be established? What are required actions and activities for these changes?*
3. *Who is/are able to execute these changes?*

After, participants responded to the following questions:

1. *What activities are needed on the short term, medium term and long term. Think of (1) civil society/citizen initiatives, (2) government/policy, (3) business and (4) knowledge and research?*
2. *What are concrete proposals and actions that can directly be implemented?*
3. *What are recommendations for diverse actor groups (as described above)?*

The session closes with a plenary presentation and discussion of the results.

5.4 Workshop results: vision and pathway

5.4.1 Vision 1: Sufficiency

Backcasting: necessary changes

In this section, we reported the needed changes for a sufficiency transition. In table 5.1 there is a summary of these changes.

Cultural-Behavioural Changes

As in the green growth vision, in the sufficiency vision, social interactions are important. As a consequence, there will be a massive flow of knowledge and information exchange, where innovative ideas can more freely circulate. The endorsement of different lifestyles, related to the diffusion of both traditional and innovative cultural systems will be facilitated by a more fluent personal and virtual communication flow. A more active social interaction will also produce a more active citizenship in various domains of the political arena and daily life contexts. The main stakeholders involved in this process will be: citizen, local communities, territorial agencies, experts and politicians.

Technological changes

Small technological changes will be activated, mostly in relation to small scale technologies. In particular, new technologies will be developed for a higher agricultural sufficiency: e.g., acquaponics systems and protein production for domestic consumption). Also, technological change will occur in the domains energy stockpile and sustainable energy conservation. The actors involved will be mostly researchers and energy producers.

Structural-Policy Institutional Changes

The management and conservation of natural resources in the territory will be improved through innovations in the institutional governance and decision process. In particular, more small scale territorial institutions (e.g., small municipalities) will replace the big centralised metropolitan municipalities, allowing a more direct and transparent political process, and thus favouring political participation and active citizenship. The main stakeholders involved will be policy makers, institutions and citizens.

Organisational changes

The main organisational changes needed to achieve a sufficient future will require a more collective management of the commons resources and spaces, at the local scale. This will be pursued through processes of self-production directly from the individual consumers ("prosumers"), and will be applied in the field of housing (e.g., co-housing), participatory process to urban renewal, more socially shared usage of common public spaces, and sustainable restructuring f existing urban and peri-urban spaces and buildings.

WHAT (change elements)	**HOW (activities)**	**WHO (stakeholders)**
Cultural-Behavioural Changes	• Cultural change in families • More social interactions exchange ideas, culture, lifestyle • Virtual communities • Virtual platforms for e-learning and education (free, from voluntaries making available competences and knowledge) • More social aggregation • More activism in institutional and political life	Citizens communities, experts, territorial communities for the improvement of local identity
Technological Changes	• Small scale technologies (agricultural technology for more sufficiency; e.g. integrated system of acquaponics, producing proteins for a family) • Technologies for energy stockpile • Sustainable energy conservation	Researchers, energy producers
Structural-Policy Institutional Changes	• Institutional innovations on decisional processes • Management of small part of the city • Conservation and safeguard as tool of territory protection	Policy makers, government agencies, local institutions, citizens
Organisational changes	• Collective management models of natural resources in a local scale	Small communities, networks of actors

	• Auto-production • Housing • Participative projects • Use of common place • Sustainable restructuring	

Table 5.1: Summary of changes, activities and stakeholders for vision 1

Backcasting: pathways

Responding at the second set of questions, the participants generated the following pathways (summary in table 5.2):

Public Interest-Citizens Initiatives-Consumers-Civil Society Domain

In short term, the citizens will be more active, and the personal and family relationship will change.

There will be in the medium term a consumption reduction and rationalisation in a way that, in a long term, no more consumption of animal proteins will be done. School is a big issue. First, school will teach to young people how to do sustainable and healthy food consumption and, then, it will teach to have a stronger civic sense and a higher environmental awareness (long term purpose).

Government-policy domain

Decisional instruments will be more participatory. There will be more dialogue between citizens and government using incentives. The enforcing systems and tools will be not only negative (e.g. fee, sanctions) but also there will be positive ones (incentives). In medium term, there will be not, only an index of gross domestic production (GDP) but also indexes that could calculate the well-being and the economic growth of a given society at the aggregate level. Sharing a collective perspective will produce the effect of developing an ethic respect of the common goods.

Activities & results until 2020	**Activities & results until 2030**	**Activities & results until 2040**
Public Interest-Citizens Initiatives-Consumers-Civil Society Domain		
Citizens until 2020	Citizens until 2030	Citizens until 2040
Active citizenship Small scale technology Personal and family changes Accessible spaces of aggregation (10 min walking) amongst equal and different generations Education Open schools in the afternoon for social aggregation	Consumptions reduction and rationalisation Education (of sustainability and healthy food into the school)	Sustainable food consumption and nutrition No consumption of animal proteins Education to civic sense and environmental knowledge
Government-policy domain		

Government until 2020	Government until 2030	Government until 2040
Decisional instruments and processes would be legal and participated More positive (incentives) than negative (sanctions) tools	New indexes of economic growth and wellbeing (e.g. economic revaluation of total costs), different from simple gross domestic product (GDP) Waste reduction and recycling	Promotion of common spaces Development of collective values Ethic respect of common good
Research & knowledge domain (including technology development)		
R&D until 2020	R&D until 2030	R&D until 2040
Basic research for technological sustainability (water, energy, sun, wind)	Technological development in small scale	New technology for sustainable food production Improved drainage network
Business-Industry-Producers-Utilities Domain		
Production until 2020	Production until 2030	Production until 2040
Economic evaluation of total costs	Investments on real and productive industrial projects (in line with consumer demand) in order to create widespread employment (long term return)	Market regulation Ethical projects with economic returns

Table 5.2: Sufficiency pathways

Research & knowledge domain (including technology development)

There will be basic research for technological sustainability. Regarding the water and lands, in the long term it will be expected an improved drainage network. Regarding the food, new technologies will be developed to respect the land, the food's taste and consumers health and well-being.

Business-Industry-Producers-Utilities Domain

The investments in the industries will be more productive, based on realistic projects with the aim to reduce unemployment levels and to satisfy the consumer's needs. The projects will have an ethic base for the consumers and right economic returns for the investors and entrepreneurs.

5.4.2 Vision 2: Green Growth

Backcasting: necessary changes

In this section, we reported the needed changes for a sufficiency transition. In table 5.3 there is a summary of these changes.

Cultural-Behavioural Changes:

For the participants, it is important to pay attention to the green spaces in urban and peri-urban settings. The green areas are ignored because people don't know that the land can be a source of income (in the cities, green areas are an obstacle to new parking, new malls, etc.). Also the citizens should be "smart" and able to use the information from the media to develop their own potentiality and creativity. The work should give people more free time that could be used for

environmental activities (e.g. to take care of an own garden). Universities should teach not only to build new stuff, but also to renew and reuse what it is already present. At school, attention should be paid to new subjects. Environmental concern and related subjects should be taught, to understand the relationship between humans and nature, but also other subjects (e.g. anthropology, social psychology, civics) should be learned to improve people-environment relationships. One participant coming from Albania spoke about the situation in her own country. She said that during the communist regime period, every Sunday all Albanian citizens had to clean the common green area and they were glad for that because they were doing something for the community. Participants suggested that a similar mentality about the idea of "common resources" should be developed.

Technological Changes

New technologies will be developed for supporting a green vision. For example, in the houses, we will find new technologies (e.g. new technologies that can meter how much energy we are saving). The technologies will be user-friendly so that both children and old people can use them. As said in the first meeting, technological changes have a double role: technologies can really help the everyday life, but also they can create some problems (overload information, what should we do if there are climate changes? Will technologies help us?). One proposed solution could be to educate people to be able to manage the information, creating a network of "information sharing". Also, new technologies are fundamental for sustainable agricultural development.

Structural-Policy Institutional Changes

The governments should implement new reforms to encourage citizens to use the environmental resources. For example, there will be a census on urban wastelands and these areas will be reused and give to citizens (e.g. urban garden for retirement people or/and people with economic disadvantages). The participants suggested the importance of collaboration between people and institutions to achieve these changes.

Organisational/Economic changes

During the discussion, participants asked for a better proportionality of the resources, rebalancing of the social gaps for a more equal society. In the current society, the difference between rich and poor people is perceived as too big. One method is the redistribution of the resources (as said using abandoned land) and also trying to encourage the young people to develop new projects to express themselves (e.g. with agriculture, with scientific resources, learning a profession). The support and cooperation between the school as place of education and the government with job reforms, scholarship, job formation, is necessary. Economically, the development of new technologies will help to save money (e.g. use renewable energy and photovoltaic systems).

WHAT (change elements)	**HOW (activities)**	**WHO (stakeholders)**
Cultural-Behavioural	• More green areas (e.g. own gardens) • New subjects at school (e.g. on the	Universities, schools, citizens

Changes	relation-ship between humans and nature • More free time and better use of common resources	
Technological Changes	• Information (good or not?) • New technologies (e.g. for houses, mobility sustainable agricultural development)	Universities, industries, citizens, institutions and local governments
Structural-Policy Institutional Changes	• Redistribution of unused resources (e.g. green areas) • Quicker reforms	City administration, government, institutions, citizens
Organisational changes	• Equity • Saving money	Industries, universities, citizens, school

Table 5.3: Summary of changes, activities and stakeholders for vision 2

Backcasting: pathways

Responding at the second set of questions, the participants generated the following pathways (summary in table 5.4). In general, all participants said that it is important to manage in the short and medium term the possible problems that come up with these changes (e.g. problem of integration of immigrants in a new culture, problem between citizens and government, and problems in the business activities).

Public Interest-Citizens Initiatives-Consumers-Civil Society Domain

Before the changes could be realised, the people should have the awareness of the problems. So the short term (in the next four years) will be used for that. In the 2030, people will be active to produce essential changes. All the changes will be real in the 2040 (school as priority) and a new green concerned society will be possible. Relationships should be less cold. More collaboration between people is required. This will be possible also with the government support. More summer schools should be introduced in which students could have the first contact with nature (e.g. teaching how to manage a vegetable garden) and new subjects should be introduced in the classes (e.g. ecology, anthropology). This will develop a new awareness on the relationship between humans and nature and between people.

Government-policy domain

The government should start new reforms. At first, jobs should be more secure and a reduction of unemployment is a necessary priority (e.g., people should have a guaranteed minimum salary, the welfare should have a better distribution). Development of the individual ability is necessary. One way to stimulate people's capacities is a comfortable working place, if possible not in the cities. The long-term purpose is to have an active citizenship (stronger collaboration between citizens and local and central government is highly required). The stronger relationship between government and citizens should also improve the awareness of the "common goods" for example the common green areas and the importance of taking care of them (e.g., cleaning common green areas)

Research & knowledge domain (including technology development)

In a short term period, more money on research should be invested; in particular, new technologies should be invented and tested. Innovation in the green vision represents a great development and an environmental challenge. In a medium term, people should be able to use the new technologies. In the long-term, innovation could produce a new economy where clean technologies are used with a consequence of a greener world. The new economy could be spread towards different regions and this could encourage the emerging of new regions and there could be a poverty reduction. Innovation should help the mobility (e.g. a better transportation system, car-sharing, carpooling, and use of electric vehicles). Also, the energy production and consumption should benefit of the technologies (e.g. more diffusion of solar panels). New "apps" on smartphones will help people to adjust their personal footprint, for example checking one's own energy consumption levels.

Business-Industry-Producers-Utilities Domain

Also in this process, the people's awareness is necessary. Many businesses could be developing if new qualified industries would be created. Participants talked about the importance of organic food production and consumption as a new and emergent business. The agriculture industry will benefit from the technologies (a qualified agriculture). Also people will discover new nutrition habits, with a good taste. The necessary changes to have a sustainable agriculture have already started, so that it could be convenient economically for the farmers and good for both the environment and people.

Activities & results until 2020	**Activities & results until 2030**	**Activities & results until 2040**
Public Interest-Citizens Initiatives-Consumers-Civil Society Domain		
Citizens-consumption until '20	Citizens-consumption until '30	Citizens-consumption until '40
Awareness of issues School (summer school with activities such as working in a small vegetable garden)	Changes activations Green areas as meeting place School: • new subjects • develop individual abilities from the school, to have a better connection between school and labour market	A new Green concern New school (Real attention on the relationship with the nature) New relationship between people (more collaboration, more interaction)
Government-policy domain		
Government until 2020	Government until 2030	Government until 2040
Reforms (especially job market reforms: more secure jobs, minimum salary, comfortable working place, more free time)	Activation of reforms Job regulation (welfare redistribution)	Green and clean cities Active citizenship Importance of the common goods
Research & knowledge domain (including technology development)		
R&D until 2020	R&D until 2030	R&D until 2040
Invest more money on research in general and on "sustainability" specifically New technologies should be invented	People know how to use the new technologies Apps on smartphones (technologies for everyone)	New mobility (very rare the use of personal cars) New energy consumption and production Poverty reduction

(start a better mobility with new cycle paths)		
Business-Industry-Producers-Utilities Domain		
Production until 2020	Production until 2030	Production until 2040
Awareness of issues Creation of new instruments for industry, new business (food)	A new and qualified industry: e.g. qualified agriculture Agriculture: • More economic convenient for farmers • More environmental concern	Sustainable production Well-distributed economy

Table 5.4: Green Growth Pathways

5.5 Conclusions and reflections

Conclusions and reflections on visions

The green growth vision looks as a " possible future" and participants aspired for that. Many positive aspects came up to people's mind. Basing on the participants background, a "green future" is a desirable scenario even if some negative aspects were underlined. Some doubts are especially in the technological changes. To what extent can they really help people or to what extent can they complicate people's life? This is an open question. Elements of tradition (reuse the lands, reuse of green abandoned area) and elements of innovation (new technologies) are a good match for a sustainable green vision. Both visions have in common the importance of the collaboration between citizens and government. Also, both visions underlined the role of the school for a better future.

Methodological reflections

We had a good number of participants for both the back-casting workshops. This permitted us to manage without any specific problem the plenary sections and the sub-groups. Probably, planning more time for the second part of the second back- casting day could be a good idea. In general we are very satisfied about the workshops and we received positive feedback from the participants. Participants found it quite difficult to think back from the 2040 to the 2020. It required them a considerable cognitive effort and time to perform that mental exercise.

5.6 Sources and references

Brizi, A., Maricchiolo, F., Carrus, G., Panno, A. (2016) WP5, Task 5.3 – Summary report of Second Backcasting Workshop (Pathway Development) in Italian Case Study for GLAMURS, internal report, Roma TRE University, Italy.

6. Pathway workshop results the Netherlands

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6.1 Introduction

On March 1st, 2016 TU Delft organised a backcasting workshop on Sustainable Lifestyles and Citizen Initiatives as a part of the GLAMURS project. This workshop is a follow-up of the vision workshop on the same topic as organised on November 26th, 2015. Just like the first workshop, people from citizen initiatives and civil society, government and knowledge institutes were invited, based on their interest in sustainable lifestyles, citizen initiatives and related subjects. The workshop was facilitated by Jaco Quist, with support from Wouter Spekkink, Udo Pesch and Carien van der Have. During the workshop of November 26th, 2015, three visions have been developed: (1) sufficiency and local communities, (2) between sufficiency and green growth, (3) green growth through innovation and active citizens. Building on the three visions, the goal of the workshop was to develop transition pathways, (policy) agenda's 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.

6.2 Workshop preparation

Inviting stakeholders

We used the list of participants of the first workshop in November 2015 as a base for sending out invitations for the second workshop, extended with new contacts established between the first and the second workshop. In total 63 invitations were send out. These stakeholders all received an email with an invitation for the second workshop. We asked all invitees to send us a confirmation of their participation. Whenever they rejected our invitation, we asked them to forward the invitation to someone else in their organisation.

Practical workshop organisation

The workshop was also this second time organised at the Art Centre Delft, which is located in a green area, near the university campus. Participants received the visions one week before the workshop. The overall program of the workshop was divided into 2 main parts. The first part in the morning focused on an evaluation of the 3 previously established visions. The afternoon involved the actual backcasting session. In this session, visions have been complemented, changes for the transition pathway have been sketched out and timelines have been established to create an overview of steps to take. The overall program was as follows:

09.15 – 09.30	Walking in, coffee and tea
09.30 – 10.00	Check-in and introduction
10.00 – 10.30	Introduction to Glamurs & presentation results 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)
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

6.3 Workshop results: applied methods

Including the 4 (co-) facilitators, 15 people joined our workshop. Among the participants, 9 people represented civil society, 2 people represented (local) governments and 4 people representing knowledge institutions. 5 of the attending persons had not participated in the first workshop.

Vision evaluation and elaboration

The method applied in the morning was inspired by the six 'thinking heads' of De Bono. De Bono uses different colours coupled to emotions, reflecting different perspectives on a certain topic. This method was translated into 4 questions we could ask for each of the visions. During the evaluation three subgroups were formed that individually brainstormed on the four questions for each of the visions. The questions were phrased as follows:

1. *What is your first reaction to this vision? What do you (dis)like? - Intuitive*
2. *What is positive about this vision / this future image? - Positive*
3. *What is negative about this vision / this future image? - Negative*
4. *What is missing in this vision? What is interesting in this vision? - What is missing*

The 3 subgroups were facilitated by the 4 facilitators; the facilitators asked the participants to write down as many answers to the questions as possible on post-its and stick them to flip-overs. After a plenary presentation all participants were asked to answer the following question: which vision is most interesting, why and what is the most important priority for the afternoon session about necessary changes and implementation pathways?

Answering this question, the participants showed a slight preference for the third vision because it is assumed to be most realistic and comes closest to our current society, but it would benefit from elements from vision 2 and 3. Others argued that vision 1 would be preferable, but that it also would benefit from elements from the other visions. From vision one and two the need to consume less was mentioned as important. The following priorities for the afternoon sessions were mentioned in the discussion:

- A growing number of initiatives is needed to achieve a tipping point for a transition.
- How to make use of the educational system?
- There is a need for more extensive awareness.
- What are the main barriers we can collaborate upon?
- Allow for more variety in the visions to make them more flexible.
- More interaction between rural and urban areas
- Innovation is not only technological, but it also contains new economic and value systems that structure the way we interact with each other.

- Emphasise the possibilities of people to create a fairer distribution of resources and welfare. Wellbeing is not only dependent on welfare and physical consumption

Backcasting analysis and pathway development

After a short introduction on the afternoon program, the participants were asked for their preferences for one of the visions. Based on these preferences three subgroups were formed for each of the visions. Each group was facilitated by one of the facilitators. The backcasting session consisted of three main parts. In the first part (duration of 20 minutes) the subgroups were asked to elaborate their vision guided by the following questions:

1. *What can be added to the vision to improve it and to make it more focused on sustainability?*
2. *How do people live their daily life according to (i) energy, (ii) products and repairing, (iii), food, (iv) mobility, (v) housing and (vi) work-life balance?*
3. *What is the role of government, local (citizen) initiatives, services and sharing platforms, business and other groups or actors?*
4. *Do you need any additional assumptions for this vision (because of the elaboration)?*

In the second part (20 minutes) backcasting questions were posed and participants were asked to write down their answers in a table that was prepared for this part. The following questions guided the discussion:

4. *What changes are necessary (cultural-behavioural, structural-economic, structure-governmental, organisationally, technologically)?*
5. *How can these changed be established? What are required actions and activities for these changes?*
6. *Who is/are able to execute these changes?*

In the third part that lasted another 20 minutes the discussion was facilitated by means of a transition curve on a flip-over sheet. Participants could add to the transition curve by sticking post-its to it that contain actions to be taken at a certain point in time. This discussion posed the following implementation questions:

- *What activities are needed on the short term, medium term and long term. Think of (1) civil society/citizen initiatives, (2) government/policy, (3) business and (4) knowledge and research?*
- *What are concrete proposals and actions that can directly be implemented?*
- *What are recommendations for diverse actor groups (as described above)?*

The session closes with a plenary presentation and discussion of the results. The in depth results of the backcasting session will be described in the next section (section 7.4).

6.4 Workshop results: visions and pathways (in depth)

In this section the elaborated visions and pathways are presented as developed during the workshops of November 26th, 2015 and March 1st, 2016. For each of the visions the following aspects will be described:

1. Core and main assumptions of the visions
2. Lifestyle activities as characteristics for the envisioned society

3. The organisation of the envisioned society and corresponding division of roles
4. The changes necessary according to the visions on the short, medium and long term.

During the workshop of March 1st, 2016 the elaborated visions and related changes have been presented and based on these presentations we discussed the visions internally in our team. This section contains the report of the workshop itself including our interpretation and further elaboration of the three different visions.

6.4.1 Vision 1: Sufficiency and local communities

Core and main assumptions

A summary of the vision on sufficiency and local communities can be found in table 6.1. 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 to prevent that we exceed the carrying capacity of our planet. A related assumption is that there is **enough time to realise a transition** in 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 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 we own and consume. There is a stronger emphasis on **sharing**, **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 and food consumption is seasonally bound. Meat products and other exotic foods are a luxury and are therefore consumed only rarely. Not every community can produce every type of food locally, which means that some food products are traded. In every community there is a distribution centre, where products from outside the community are delivered. 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. 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 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** people work fewer days a week, and work becomes more flexible in terms of working hours and working place. This gives people more time to do 'unpaid work' in 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 specialisations, but the capacities of people are broad enough to also be able to support the activities of others. In addition, it is recognised 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

Companies have large divisions that focus on repairing, client support, and selling functions that products can provide. Many products and services are exchanged in 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, but show a strong interest and involvement in the company they invest in. Shareholders also take into account the collective interests of their community and have a long-term vision. The bond with their company is based on the fact that they come from the same community and/or because they are also employees of the companies. Companies regularly invest their revenues back into local communities in which they are bedded. The way companies engage

in **marketing** testifies to a strong moral consciousness. Marketing is not just about selling products, but also about learning the wishes of the community. In this way companies comply with the core value of this vision: sufficiency.

Core and main 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. • Optimistic view upon human nature 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. • Leisure activities take place within 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 specialisations, but everyone supports a broader range of activities. • The quality of the living environment is high. • *Energy is partly generated locally, and partly at the non-local level.* • *We make use of smart grids, energy storage and well-connected networks.* • *We take energy saving measures.*
Organisa-tion and division of roles	• Companies are less profit-driven and invest revenues back into local communities • *Social shareholders have a bond with their company and the community.* • *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.* • *There is education on sustainability at all levels of education.* • *Status no longer depends on ownership, but on contributions to the community.*

Table 6.1. Summary of vision 1. Points in italic are additions from the second backcasting workshop

'**Financial**' **systems** are local and not purely oriented towards welfare. For example, it is possible to trade time for goods. It also means international trade is slowed down because markets are local oriented. These local markets flourish just like in ancient times. 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 **status** is less dependent on what people own, and more dependent on what one contributes to a community. Thus, people spend less money, meaning they do not need to work much to earn what they need.

The **pyramid structure** of our current society **is inverted**. That means that **supra-local governments** only monitor and maintain boundary conditions, that **local governments** have a facilitative role, and that both these are **in service of citizens**, who represent the executive power. Citizens have a strong say in collective matters. 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 **harmony** between different local communities. This includes **welfare functions**, but also mechanisms to **empower people** to discover and take up their role independently. In this way, governments contribute to the combination of local roots and global connected-ness of communities. In addition, supra-local governments **ensure healthy infrastructures**. The focus of governments is setting boundary conditions that encourage self-organisation. This requires **advanced forms of participatory governance**, and **smooth contacts** between local authorities and residents.

Sustainability has become an important in **education**. Education is focused on making students more aware of their own talents, responsibilities and role in the community. Instead of adapting education to the "average" student, **education is customised**. 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**.

Backcasting: necessary changes

The vision outlined above implies several changes that need to take place at the short, middle and long term (summarised in table 6.2). 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.

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 **technology and knowledge** are aimed at making our economy more sustainable. Elements of ecological modernisation are present in the envisioned changes in this area.

	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; 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 make citizens the executive force. Also ensure 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, ba
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 instit 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

Table 6.2. Summary of changes required according to vision.

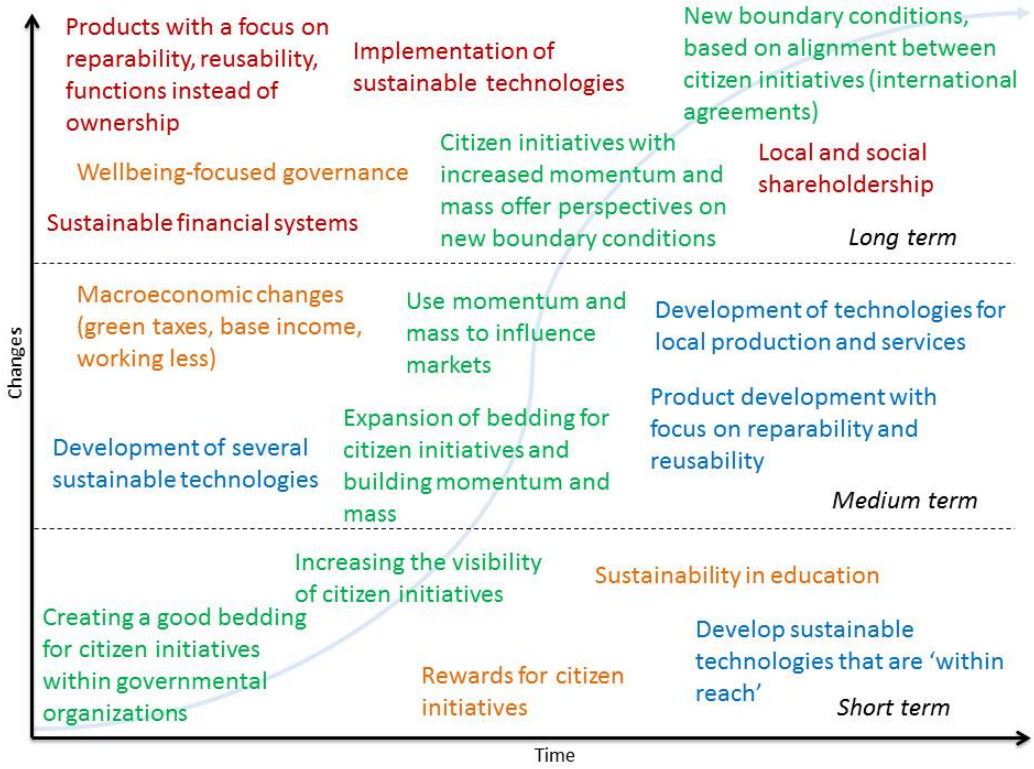


Figure 6.1: Transition curve for vision 1. Green = citizen initiatives, blue = knowledge institutes, orange = governments, red = business.

Backcasting: the transition curve

Figure 6.1 offers a visualisation of the transition curve, which gives an impression of the stepwise changes to be made into the direction of the envisioned society. In broad outlines, the changes match those 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, 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** by pro-actively approaching governments and ensuring these create positions that enable facilitation. This is a matter of **increasing the visibility** of citizen initiatives. Although this requires action by initiatives and government, it is primarily the citizen initiatives that have to be pro-active.

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 offering **perspectives on new boundary conditions for society**. Based on alignment between citizen initiatives new boundaries conditions are 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 **changes in education** (responsibility of governments), the creation of an environment that rewards (participation to) citizen initiatives (responsibility of governments), and the **development of sustainable technologies**, that 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.**

6.4.2 Vision 2: Between Sufficiency and green Growth

Core and main 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**, 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. To some extent this is also a necessity, because the **institutional structures** of our society have become fluid and fragmented, which creates **flexibility**, but also causes **uncertainty**. The fluid institutional context requires people to be **independent** and **entrepreneurial**, and requires them to discover, develop and utilise their talents. This does not mean that people are entirely egocentric. At a lower scale there are still **communities** 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 and **people feel responsible** for the wellbeing of community members that have fewer chances of developing their talents.

Most **collective systems and services are organised 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**. Smart solutions are required for problems like spatial pressure in cities, which arise as a consequence of the **increased number of people that live in cities**, while space is also needed for 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.

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.

Organisation and division of roles

Striving for autonomy does not only apply to individuals, but also to cities. **People take into account the collective interests** of their city, and collective systems are organised at the level of the city. 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 the development of local currencies.

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 **facilitates** and **empowers**. 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 central government is decreased**. Central government performs elementary tasks, safeguards boundary conditions and maintains critical infrastructures that society needs to function. In the boundaries set by governments, individuals have a lot of **freedom** to lead their life in the way they see fit. There are **apolitical organisations** that have the prime responsibility for **maintaining the long term vision** of cities, and to **facilitate regular reflection** on new developments and adjustments that are necessary to adapt to these developments.

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 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**.

Core and main assumptions	• People strive for autonomy at individual level, and social cohesion at city level • 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 utilise 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/smart innovations ensure a limited footprint.
Lifestyle activities	• People live in smaller houses, and they relocate within the city boundaries often

	• *People live in communes and share services and products in 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 both commercially and collectively. • Products, services and food are produced locally, and also non-commercially. • People can change jobs often.
Organi-sation and division of roles	• Governance takes place at city level; only a small role for central government. • *The city government facilitates and empowers.* • *Central government performs elementary tasks, sets boundary conditions and maintains critical infrastructures.* • *Within the boundaries set by government, individuals have a lot of freedom.* • *There is a change of emphasis from the legislative power to the judiciary power, to increase the opportunities that individuals have to stand up for their rights.* • *In addition to traditional courts, there are smaller, accessible judicial arenas.* • The production of goods and services is organised at city level 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 recognised and rewarded. • *Cities are self-sufficient and problems are solved within the borders of the city, although exchanges and interactions between different cities still exist.*

Table 6.3. Summary of vision 2: Between Sufficiency and Green Growth.

Backcasting: necessary changes

The vision outlined above implies several changes that need to take place at the short, middle and long term. These are summarised in table 6.4. 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.

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 organisations 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 organisations responsible for this since 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. It moreover presupposes freedom of choice to the extent that this involves the development of generalist knowledge, or specialist knowledge.

Backcasting: the transition curve

The changes summarised above are based on the assumption that increased fluidity and fragmentation of society is inevitable. The changes thus focus on preparing individuals to take part in the envisioned society.

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. A wide range of actors may play a role in this. First, **apolitical organisations** are of particular importance in claiming responsibility for the vision and maintaining it on the long term.

The establishment of apolitical organisations is a short term step in an iterative process that continues throughout the 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 localisation 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 create an environment in which autonomous and responsible individuals can thrive. This includes **reforms in education**. Government should steer more towards an education system where learning is not an obligation, but a right that everybody can make use of. Education institutes should focus on creating flexible educational programs that offer opportunities for in-depth learning (specialist knowledge), as well as broad learning (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 should introduce research agendas that focus on creating technologies that facilitate independence and self-sufficiency.

	What (changes)?	How (activities)?	Who (stakeholders)?
Culture and behaviour	More autonomy and responsibility for individuals.	Individuals may be pro-active in anticipation of the increasing fragmentation and fluidisation 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.	Government Citizen initiatives Apolitical organisation
	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 organisations 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	Citizen initiatives

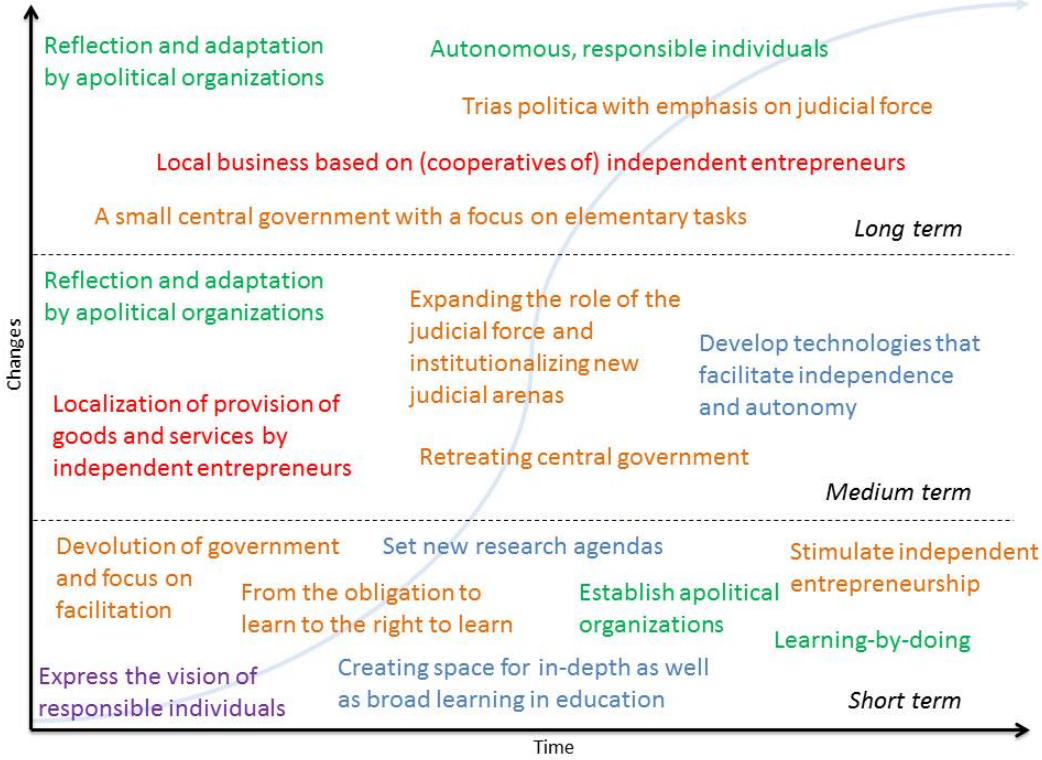
		on the vision and new developments.	
	Small scale companies become more prevalent.	Although large scale companies continue to exist based on supra-local economic affairs, products and services at the level of the city are offered by small scale business (often independent entrepreneurs).	Citizens (individuals)
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.	Different design of our educational programs, with a stronger focus on learning-by-doing, and with good opportunities for generalist educations as well as specialised educations. People should have the freedom to choose an approach that fits their needs and desires.	Government Educational institutes

Table 6.4: Summary of changes required according to vision 2

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**. 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 fed 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. Globalised 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.

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



6.4.3 Vision 3: Green growth through innovation and engaged citizens

Core and main assumptions

Table 6.5 summarises the vision on green growth. The vision is an **optimistic** one, based on a belief that we will be able to change our society for the better through **technological and social innovations**. The vision expresses a strong **trust in the innovative power of firms**, as well as **engaged citizens**. The vision is rooted in principles of ecological modernisation, but it assumes green growth is used to realise changes in value systems underlying our society. 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, like leading a healthy life or environmental and social responsibility of firms become more important. The efficiencies achieved through growth aren't used to realise growth, but to create possibilities for a more sustainable society.

The emphasis on **growth** is also **nuanced** by the explicit recognition of the vulnerability of our society and its natural environment. **Biodiversity**, **geopolitics**, **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 responsibility of people when so much trust is invested in technology. This responsibility can be found in the development of the technology: a **democratisation 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 democratisation 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 are located in proximity to close loops. Economic activities are based on new business models following the principles of **CSR, social entrepreneurship, circular economy**, **cradle-to-cradle**, and **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 we take energy saving measures that reduce demand. 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. Our **diet** has changed. We eat insects, we primarily eat locally produced proteins and we eat cultivated products.

For our **mobility** needs we no longer make use of fossil fuel. Instead, cars are electric, and can drive autonomously. In addition, cars are often shared, partly based on commercial services. People primarily use 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 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 recognised and rewarded.

Core and main assumptions	• Optimistic: via technological and social innovations our we can change our society. • 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 democratisation 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 & wind • *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.
Organi-	• *The increased economic efficiencies create space for other values.*

sation and division of roles	• *Economic activities are based on new business models that follow principles of CSR, social entrepreneurship, circular economy and the sharing economy.* • Remake industry: repairing and recovering materials into our circular economy. • Due to new economic activities there are 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.

Table 6.5. Summary of vision 3. Points in italic are additions from the second backcasting workshop

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 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 democratisation 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 optimise 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 are present in buildings. These materials can be reused if the building is no longer used.

Backcasting: necessary changes

The vision outlined above implies several changes that need to take place at the short, middle and long term (Table 6.6). 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 democratised, and this should serve as an instrument for the further democratisation 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 democratisation 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 democratisation 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.

The vision also implies that technological development should partly be in service of the sustainable development of our society. The millennium goals can serve as concrete goals in this. Although energy neutrality and circularity are mentioned as concrete directions, we rely primarily on new experiments for the development of smart solutions. The democratisation of technological development implies citizen initiatives become important partners for knowledge institutes and the development of new technologies and knowledge, and in experimenting with these in practice.

Backcasting: The 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 emphasised in the description of necessary changes. 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.

	What (changes)?	**How (activities)?**	**Who (stakeholders)?**
Culture and behaviour	Technology needs to be democratised.	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	Government and knowledge institutes

		citizen initiatives by providing support to citizen initiatives.	
	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 alternative values.	Experimentation with new technologies by citizen initiatives, in cooperation with knowledge institutes (coproduction of knowledge).	Citizen initiatives and knowledge institutes
	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

Table 6.6: Summary of changes required according to vision 3.

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 through the abolishment of patents, and by stimulating open source knowledge through regulatory measures.

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 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 rebalances economic/financial values with the other values. Greening our tax system should be part of this.

On the **medium term experiments are evaluated**, and the results should feed into some form of societal debate on **new boundary conditions** for growth, 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. 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. The vanguards of some **alternative value systems** should have mobilised 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. 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. 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. Business also still depend on the lessons from experiments performed in the context of citizen initiatives.

Throughout the entire transition a **societal debate** takes place (similarly to the second vision). 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 democratisation 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.

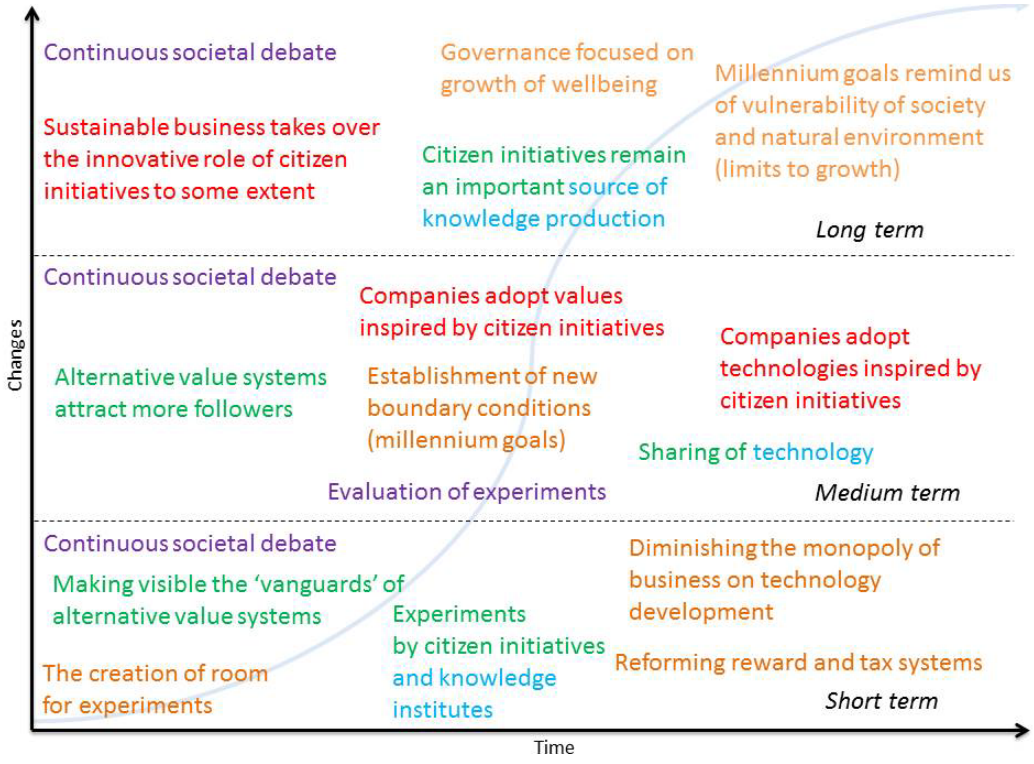


Figure 6.3:Transition curve for vision 3. Green = citizen initiatives, orange = governments, red = business, blue = knowledge institutes, and purple = all.

6.5 Conclusions & Reflections

Conclusions and reflections on visions

The workshop has 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 the original visions. Nonetheless, vision 1, on sufficiency and local communities, still leans most clearly towards a society based on principles of sufficiency and de-growth, while vision 3, on green growth through innovation and engaged citizens leans most clearly towards a society based on principles of green growth and ecological modernisation. 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 individualisation 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 localisation 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 modernisation and 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 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 recognised 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 organised 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 organisations (vision 2). Interestingly, this points out that the participants that developed these pathways recognise 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

With regard to the morning part of the 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.

With regard to the afternoon session we can say that the further elaboration of the vision helped to fill in some of the gaps that were left in the visions after the visioning workshop that took place on the 26th of November, 2015, and that it also helped to introduce nuances in the visions that were missing at first (also see conclusions above). At the same time, 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. The different steps in the afternoon backcasting session have helped to generate more results, and putting post-its on a flip-over sheet with a transition curve was helpful for stimulating thinking on actions for various time horizons. However, as always, workshop results are rather rough ideas and need further elaboration and checking after the workshop. Furthermore, discussion sessions after sessions for both evaluation and backcasting & pathway generation are as important as the active sessions.

In the preparations for our 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.

6.6 Sources and references

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7. Pathway workshop results Romania

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7.1 Introduction

On Friday, the 25th of March 2016, the Romanian case study team in GLAMURS held the second backcasting workshop, as part of the tasks assigned in Work Package 5 of GLAMURS (i.e. Task 5.3).

The workshop's aim was to involve diverse regional stakeholders in the further elaboration of sustainable lifestyle visions, as well as backcasting tasks and the formulation of implementation agendas and transitional recommendations. This was achieved through highly interactive, participative methods facilitated by members of the research team.

The workshop agenda largely followed the structure suggested in the backcasting guidelines and was comprised of four major sections – an introduction section followed by a review of the previous workshop's outcomes, a section focused on evaluating and further elaborating the existing lifestyle visions, a backcasting section for discussing the key actions and changes required for the realisation of the lifestyle visions, and a final section for formulating timeline proposals for transition pathways to the lifestyle visions. A more detailed description of the workshop agenda will be included in a following section of this report, and the full version of the workshop script designed by the researchers will also be annexed to the report.

Like the previous one, the second backcasting workshop took place in Timisoara, at a local bakery and café named Reciproc. The venues was initially chosen due to its focus on values such as fair trade, responsible consumption, social economy and community-supported agriculture, which were considered pertinent to the topics of interest in GLAMURS and in the Romanian Case Study in particular. Following the first backcasting workshop, impressions from both the participants and the research team confirmed that the café is a very suitable and comfortable location for hosting such an event.

The workshop was facilitated by GLAMURS researchers Irina Macsinga and Vlad Pandur with valuable assistance from three undergraduate Psychology students, and was attended by seven stakeholders with significant professional expertise and personal experience in areas relevant to the topic of our workshop.

7.2 Workshop preparation

The first steps for preparing the second backcasting workshop started almost immediately following the vision development workshop. Based on impressions from the first workshop, our research team agreed that the venue were the workshop was took place – Reciproc Café in Timișoara – was a good choice of location and it would be convenient to also hold the second

workshop there. Since the managers of the café had participated in the first workshop, we approached them immediately afterwards with and checked whether it's possible to hold the next workshop there at a convenient date we would subsequently agree on. The café managers were very receptive to our proposal and we immediately started discussing what suitable arrangements could be done at the venue to best accommodate the upcoming workshop. It was decided that once we had gotten in touch with our potential workshop participants and had an overall idea ok their availability, we would suggest a date for the workshop and make a reservation at the café.

Over the course of the following weeks, we then focused on putting together a list of potential workshop participants from relevant stakeholder categories (the same stakeholder categories we had targeted for the first workshop – more details in the First Workshop Summary Report). Based on our own impressions of the first workshop and on some of the feedback we received, we settled on two main priorities regarding the recruitment of participants – ensuring a much larger number of participants overall compared to the first workshop, and enrolling more participants from stakeholder categories with direct experience in practical applications of sustainable alternatives which were underrepresented in the previous workshop (particularly NGOs, civil society initiatives and grassroots initiatives, and representatives of local and regional public administration/governance).

In our efforts to acquire participants for the workshop we mainly collaborated with two significant stakeholder organisations. Firstly, we sent out an invitation to the Romanian Sustainable Energy Cluster (ROSENC), whose headquarters is located in Timișoara. ROSENC is a non-profit, non-governmental juridical entity comprised out of various organisations from the private, R&D, and public sectors, including a number of businesses, research institutions and public authorities. The Cluster's goals involve promoting Romania and the Banat-Timiș region as leaders in the sectors of renewable energy and sustainable energy. We sent out a workshop invitation to the president of ROSENC with the added request that he forward it to other ROSENC members who might be interested in attending. Though he could not attend himself, the ROSENC president provided us with a list of around 20 members and their contact details, and encouraged us to get in touch with them on his recommendation. After contacting them by phone or email and inviting each to the workshop, we ended up with a list of 12 potential participants.

Secondly, we worked with a contact person at the Town Hall of Timișoara in an effort to enrol participants from the Department of Environment and its various subdivisions. We were told to expect around 6-8 Town Hall employees at the workshop.

Additional participants from with academic/research expertise in sustainability were recruited from among our colleagues at the West University of Timișoara, as well as undergraduate Psychology students currently involved in research or work related to sustainable/healthy lifestyles. The managers of the café were also invited to return as participants for the second workshop, but they had to decline due to other previously scheduled obligations.

After confronting schedules and checking everybody's availability, the date for the second workshop was set for Friday the 25th of March. Unfortunately, up until the day of the workshop (and even during the actual workshop), we received numerous cancellations from the expected participants due to objective reasons and unforeseen incidents. Because of this, the actual number of participants at the workshop was much lower than planned and only marginally higher than for the first workshop, with 8 stakeholders attending. Also, there were no returning participants who had also attended the first workshop.

7.3 Workshop results

Overall program and welcome session

The workshop had a duration of 5 hours, starting at 10am and concluding at around 3pm. The program for the workshop was designed by largely following the structure suggested in the backcasting guidelines and taking into account past discussions in various GLAMURS meetings. The program was comprised of four major sections – 1) an introduction round for welcoming the participants, getting acquainted and presenting the project; 2) reviewing the content produced during the previous backcasting workshop – key lifestyle aspects, main barriers and obstacles, sustainable lifestyle visions for 2040; 3) evaluating and further elaborating the lifestyle visions; 4) developing transition pathways. The main sections of the agenda were interspersed with breaks for lunch and coffee/refreshments.

Below we present an overall rundown of the workshop agenda, with the major activities and sessions, subgroup and plenary activities, breaks and starting times/time allotted for each activity.

10.00 Welcome, introductions, getting acquainted *(45 min)*
10:45 Presenting results from the previous backcasting workshop *(15 min)*
11:00 Coffee break *(15 min)*
11:15 Evaluating the sustainable lifestyle visions for 2040 *(30 min)*
11:45 Discussing in subgroups: further elaborating the visions + backcasting questions *(45 min)*
12:30 Lunch *(1 hour)*
13:30 Working in subgroups: designing transition pathways and practical recommendations for implementation *(40 min)*
14:10 Break *(15 min)*
14:25 Subgroup presentations *(30 min)*
14:55 Final discussion and conclusions *(20 min)*
15:15 Closing the workshop

The first part of the workshop was reserved for introductions and getting acquainted with the participants. The researchers started by introducing themselves to the participants and briefly describing their work in GLAMURS. We then proceeded with a brief slideshow on GLAMURS,

presenting the main aspects regarding the project's aims, the research consortium, the regional case studies, and the main empirical data collection and analysis tasks. Since there were no participants who had also attended the previous workshop, this presentations mostly followed the same structure that we used in the first workshop.

We then moved on to some explanations about backcasting and the aims of our workshop. We made sure to highlight the interactive, participatory nature of the methods we will be using throughout the workshop in order to encourage the participants to engage freely and actively. We also read through the workshop agenda along with the participants, and made sure everybody consented to the activities included in the program and the time allotted for each activity and for the breaks.

Following this, we made a table round of introductions, asking of each attendant to introduce themselves and share some information about themselves (e.g. occupation, interest in the workshop's topics, and previous experience with similar issues etc.).

Finally, before moving on to the first actual activity in the agenda, we checked with the participants whether they had any questions to ask or wanted to express any specific needs or expectations related to the workshop. One participant expressed his hopes that the results of the workshop (and of GLAMURS overall, as well as similar projects) would provide benefits to the Timiș region, particularly in the area of sustainable energy management. He also states how he welcomes such projects that facilitate collaboration between diverse regions in Europe as opportunities for exchanging knowledge and good practices.

When there were no further questions or comments, we proceeded to the first major activity session in the workshop: the presentation, critical evaluation and further elaboration of the lifestyle visions produced in the first backcasting workshop.

Main results vision evaluation and discussion session

The session commenced with a brief review of the vision development workshop. After briefly recounting the previous workshop's results regarding key aspects of sustainable lifestyles, main obstacles, clustering and prioritisation, the researchers proceeded to describe in detail the two lifestyle visions – "Green Growth" and "Sufficiency" – which would provide the starting point for the upcoming workshop activities. The presentation of the visions specifically emphasised the various aspects in the visions related to the core assumptions, the everyday lifestyle aspects, and the division of roles, as imagined by the participants at the first workshop (for more details, please consult the Summary Report for the first backcasting report). Following the description of the visions, the participants were instructed to form two groups of 3-4 people, and each group was asked to choose one of the two lifestyle visions that they would prefer to work on in the following sessions.

After forming groups and choosing their preferred visions, the participants were provided with a first list of questions, aimed at critically evaluating and further expanding the two visions. The teams then spent the following 40 minutes going through all the questions, discussing each of them in turn and working towards a consensus regarding the answers. Each team's responses were recorded on flipchart sheets and presented afterwards in a plenary discussion.

The questions, as well as the teams' responses for each of the visions are presented in the table below (Table 7.1).

For both lifestyle visions, participants' first impressions were positive, with several people pointing out the well-meaning tone and desirable characteristics included in the visions. However, while one team assessed the Green Growth vision is plausible and relatively feasible – with some of its elements already being realised in parts of the world – the team which evaluated the Sufficiency vision concluded that it is quite unrealistic, because it is too utopic and fanciful and overall incompatible with the realities of the 21st century; they argued that such a vision could only be realised in small-scale communities.

Green Growth vision	**Sufficiency vision**
Q1: *What is your first response to this vision? What do you like about this vision, or not?*	
• It is a desirable vision for any kind of society. • To a certain extent, it is actually currently being realised in some parts of the world. • There are good chances for it to become a reality.	• It's a pleasant sounding vision and it would be an enjoyable challenge to imagine how to realise the vision, although it comes across as unrealistic with regards to the realities of the 21st century and globalisation.
Q2: *What is positive about this vision?*	
• efficient use of resources; • diminished pollution, better adherence to environmental regulations and norms; • a more leisurely life; • healthier food –> healthier people.	• it's a well-meaning, well-intentioned vision; • it encourages community spirit and team spirit; • it places more emphasis on human values; • less time needed for work, and more people can be self-employed; • it presents some good perspectives for education. • reducing stress;
Q3: *What is negative about this vision?*	
• loss of privacy; • a shift in lifestyle will probably not equate to a shift in people's mentalities;	• it seems a rather unrealistic vision; • only seems feasible for small-scale communities –not on a national level • if the world's economy will still depend on growth, it is unclear how this vision will fit in; • sufficiency-based lifestyles already exist, but they depend on resources coming in from

	outside the community; • vision implies that car-use will not be a part of people's lifestyle – this does not take into account some more sustainable versions of car-use, such as electric cars or cars using "green" fuel sources; • without a formal decision-making/ governance system or a formal leader (and counting only on reaching consensus) things can too easily descend into chaos;
Q4: *What is missing in this vision?*	
• an analysis of economic impacts; • how can people's mentality be transformed in order to allow for realizing this vision? (e.g. how will people become responsible consumers?) • lack of strategies for pursuing common goals.	• not enough details about people's sources of income; • where do people work? who employs them? who provides jobs? • what laws are there in the communities, if any? who upholds the law?

Table 7.1: Evaluating the visions

There are also some notable distinctions between the two teams with regards to the positive and negative aspects they identified in the visions they evaluated. For the Green Growth vision, the participants seemed to appreciate it more pragmatic and clear focus, and many of the vision's practical lifestyle elements involving clearly defined sustainable and pro-environmental practices were assessed as positive points. Negative points of the Green Growth visions were relatively few and mostly revolved around the participants' disagreement that improvements in lifestyle and actual practices corresponds directly to improvements in people's mentalities; for the participants, this association was not as self-apparent as suggested in the vision.

In contrast, rather than focusing on practical aspects, most of the positive aspects listed by the participants that evaluated the Sufficiency vision had to do with the importance given in this vision to personal values, community spirit and general wellbeing. However, it is exactly this relative lack of practical details that inspired many of the negative points listed by the participants – without a more clearly defined governance approach, and more clarity on how the lifestyle described in the vision fits economically into a larger context (at the regional, national, or wider levels), the participants argued that such a community with such a lifestyle could not be feasible.

After these impressions were presented by each team to the entire group and briefly discussed, the two groups were given the next set of questions, this time focused on further elaborating on the visions and expanding them. Before proceeding, two of the participants switched teams in order to continue working on the visions that they liked better.

The questions in the second set, as well as the teams' responses for each of the visions are presented in the table (Table 7.2) below.

Green Growth	Sufficiency
Q1: What are the important assumptions/conditions for realising this vision?	
• people will benefit from improved education and greater awareness; • people's mentalities will have improved in the future with regards to sustainability; • there will be effective, accessible infrastruc-ture facilitating sustainable practices; • policies, legislation, governance-based stimulants will be effective in supporting more sustainable lifestyles; • people will have an actual desire to live more sustainably.	• people can of choose for themselves whether they want to live this way. • people have clearly established common values – taking responsibility, openness towards sharing, concern for the wellbeing of the community; • people conform to the community's decisions; • trust in other people and their skills; • a tendency towards balance and harmony in all areas of life.
Q2: How do people life their everyday life in this vision?	
• people work efficiently; • do a lot of gardening; • healthy leisure options: people take walks, go on hikes, practice meditation; • spending time with one's family; • having close everyday interactions with other people from one's community; • people have healthy diets; • people engage in innovative projects → "green" innovation.	• childcare duties: taking kids to kindergarten and school, teaching them, caring for them; • work-related duties: 4-5 hours/day work schedules + volunteering in the community; • gardening; • spending time with other members of the community; • working in service of the community.
Q3: What other actor groups would be relevant in this vision? What is their role?	
• government representatives → policies, legislation; • the economic environment (i.e. businesses, companies); • actors in the field of education: schools, universities, churches (!) • the civil society (e.g. NGOs); • local authorities; • the mass-media.	• governmental institutions from outside the community; • the alternative energy industry; • a market for selling the community's products; • links to various domains of economy and manufacturing.
Q4: What is the role of citizen initiatives in this vision?	
• facilitating volunteering; • bringing together the younger generations, motivating engagement; • promoting issues concerning sustainability, raising awareness; • maintaining pressure on governments – e.g. mass actions, involving NGOs in politics; NGOs as a motor of inducing sustainable change and innovation; • education, bringing together initiatives in the pursuit of suitable policies.	• providing the communities with convenient access to any required products beyond what they can produce by themselves, e.g. clothing, food etc. (for example, by facilitating gift economy practices and events) • improving people's education and helping create a culture focused on the manufacturing, marketing and consumption of healthy, natural products – e.g. detergents, cosmetics, balms etc.

Table 7.1: Further elaboration of the visions.

7.4 Workshop results: backcasting, pathways and agenda session

Following the lunch break, the workshop proceeded with a section focused on applying backcasting to the two current lifestyle visions and designing a transition agenda. For this purpose, the following set of questions was provided to the two teams, to be applied to their respective lifestyle vision:

- ***What*** *changes are needed (cultural-behavioural, structural-economic, institutional-regulatory-policy, organisational, technological)?*
- ***How*** *can changes be realised? What actions and measures are needed to bring about changes?*
- ***Who*** *should do these activities (governmental actors, citizens, NGO's, other)?*
-

The teams were requested to go through the questions and discuss as specifically as possible what can be applied to their respective visions and record their responses on a flipchart sheet. Due to the complexity of the topic, the questions were given gradually to the participants, with around 10-15 minutes reserved for each question, according to each team's dynamic and work pace.

After the teams had completed their responses to the backcasting questions, they were given additional blank sheets and instructed to transpose their results into a transition timeline designed as an S-curve. They were requested to write down specific changes and measures from their respective transition pathways unto post-its and arrange the post-its on the timeline in a chronological order, starting with the short-term and proceeding with long-term measures up to the year 2040.

The backcasting and agenda results for the two visions are described below. The timeline results will be discussed in a following section of the report were the extended draft of the lifestyle visions following the two backcasting workshops will be detailed.

7.4.1 Vision 1: Green Growth vision

WHAT (change elements)	HOW (activities)	WHO (stakeholders)
Cultural-Behavioural Changes	• designing an educational program focused on continual learning starting with kindergarten and going all the way to university studies and beyond; • integrating church as a means for supporting education; • continual education, professional training programs for educators – Train the trainers; • promoting good practice models and exemplary	• Education providers – teachers, family members etc. • NGOs; • the mass-media; • social networks;

	behaviour related to sustainability in schools and in mass-media; • having knowledge and expertise exchanges with other more advanced actors; • local campaigns and events for promoting sustainability.	• local/regional authorities;
Technological Changes	• upscaling clean technologies, introducing advanced recycling • creating centres for repairing and upgrading various pieces of equipment, appliances etc. • creating infrastructure: o sustainable transportation; o recycling o reusing and trading waste o shared use of goods and products	• business companies; • industrial institutions, together with universities, research institutions and third parties.
Structural-Policy Institutional Changes	• assimilating products with ecological certification into the mainstream market, increasing their cost effectiveness; • adopting sustainable business models; • adopting European strategies: o circular economy; o Roadmap 2050; o Europe 2020; o The 2030 Agenda for Sustainable Development • creating market-based, financial and economic instruments for supporting sustainable development strategies; • implementing a stable, clear and concise policy package and correlating it with sustainable development strategies and European legislations; • financing research and innovation in sustainability; • applying legislative measures.	• The government; • regional and local authorities;
Organisational changes	• creating / supporting networks and clusters for innovation in sustainability.	

Table 7.2: Backcasting results for the Green Growth vision.

7.4.2 Vision 2: Sufficiency vision

WHAT (change elements)	HOW (activities)	WHO (stakeholders)
Cultural-Behavioural Changes	• creating clearly structured work schedules and task logs for each member of the community; • designing and carrying out a periodic reviewing procedure for the community; • developing awareness of how important each person's role is for the community; • developing skills for the various areas people will be working in (e.g. for working in schools);	

	• implement and maintain a continual learning process; • constantly adapting the community in order to harness new sustainable resources.	
Technological Changes	• ensuring high-quality Internet and IT services, integrating innovative technologies into community services; • introducing environmentally friendly farming equipment and technologies for streamlining activities in the community; • constantly readapting facilities and equipment to the community's needs, and to new technologies and sources of energy;	IT specialists, renewable energy specialists
Structural-Policy Institutional Changes	• creating a formal governance system; • implementing a clearly defined hierarchy for each specific domain of activity in the community; • introducing a system of "laws" for regulating potential harmful behaviours in the community; • creating educational and administrative institutions that can train experts in domains of interest for the community.	• governance system designed and agreed upon by the community members; • the community members design and agree on hierarchies that meet the community's needs; • laws are proposed and voted on by the members of the community.
Organisational changes	• equitable distribution of tasks in the community → everybody has to contribute; • assigning community representatives for improving relationships with the outside world.	

Table 7.3: Backcasting results for Sufficiency vision.

Main results of final discussion

After finalising the backcasting and timeline design tasks, the workshop concluded with a final plenary discussion round. Due to time restrictions and several of the participants having to attend other obligations, this section was kept short and concise.

After briefly reviewing the results of the workshops and the materials produced by the subgroups, the participants were invited to share their impressions of the workshop, along with

any additional suggestions, comments and potential insights. The general impression of the workshop was quite positive; the participants thanked the research team for being invited to attend, they rated the workshop as enjoyable and engaging and expressed interest in receiving the results of our upcoming analyses in GLAMURS. Several participants noted that although at the start of the workshop, the lifestyle visions seemed somewhat ambiguous to them and difficult to grasp, by the conclusion of the agenda they had come to view the visions as not only motivating and desirable, but quite feasible to realise as well.

Participants also repeatedly emphasised that it would be worthwhile if the results of workshop and GLAMURS overall would be linked to existing sustainability-related programs and strategies at the European level, and used to generate further opportunities for collaboration, exchanges and networking between various European regions, organisations and research institutions.

After completing the round of impressions, the researchers thanked the participants for their time and contributions and concluded the workshop.

Post workshop results

In this section we will describe the fully elaborated lifestyle visions, after having conducted the two backcasting workshops and further post-workshop analyses. The bulk of the content describing the visions is taken from the summary report for the first workshop and presented in plain text, while the additions following the second workshop are included in bolded text. For each relevant subsection of the visions, we have included some comments describing the developments brought to the vision following the second workshop. The content regarding transition agendas, pathways and timelines for the two vision was formulated mostly in the second workshop and in post-workshop analyses.

Further development of "Green Growth" vision

Overall concept: People will be happy. The issue of "stress" will have been overcome.

Assumptions:

- "Green Growth" future: pro-environmental concerns, technological innovations, "green" technologies embedded in everyday life, "green" economy, etc.
- People are willing to share goods and resources;
- People will develop a personal capacity for recycling, saving up, etc.
- people will benefit from improved education and greater awareness;
- people's mentalities will have improved in the future with regards to sustainability;

- there will be effective, easily accessible infrastructure to facilitate sustainable practices;
- policies, legislation, governance-based stimulants will be effective in supporting more sustainable lifestyles;
- people will have an actual desire to live more sustainably.

Comments: The participants from the second workshop argued that while the Green Growth vision adequately describes lifestyle aspects, the vision seems to take for granted that these aspects will come about as a result of infrastructural improvements that go hand in hand with improvements in values, motivations and mentality. For the participants, this implicit assumption in the vision did not seem adequately explained, therefore most of their additions to this section were meant to explain how contextual changes and people's subjective changes can interact to bring about the realisation of the vision, without equating the two.

Aspects of lifestyle:

- improved technology will increase efficiency at work, reducing time spent at work;
- with more free time to spare, people will spend most of their days with their families or pursuing various hobbies, leisure activities or personal enterprises;
- we will have access to various ways of spending our free time in harmony with Nature; people will spend a significant amount of their time in nature – tending to their gardens, hiking/taking walks, meditating in nature, etc.
- environments with adequate ambiance will created for spending leisure time;
- Recycling will be adopted on a large scale; the environment will be cleaner;
- Co-housing and shared living spaces and appliances – e.g. people will use shared washing machines, thus reducing energy use and water consumption;
- Solar panels, wind power used for renewable energy in every home;
- More bike lanes than roads for cars;
- Living quarters are surrounded by areas for growing vegetables and other food;
- The importance of associative environments – by spending more time close together, people will trust each other more;
- people engage in innovative projects → "green" innovation.

Comments: With the exception of people's engagement in "green" innovation efforts, there were no notable additions to this section. The participants considered that the actual everyday lifestyle aspects were suitably well presented in the vision, and reflected various sustainable practices that to are already being realised to a certain extent (e.g. intentional communities, transition towns, repair cafes, etc.).

Organisation and division of roles:

The participants did not elaborate on this aspect, and it remains an underdeveloped component of the lifestyle vision.

Backcasting results (changes, actions, key actors):

Comments based on Table 7.3: Although the participants considered that the vision was adequately developed in terms of lifestyle aspects, for them the underlying framework supporting the emergence and realisation of such a lifestyle was not sufficiently clear. In their opinion, the vision did not clearly distinguish between contextual (e.g. infrastructure, governance, education) and individual (e.g. values, motivation) aspects driving the lifestyle. As such, the backcasting activity for the Green Growth vision put great emphasis on clarifying and defining these issues in straightforward practical terms.

In order to address the issue of how people's values and mentalities match up with contextual aspects, the participants started with proposing a series of measures in the field of education meant to support the development of sustainability-friendly personal characteristics. As conceptualised in the workshop, these educational measures are designed with the long-term in mind, involve several levels and have a strong focus on continual learning, both for students and for the education providers themselves. This is presented as an essential prerequisite for ensuring the people included in this lifestyle vision are actually adequately equipped to harness the contextual aspects in order to live a truly satisfying and sustainable life.

Similarly, participants emphasised how an essential first step in establishing favourable grounds for realising such a vision would be an effective adoption and implementation of European-level strategies and programs for sustainable development and regulations. Once this is accomplished, it was argued that this will provide an optimal direction for designing and implementing the following steps – designing policy packages, educational programs, developing infrastructure etc.

Pathway results:

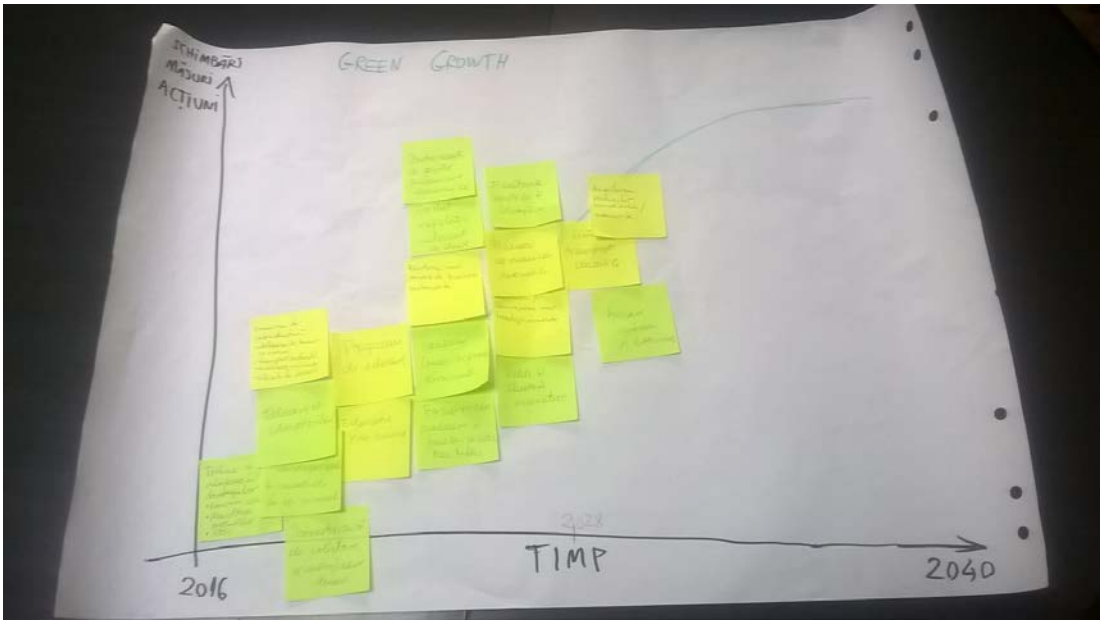

Figure 7.1: Timeline for Green Growth pathway.

Building on the points established in the backcasting session, the participants transposed several of the most significant transition measures in the pathway onto a transition timeline. The participants did not design the pathway as a linear progression of measures and actions going all the way from the present up to the year 2040; rather, the pathway was developed as a set of six waves of measures meant to be implemented in an incremental approach; more specifically, the transition is initiated with the adoption and implementation of EU strategies for sustainable development in the initial phase, which will provide the basis for designing educational programs and development programs in the next stages, which will in turn facilitate the training of well-capacitated specialists in relevant domains who can then contribute to the implementation of development programs, creating infrastructure, upscaling of best practices etc. As such, this set of measures can be implemented cyclically with exponentially greater gains towards realizing the lifestyle vision. The six waves of transition measures in the pathway are described below:

1.Adopting and implementing European strategies for circular economy, sustainable development etc.

2.Creating suitable infrastructure; training of trainers in the field of education, continual learning; exchanging knowledge and best practices;

3.Education programs and education through church;

4.Designing and implementing instruments (market-based, financial, economic); policy package for sustainable development; sustainable business models; local and regional-level campaigns and events; promoting best practice models;

5.Financing research and innovation; sustainable urban design plans; adopting and promoting innovative "green" technologies; clusters and networks for innovations in sustainability;

6.Upscaling "green" products and manufacturing; sustainable transportation systems; applying measures and instruments.

7.

Further development of "Sufficiency" vision

Overall concept: "a village like a bee-hive"

Core and main assumptions:

- "Sufficiency/De-growth" future: strong focus on personal well-being, emphasis on non-material sources of wellbeing, group cohesion and sense of community, reduced consumption, DIY approach, etc.
- Openness to other cultures and continual learning will facilitate change;
- It's not a society that leaves progress aside; rather, it uses progress as a driver for something else.
- It must be a society that defines for itself what its basic needs are.
- The more educated people are, the more willing they will be to keep studying.
- people have the option of choosing for themselves whether they want to live this way.
- people have clearly established common values – taking responsibility, openness towards sharing, concern for the wellbeing of the community;
- people conform to the community's decisions;
- trust in other people and their skills;
- a tendency towards balance and harmony in all areas of life.

Comments: The additions to the vision's core assumptions developed in the second workshop did not introduce any radically different elements to the existing vision. Instead, the participants simply brought some clarifications and nuances with regards to how people's values, interpersonal raports and interaction patterns impact on their lives within the communities described in the vision. Since interpersonal relationships in the community and civic engagement are some of the central elements of the vision, the participants considered the underlying assumptions in this area needed to be properly clarified and defined.

There was also some discussion regarding the general description of the vision's communities likening them to a bee-hive. In the participants' opinion, this description is somewhat ambiguous and can be given contradictory interpretations; for example, the vision describes communities with a high level of social cohesion where all the residents are civically engaged and

bring substantial contributions to the community, which can indeed bring to mind a bee-hive – on the other hand, the vision's strong emphasis on decentralised decision-making and participatory consensus-based governance approaches are inconsistent with the rigid and strictly enforced hierarchies and role systems exhibited by bees.

Lifestyle aspects:

- all the children in the village will study at a single kindergarten; their parents will fill in as teachers, by rotation; for higher education levels, pupils will have to commute, or after a certain age, move to another city to study;
- the village will have a shared kitchen; people can have group meals there with neighbours, friends, family etc. or can cook and eat at home, whichever they prefer; kitchen is staffed by volunteers from community, but anybody can help out;
- decentralised, participatory decision-making system;
- reduced time spent in formal professional roles – people will mostly work part-time jobs, or otherwise work as freelancers or be self-employed; rest of work will be done by rotation, as volunteers for the various duties in the community (e.g. volunteering in schools, gardens, community kitchen, administration etc.)
- gardens surrounding each house, for growing vegetables, flowers and meditation; people will have a lot of time they can invest in growing their own food, or volunteering in the community gardens/greenhouses; also, people can volunteer to help others with their gardening;
- Growing cereals, for consumption in the community, and or trade as well;
- Solar-powered greenhouses;
- Community hospital, providing both allopathic and homeopathic care;
- there will be many co-housing buildings where several families will live together and share various goods and facilities; at the same time, there will also be individual land plots with single houses for people/families who prefer a more private life;
- people will engage in various forms of gift economy and sharing habits – building things for use in the community (e.g. agricultural tools), share their skills and knowledge by teaching others or starting projects;
- Shared storing spaces;
- the village will be connected to a road, but there is little to no actual car use within the village; people will get around by foot or by bicycle; the road will be mainly used by commuters, travellers passing through the village, and the daily school bus;
- All community areas will be connected to a community-owned satellite.

Organisation and division of roles:

- services and facilities within communities will be mostly staffed and operated by volunteering residents, by rotation – e.g. parents will fill in as teachers at the kindergarten, people can volunteer for work at the community kitchen or in the community gardens or as volunteer nurses at the community hospital, etc.

- there is a tendency towards food and energy self-sufficiency – most of it is self-produced, covering the community's requirements, the surplus is exported in the region;
- there are no 'institutions' – the community is a self-governing direct democracy.

Comments: Aspects regarding the division of roles and the organisation of governance elements were given particular attention during the backcasting and pathway development session. The participants argued that such a decentralised and loosely structured governance system as described in the vision would not be effective and the communities would face the risk of becoming disorganised and chaotic, hindering the achievement of sustainability goals and upscaling of best practices. Further details are presented below, in the table of results from the backasting discussion session.

Backcasting results (changes, actions, key actors):

Comments based on Table 7.4: The backcasting discussion mostly revolved around the development and implementation of a clear and effective governance system that would facilitate a feasible realisation of the lifestyle vision, without compromising its emphasis on decentralised decision-making and voluntary engagement. The participants defined a series of measures meant to establish a more formalised and structured set of governance elements in the vision's communities that would also serve sustainability-related objectives.

Pathway results:

The transition pathway for the Sufficiency vision was designed as a set of iterative measures meant to be implemented cyclically. These measures mostly targeted the development of individual and community-level characteristics that will facilitate the adoption of a low-consumption, environmentally aware lifestyle. As defined by the participants, the measures included in the pathway can be updated, revised an (re)implemented indefinitely, even beyond the realisation of the lifestyle vision. The measures included in the timeline are described below:

- developing awareness of community needs and the importance of personal engagement;
- transitioning from extrinsic to intrinsic motivation;
- developing skills in relevant domains of activity; continual learning and improvement; integrating advanced IT services and innovative technologies;
- equitable distribution of tasks in communities; (re)structuring the distribution of tasks and responsibilities according to the needs of the community and newly acquired knowledge/ skills/resources;
- continuous updating and adoption of new "green" technologies.

Obstacles:

- real-world resistances can be very strong against those who try to build such communities (see real-life case of Armonia Brassovia community, from the Romanian case study);
- Things that are given for free are generally regarded as worthless.

Figure 7.2: Timeline for Sufficiency pathway

7.5 Conclusions and reflections

The overall conclusion following the second backcasting workshop is that the two elaborated lifestyle visions are quite desirable, especially with regards to sustainability and overall wellbeing benefits. Furthermore, after carrying out the backcasting and pathway design tasks, the participants generally expressed agreement that the realisation of the two lifestyle visions seems truly feasible.

Due to the participants' diverse backgrounds and areas of expertise, there was a very dynamic atmosphere throughout the course of the workshop and the discussions benefited from a very eclectic range of arguments, opinions and viewpoints. Unfortunately, none of the participants from the first workshop could be present, so a bit of extra effort was required from the facilitators to introduce the results from the previous workshop and maintain consistency between the content of the existing visions and the contributions of the new participants. Some of the participants initially found it a bit challenging to evaluate and elaborate lifestyle visions developed by someone else, and wondered why they could not instead formulate their own visions. However, by the end of the workshop everybody had become quite comfortable and even enthusiastic about the visions.

The workshop presents several limitations we are compelled to mention. Firstly, the workshop was hampered by the low number of participants, which was substantially below our expectations. Furthermore, as we have mentioned, there were no returning participants, thus putting extra pressure on the researchers to ensure continuity between the two backcasting

workshops. Lastly, there were significant time constraints which interfered with our intended workshop agenda, forcing us to reduce the time reserved for certain sections of the agenda and some of the subgroup and plenary discussion, thus creating an additional limitation.

7.6 Sources and references

Pandur, V., Macsinga, I., Dumitru, A. (2016) WP5, Task 5.3 – Summary report of Second Backcasting Workshop (Pathway Development) in Romanian Case Study for GLAMURS, internal report, Universitatea de Vest din Timișoara.

8. Pathway workshop results Scotland

Tony Craig, Kathryn Colley, Gary Polhil (The James Hutton Institute)

8.1 Introduction

The backcasting workshop, also described as **GLAMURS Sustainable Lifestyles Workshop** took place on Friday 18th March 2016 in Aberdeen city centre. This workshop incorporated the elements of visioning and backcasting processes into a single workshop, rather than replicating the 2 workshop model followed in other GLAMURS case studies. This was because the Scottish case study workshop builds on a previous visioning process carried out in the Interreg and Aberdeen City Council funded **Mitigation in Urban Areas: Solutions for Innovative Cities (MUSIC)** project (2011-2014)[7]. This approach offered the opportunity to build on existing work on transition management in the North East of Scotland, mobilising the same key stakeholders in the sustainable development of the region to develop a vision focusing on flexible working and work-leisure balance which used the MUSIC vision as a foundation rather than duplicating the process.

This document therefore reports on both the elaboration of the vision and also the summary of the backcasting phase of the work.

8.2 Workshop preparation

8.2.1 Development of vision from MUSIC project

The MUSIC project had previously developed a wide-ranging vision and action plan for a more sustainable city of Aberdeen by 2050. To focus the GLAMURS workshop activities on flexible working, in line with the scope of the North East Scotland case study, we reviewed the MUSIC vision and identified elements of particular relevance to this topic for further elaboration and development.

The **MUSIC** vision was anchored around five guiding principles:

- Aberdeen as an opportunity city
- Aberdeen as an attractive city to visit and live
- Aberdeen as a learning city
- Aberdeen as an accessible city
- Aberdeen as an energy efficient and resilient city

The 2050 vision included aspects of flexible working relating to three of these guiding principles (see Table 8.1 on the next page).

These were synthesised into 3 themes for the purposes of the GLAMURS workshop:

1. Working from home

[7] Details on the MUSIC project can be found at: http://www.aberdeencity.gov.uk/musicproject/

2. Flexible working patterns, facilitated by better ICT infrastructure
3. Public transport infrastructure designed to mirror new patterns of working

Guiding principle	Flexible working elements[8]
Aberdeen as an energy efficient and resilient city	*"Aberdeen is connected by broadband communication networks with flexible and home working reducing the need for travel."*
Aberdeen as a learning city	*"As a learning city, modern technology helps life-long learning, offers education beyond conventional channels and accessibility to knowledge for all. In this learning environment citizens work more efficiently and also from home"*
Aberdeen as an accessible city	*"There is strong use of public transport with schedules that mirror the work pattern and reflect the demands of citizens".*

Table 8.4: MUSIC vision guiding principles and elements extracted for GLAMURS visión.

These themes formed a focus for the workshop's vision elaboration/development process (see section 8.3.2). In addition, the MUSIC project developed 8 pathways to 2050. Four of these contained particular elements of relevance to flexible working, time use and work-leisure balance (see Table 8.2). These pathways were not discussed in the GLAMURS workshop, but are presented here to contextualise some of the workshop discussions around time use in later sections of this report.

Pathway	Flexible working/time use/work-leisure balance elements[2]
Virtual and physical connectivity	*"The availability of improved internet access across the Aberdeen city region will facilitate the establishment of virtual hubs which function as remote working and virtual service centres around the city and shire. Learning from the models currently in use on oil rigs, these 'land rigs' could provide hot-desk, teleconferencing, education and health services to communities around Aberdeen"*
Equality	*"Aberdeen needs to work towards being recognised as the most equitable city in the world, by working based on values of trust, openness and inclusivity to provide equality in housing, education, opportunity and employment."*
Active Citizenship	*"Aberdeen needs to embrace a transformed sense of citizenship, to become a city where residents do not feel time pressured and are able to participate and contribute to their communities."* *"As a starting point, the city will need to work towards establishing itself as a living wage zone, where its residents have enough free time to engage with their communicates. Community participation should be recognised by setting up a community credit scheme, and a volunteering culture promoted via time banking (similar principle to a skills bank) where people can be encouraged to volunteer and gain rewards for themselves or their projects".*
Mobility and transport	*"The promotion of more sustainable working practices will mean citizens travel less and increase participation in collective modes of transport, such as car sharing clubs."*

Table 8.2: MUSIC vision pathways and elements extracted for GLAMURS visión.

[8] As reported in 'Aberdeen in Transition: Journey Towards 2050'. Available at: http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=54190&sID=22343

8.2.2 Workshop organisation and participants

Email invitations to participate in the workshop were sent to all previous MUSIC participants and also to members of the North East Scotland Climate Change Partnership (NESCCP). In total 66 individuals representing a range of public, private and third sector organisations and interests were invited to attend. Twelve participants attended the workshop on the day, the majority of which were local government stakeholders. Academics and a representative of community sector interests were also present. Although the lack of private sector engagement is unfortunate, this is a common issue in such projects. At the same time, the strong public sector representation amongst the workshop participants means that there is a clear correspondence between the present task and the case study work in WP5 focusing on flexible working practices in Aberdeen City and Aberdeenshire Councils.

A detailed plan for the workshop sessions was developed. The agenda for the workshop is outlined in section 8.3.1 below. A graphic artist was commissioned to create a visual record of the workshop discussions. The same artist had been involved previously in the MUSIC project. In doing so we aimed to build visual continuity between the MUSIC and GLAMURS projects, thereby reinforcing the message that the GLAMURS workshop was, in part, an element of the MUSIC project's legacy, rather than simply a repetition of its process.

The workshop took place in a committee room at Aberdeen City Council's Townhouse. The hosting of the workshop at this venue was kindly arranged by Councillor Jean Morrison. There were some restrictions in terms of the flexibility of room layout as tables were fixed in place; however this did not pose a significant limitation to the workshop activities.

Participants were provided with a handout detailing the purposes of the workshop, the three workshop themes, as well as information on the time use categories used in Interactive session 2 (see section 8.3.2).

8.3 Workshop results

8.3.1 Overall program and welcome session

The agenda for the workshop was as follows:

9.30-10.00	Registration, tea and coffee
10:00-10.05	Welcome and Introductions
10:05-10.30	Presentation: Overview of MUSIC and GLAMURS projects
10:30-11:00	Interactive session 1: Elaboration and discussion of the MUSIC vision
11:00-11:10	Short presentation: Time use and lifestyles
11:10-12:00	Interactive session 2: Time use in 2050
12:00-12:30	Lunch
12:30-14:30	Interactive session 3: Identifying pathways to 2050
14:30-14:40	Tea and coffee break

14:40-15:00	Plenary discussion: Summarising pathways and future plans
15.00	Close

The welcome and introductions session began by introducing the participants to the James Hutton Institute GLAMURS team and briefly outlining the purpose of the workshop. During this session participants were also informed that the team would be taking photos throughout the day and that anyone who did not wish for their image to appear in the reporting should make themselves known to the researchers at some point during the day. No participants withheld their consent for their image to appear. This was followed by a brief roundtable introduction where each participant introduced themselves to the group and stated briefly how their work related to the workshop focus.

A short presentation then gave participants an overview of the MUSIC and GLAMURS projects. The aims, vision, and pilot projects developed from the MUSIC project were outlined. An introduction to the GLAMURS project aims, scope, areas of study, and methods was given to give the necessary context for the introduction to the vision elaboration and discussion session.

8.3.2 Main results vision elaboration and discussion session

The vision elaboration and discussion process was broken up into two components, each of which considered and developed different aspects of the 2050 vision. These were: (1) Working life in 2050

(2) Time use in 2050.

Vision of working life in 2050

The question given to participants, which formed the focus of this part of the process was "*What will working life be like in 2050?*". Participants were asked to consider this question in light of the 3 workshop themes taken from the MUSIC vision:

- Working from home
- Flexible working patterns, facilitated by better ICT infrastructure
- Public transport infrastructure designed to mirror new patterns of working

We explained that the aim was to generate a set of 2050 outcomes relating to working life, which would be taken forward to the afternoon session where we would consider pathways to reach the outcomes. A number of questions were provided as discussion prompts displayed on a PowerPoint slide (Fig. 8.1 on the next page) during the discussion. Before progressing to the development of the vision there was some discussion about the workshop's scope, and particularly the time frame of interest. Some participants raised concerns about the appropriateness or realism of adopting the 2050 time horizon. The key issues raised in this respect were:

- There is a significant level of uncertainty around technological developments. Future technologies will impact working practices in ways we cannot currently predict.

• The infrastructure to support changes in working practices in line with the 3 workshop themes will be delivered significantly ahead of the 2050 time horizon.

• Most of the participants in the workshop will be retired by 2050 – would a workshop with a younger age profile yield different results?

• Envisioning 2050 is extremely challenging – is it more promising to start with considering current drivers of change (e.g. what do teenagers want out of their working life?).

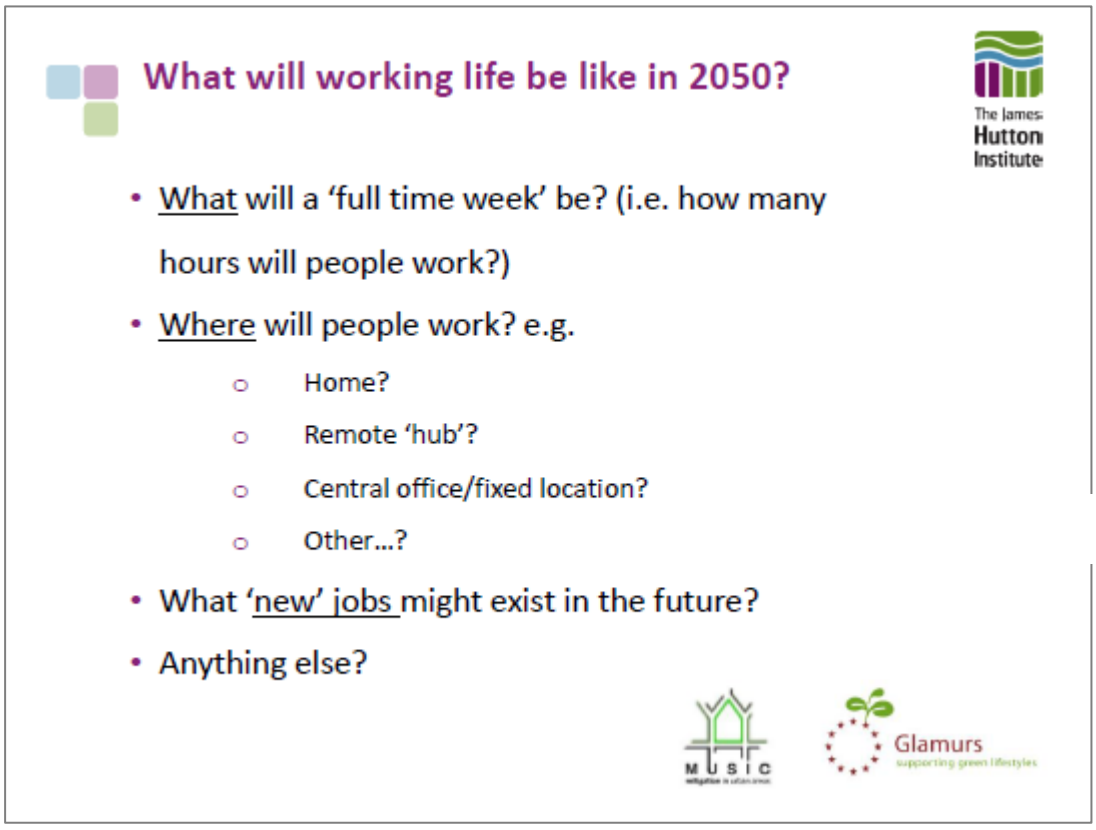

Figure 8.1: Prompt questions posed for discussion of working lives vision.

Clarification was also requested on the industry sectors and societal groups of interest. It was confirmed there was no single industry focus to the workshop. Participants noted that some types of work cannot be done flexibly and this will still be the case in 2050. It was also noted that different groups in society will likely experience very different changes in working lives. Understanding the variation across society was noted to be an important aspect of creating realistic visions of the future. These concerns and caveats having been acknowledged, participants agreed to proceed with the 2050 vision given the need for correspondence with the MUSIC 2050 vision. Misgivings around the 2050 timeframe could not, however, be easily overcome as they recurred at various points in the discussion as a limitation to forming the elaborated 2050 vision.

The outcomes generated in the discussion that followed were recorded on a flipchart by one of the workshop facilitators. Each outcome brought up in the discussion was checked as it was recorded to make sure that the group were in general agreement that each point should be included in the vision. These outcomes and key points from the discussion surrounding them are presented in Table 8.3.

2050 Outcome	Notes from discussion
Some jobs have changed with the advent of new technologies	• It is difficult to envisage what changes will occur due to technology. Participants agreed that some form of human interaction will still remain central to most roles. • Differing views were raised as to whether there will be fewer or more manual jobs. Whilst technological change might make some manual (and other) jobs redundant, modernising infrastructure and operating/supervising the technology will require a great deal of labour. • The pace of change will depend on the uptake of new technology – if innovations are not adopted then changes will not be so significant.
The working week is shorter (on average)	• Some will be working less by choice but others may work less because there is less work available. • More and more young people are placing higher value on their time and quality of life. Professions requiring long working hours are now less desirable for young people. • Must consider how the precariat will be affected – not all will be in a position to voluntarily work less, especially as there may be less work to go around. • More temporary work and fewer hours may mean shorter working weeks by de facto, but not necessarily equating to more leisure time to be enjoyed.
Working lives are longer	• Current trends suggest that by 2050 the pension age will be further increased. State pension may not even exist. • Young people may feel it more important to "pace themselves" given that their working lives will be much longer.
Companies offer attractive workspace and working hours	• More companies will prioritise the provision of a high quali ironment as this will be key to attracting the top talent. This will result in a blurring of v e space. • This will depend on competition for labour in different indu n some types of work there will be a shortage of workers with the right skills, in other a surplus so no incentive for companies to do so.

People will move more between multiple work sites	• There may be more multi-site organisations, with people moving between different sites. • This may be the case in larger organisations but less so in SMEs (where more people currently work). • Mergers of companies will create more multi-site organisations. • People will home work but also work from multiple sites. The idea of a single central office in a fixed location will become a thing of the past. • With such changes comes hot-desking – no fixed desk for each employee. • This pattern may be different in work that still focuses around objects rather than services – e.g. warehouses. It is unclear how these roles could be more flexible.
Companies give employees the choice of where to work and when. This will be facilitated by: - **Technology for working flexibly** - **Organisational cultures which move beyond presenteeism**	• Although not all jobs will be compatible with flexible and home working, for those roles that are, employees will be supported to choose where they work (which may depend on the particular tasks at hand at any given time). This could be at home, at an office or elsewhere. • This flexible working will be supported by ICT and also by organisational cultures that focus on outcomes rather than time present in the workplace. • There may be monitoring and surveillance of workers via technology (e.g. others being able to see when an individual is logged on/which files are open, or GPS tracking of mobile workers). • Although more people will be spending some time working away from a base (including at home), face to face interaction between colleagues will still remain an important feature of work. The ideal model is one of choice. There is a need to balance use of technology and needs for human interaction.
Boundary between work and leisure is blurred	• Work and leisure will shift and merge – socialising through work and working in social time. • This might not occur across the board – it will relate more to the middle classes.
Working life changes will be underpinned by a sustainable, renewable power source	• The vision assumes we have transitioned to sustainable power sources, replacing oil which may have run out by 2050. Other aspects of the work vision are underpinned by secure and sustainable energy supply. • Without a sustainable replacement for oil, costs of personal mobility will constrain flexible movement except for the wealthiest individuals. • Once secure and sustainable power sources are achieved, focus may need to turn to how to protect power and data networks.

Table 8.5: Working Life vision

Finally, it was noted that a recurrent theme throughout this discussion was that expectations based on current trajectories often made it challenging to frame a future vision entirely in terms of positive outcomes. This tension between idealism versus realism in the visioning process is important to reflect on from a methodological point of view – whilst visioning might ask people to focus on notions of an ideal future, backcasting asks for participants to move to a more concrete way of thinking – which can be more natural if the vision is somewhat constrained by what is considered as 'possible'. This is not something we resolved in the workshop, but it was an interesting tension that we felt was worthy of note.

Vision of time use in 2050

The second part of the visioning session focused on developing a vision of time use in 2050 to complement the vision of working life. The study of time use was introduced in a short presentation, which was followed by an interactive task. In this task the participants were presented with a poster featuring a list of time use categories (Fig. 8.2). Each participant was supplied with 5 blue stickers and 5 red stickers, with blue stickers representing 'less' and red stickers representing 'more'. The time use categories presented in the poster were also detailed in a handout which gave further explanation of the categories.

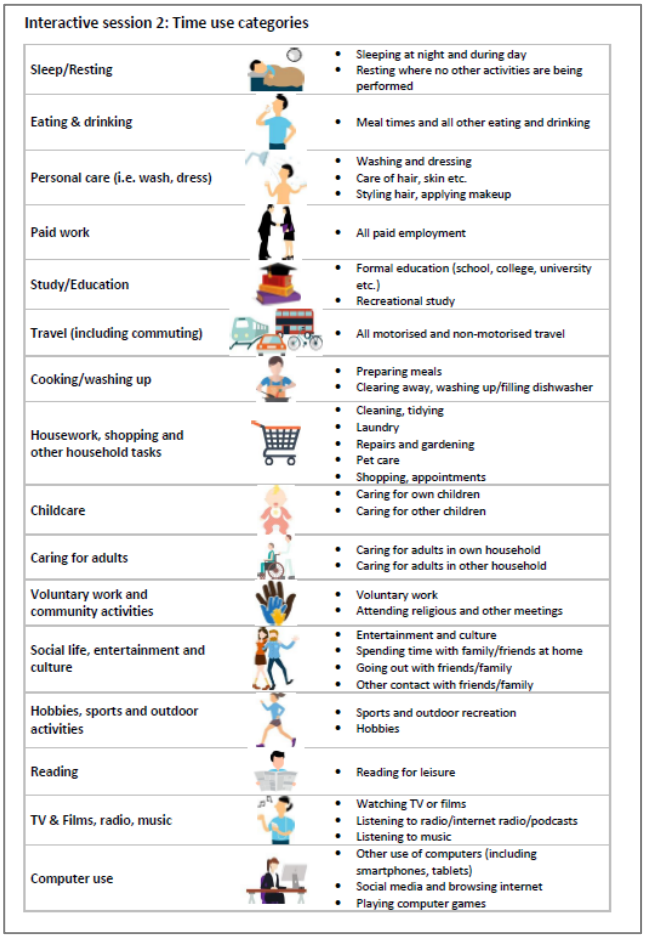

Figure 8.2: Time use poster.

After giving participants a few minutes to familiarise themselves with the time use categories we asked them to consider the following questions and place their stickers on the poster accordingly:

- In 2050, what will people do less?
- In 2050, what will people do more?

Participants could allocate as many of their stickers as desired to any single category. It was advised that they need not use all of their stickers but that they must place an equal amount of blue and red stickers, since doing more of one activity will involve a trade-off where less of another activity can be performed. Each participant's stickers were numbered to allow the opportunity for analysis of the trade-offs made by each individual. This data on trade-offs has not been analysed for the purposes of this report but is available should GLAMURS partners wish to use it. The results of the sticker allocation activity were then discussed by participants and used as the basis for developing a 2050 vision of time use.

The key messages from the poster above were summarised and noted down as outcomes for 2050 (Table 8.4). These formed the basis of a discussion to further develop the vision of time use in which other 2050 outcomes were suggested by participants. These are summarised in Table 8.5. It should be noted that the outcomes in Table 8.5 were not necessarily agreed by the whole group as outcomes to take forward due to time constraints at the end of this session. Rather they represent the points made in the discussion by one or more individuals in the group.

2050 Outcomes	Level of agreement (sticker allocations)
More time caring for adults	0 less, 10 more
Less time spent on paid work	1 more, 9 less
More computer use[1]	1 less, 8 more
Less time spent travelling	8 less, 2 more
Less time spent on cooking/washing up[2]	6 less, 0 more
Less reading	7 less, 1 more
More voluntary and community work	1 less, 6 more
More time in study/education	1 less, 6 more
Less time spent doing shopping and household tasks	7 less, 2 more
More time spent on hobbies and outdoor activities	0 less, 5 more

Table 8.4: Time use vision developed in the sticker activity.

[1] In discussion it was noted by the participant who envisioned less computer use felt that this would be because systems will be slicker and more effective. Her vision included less time engaging in sedentary

computer-based activities and more on active hobbies and sports. Another participant noted that this is what she would like to see this outcome but had not felt it was realistic.

[2] In the discussion around food preparation some participants expressed surprise that less time cooking was envisaged. It was noted that arguably the current trend is in the opposite direction. Others felt that more people would be eating out more frequently, or although they would like to see more time spent on cooking this was not realistic.

Additional 2050 Outcomes
The working day may be stretched in length, punctuated by periods of leisure
Caring may include more extended periods of time (e.g. days, weeks) caring for relatives who do not live locally.
Subsistence activities (e.g. growing food, chopping wood fuel) will be more prevalent, and may be seen as part leisure, part necessity.
We will value food more, and waste less
The sharing economy will have grown substantially
More time may be spent seeking work
Food security will drive which path we take

Table 8.5: Additional time use vision elements suggested in discussion

8.4 Workshop results: backcasting pathways and agenda session

The third interactive session of the workshop focused on the backcasting. The 2050 outcomes forming the visions of working life and time use developed in the morning sessions were pinned to a wall alongside sheets denoting a timeline split into the periods: present-2020; 2020-2030; 2030-2040 and 2040-2050.

A brief introduction to the backcasting process was given, emphasising the aim of working backwards from the 2050 vision to create pathways to its achievement. The following questions were posed to focus this discussion:

- What things need to happen between now and 2050 to reach the vision?
- When will these things happen?

Initial intentions had been to focus taking priority 2050 outcomes and backcasting separately from each of these; however the discussions progressed in a more fluid manner. It was clear that the outcomes were linked to the extent that it was not possible to treat them separately and rather should be considered as part of a portfolio of interacting activity patterns.

The discussion during the backcasting session focused around four main pathways:

- Developing models of living and working to support increased caring for adults and children
- Building capacity for bottom up action and community activity

- Progressing towards a universal basic income
- Reducing institutional barriers to working less

As necessary actions or changes to achieve the vision were raised these were noted down on post-it notes by one of the facilitators. Participants were then asked to instruct on where these should be placed on the timeline and what other actions or changes would be necessary to facilitate them. The timeline content generated is presented in Table 8.6. The key discussion points around each of the pathways are then summarised.

Time period	Timeline points
Present – 2020	• Piloting new co-operative housing for elderly • More caring leave from work – policies and uptake (large companies) • Building/adapting housing for extended family to move in • More informal sharing • Remove institutional barriers to working less • Employers focus on outcomes rather than hours • Changing expectations about service delivery – not 24/7 • New culture of team rather than individual responsibility • Doing voluntary work considered in work evaluations • Access courses for leadership and management in voluntary sector
2020 - 2030	• Caring leave policy (smaller organisations) • Local living wage • Extended Corporate Social Responsibility (CSR) – voluntary work paid by employers (widespread take up) • Legislation – right to part-time working • More opportunities to work fewer hours • Bank of the sharing economy (formal) • Mainstream co-operative housing for elderly
2030 – 2040	• Credit system e.g. for caring for others • Devolution of control to regions/ municipalities • Local universal wage (NE Scotland)
2040 - 2050	• National universal wage from the state

Table 8.6: Post-its placed on timeline.

Developing models of living and working to support increased caring for adults and children

The first part of the backcasting discussions focused around care for elderly parents and grandparents (giving the ageing demographic), as well as for children, and how society might respond to the increasing need for caring to occur within families. It was felt that employers had a role to play in facilitating employees to care for elderly relatives. Support could come in the form of greater flexibility in giving time off and in flexibility over working patterns. Participants pointed

out that this is a transition that is already underway (e.g. there are recent policy developments supporting greater flexibility for workers to care for elderly parents) and it was seen that developing new norms in this respect would happen relatively quickly in large organisations. A key challenge will be in upscaling to small businesses which are often reliant on key individuals. Living arrangements were also a focus of the discussion. Suggestions were made to pilot new models of communal housing for the elderly, matching people with complementary skills so as to reduce living costs through the provision of mutual aid. It was also suggested that this might aid turnover and therefore availability of social housing across the board. Another point raised related to the perception that current trends were towards more institutionalisation of elderly people, and there was a general consensus among participants that there was a need to move towards more community caring. This might mean a move towards families living closer together geographically and/or more extended families living together, with several generations in one household. Choices of where to study and work would be affected accordingly. It was felt that a shift from the current individualistic to a more collectivistic culture will be necessary to facilitate these societal changes. For example, for communal living models to become mainstream attitudinal changes will be necessary in addition to changes in the housing stock. The discussion suggested that new culture of caring may be framed in different ways. In one sense, greater emphasis on caring for elderly relatives may be seen as a burden, however at the same time the development of this more collectivistic way of living would have positive outcomes in terms of families and individuals being more connected. Different societal groups may experience the transition differently however; it was pointed out that there will be a need for a gendered perspective in policy in this area as women might find themselves under more pressure than male counterparts to undertake caring activities.

A number of areas of uncertainty were also highlighted in the discussion. For example, one participant pointed out that it is not clear when the 'demographic timebomb' will go off, so it is difficult to envisage how big the problem will be by 2050. Others noted that medical progress and improving health in older age may mean that the need for care might not arise until later in the life course. It is also possible that diseases such as dementia will have been cured by 2050. One participant voiced a view that in the future older people will not have the financial resilience that many have now due to changing policies around pensions, however another pointed out that this may depend on party politics in the intervening period.

Building capacity for bottom up action and community activity

A second pathway synthesised from the discussion focused on the need to build capacity to facilitate greater participation in voluntary work and community activities. Some participants foresaw a future need for more functions of public sector to be taken up by the voluntary sector (citing examples such as the move in the English education system towards the academy model of schools run by charitable trusts). This trend would lead to a need for more people to take up a role in their local communities. The need to develop skills was another aspect of building the capacity

of voluntary organisations highlighted and it was suggested that more training opportunities, especially for leadership and management in the voluntary sector will be required.

Some of the suggestions around increasing participation in voluntary work suggested a role for employers. Participants gave examples of organisational initiatives such as introducing participation in corporate voluntary schemes into the criteria used in employee evaluations, and schemes providing non-monetary benefits in exchange for volunteering time and professional skills. It was felt that these were actions that were already being put into place in some organisations and so could be rolled out to others relatively quickly. At the same time, the issue was raised that the time for volunteering must come from somewhere, and will necessarily mean less time working. Widespread take up of extended Corporate Social Responsibility schemes whereby employers pay for employees to do voluntary work was seen to be a necessary but longer term goal in this respect.

There was also a discussion around the need for systems which would formalise and structure the kinds of sharing economy activities already happening informally in communities. The activities discussed focused around individuals using their skills to help others in a reciprocal manner. It was agreed that there is a need for a centralised system that would help to put people in contact with others in their community who might have need of their skills – this was referred to as an 'Ebay for sharing' or a 'bank of the sharing economy'. It was noted that there are existing websites performing this function, but for this to facilitate a mainstream sharing economy there would need to be a single leading service and high levels of public awareness. Limitations to this system of structured yet informal sharing were also highlighted – some people may not find a match for their skills, especially if highly specific. These sorts of limitations might be overcome to some extent by the introduction of a formal credit system. This credit system could extend to the caring of others as well as household jobs etc.

Participants again reflected that the transitions discussed depend on a wider societal shift in favour of communitarian values. Some saw this as being dependent upon the political context, and that if current trends around pensions persist financial insecurity in older age will mean that we will need to trade our skills. It was suggested that it may be that becoming more communitarian will be a necessity rather than a choice, and that the idea of a move towards a more collectivistic culture seems predicated on a breakdown of current systems.

Progressing towards a universal basic income

The discussion progressed to consideration of the idea of a universal basic income similar to that already being put in place in Finland. This income from the state would replace the current benefits system and be received by all. It was suggested that such a universal income would provide an even baseline which would allow individuals to spend more time caring for others and participating in community work, with the opportunity of supplementing this income with paid

employment as appropriate. Participants generally felt that this was a policy which was still a long way off and so placed it close to the end of the timeline in the 2040-2050 section.

In considering the pathway towards achieving this it was noted that in Finland this began as a local initiative. This was seen as a promising route and as such a local universal income for NE Scotland was proposed as a step towards a Scotland-wide policy. Participants agreed that to do this could only happen in the context of a wider devolution of control to the regional level. It was noted that at present within Scotland the trend seems to be towards greater centralisation of power. There was a high level of uncertainty within the group about when this might occur on the timeline to 2050. Whilst several felt that this was (if achievable at all) still a long way off, for others it was conceivable that it could happen relatively soon depending on the political context.

The initiation of a local living wage was an action that would help pave the way for a local universal income. It was felt that this was something that could potentially be delivered over a shorter timescale than the other changes discussed in this pathway towards a universal basic income. It was noted that there are already discussions happening locally about introducing a local weighting for public sector workers in the Aberdeen region to support recruitment and retention.

Reducing institutional barriers to working less

The final part of the discussion focused on what other changes, in addition to those discussed in the pathways discussed above, would be necessary to create a context where more people can choose to work fewer hours. It was felt that there were many institutional barriers to working less which need to be addressed. One option suggested was to formalise the choice to work fewer hours by introducing legislation giving individuals the right to work part-time hours, as opposed to the current legislation which requires employers to *consider* requests to move to part-time working. Other aspects of the discussion focused around identifying and addressing the drivers leading to the current situation where there is limited availability of part-time jobs and job-sharing opportunities. The actions and changes suggested here were generally seen to be things which could happen now/in the very near future (within the 2016-2020), or were already happening in certain organisations. Client expectations and service users' desires for continuity were suggested as posing a key barrier to working less. One potential solution to address this was for organisations to develop working cultures which focus around team (rather than individual) responsibility for a task. It was also suggested that we may need to question whether we really need services to be provided on a 24 hours-a-day, 7 days-a-week basis. Changing expectations about service delivery will be necessary to develop cultures where clients expect that there will be certain days and times when individuals are not available. Part of this may simply be down to communication and managing expectations as part of the ongoing relationship with clients.

Reflecting some of the discussion in the morning visioning session, ideas around developing organisational cultures where employees are given flexibility as the times they work and where performance management is focused around outcomes rather than hours at work, were revisited. It was acknowledged that such changes are already happening now within many large organisations and that at the societal level the challenge is in mainstreaming such practices. At the same time, one participant raised the issue of possible negative consequences around a wider move towards outcomes-based working, namely that it could lead towards a 'zero hours culture' where individuals are contracted only to deliver specific tasks. This would mean that the onus would be on individuals developing long term relationships with companies to ensure their security and continuity of employment.

8.5 Conclusions and reflections

Overall, we judged the Aberdeen GLAMURS backcasting workshop to be a success. The group took those aspects of the MUSIC project vision and further elaborated on using a time-use lens. The use of the 'less-or-more' live-graph was very useful as a means to capture the sense of what people felt would be likely to change in the future from a time-use perspective. The MUSIC project had already identified three important aspects that mirrored our focus in the GLAMURS case study: flexible working patterns, home working, and public transportation to mirror patterns of working.

As previously noted, there was certainly some tension in the discussion between discussing ideal futures, and discussing futures that might be expected given current knowledge, and ideas about how the future may play out. In some cases it was felt that there were items in the MUSIC vision (which had a time horizon of 2050) that were already in existence, and could reasonably be prioritised for upscaling immediately. However, there were some aspects of the future that were clearly more uncertain. For example, in the discussion about caring for older people, it was noted that it was possible to imagine things like a cure for Alzheimer, or other such medical technology breakthroughs, but it was not possible to imagine that ALL problems in society could be eradicated. The point made about needing to find sustainable sources of energy was particularly important in this respect. Aberdeen has a close relationship with the oil and gas sector, and as such has a heightened awareness of how important energy is, not only in the functional sense, but also in terms of the regional economic impact of a shrinking sector. At the time of the workshop, the oil and gas sector was (and still is) rather depresses, and as such, it seems unsurprising that participants find it hard to imagine a future defined solely in positive terms. In terms of the balance between work or leisure though, there was a consensus that (to quote one of the participants): "*Whether the future is utopian or dystopian, by 2050 it will not be ambrosia and honey, but on average people will be working less*".

The aging population was an important focus of much of the discussion. Not only was this demographic reality felt to be important insofar as it meant people would necessarily be working for longer. It was also an important consideration from a time-use perspective. The discussion around caring for older people was particularly interesting, as it focussed around changing the narrative from one of burden to one of caring. This yearning for a move to a more caring culture (for adults and children) was a thread running through many of the discussions. It was felt that the individualistic culture that we currently live in was a particularly pernicious barrier to realising such a vision. Flexible working policies, whilst important, will not in themselves do anything to change such a trend. Indeed, if flexible working results in a lowering of regular social connection with co-workers (especially in the case of home working), this may well work in the opposite direction.

The idea of a universal basic income was a particularly interesting aspect of the discussion here. In trying to weave a thread of coherence back from the overall vision to the present, the tensions between paid work and other patterns of activity were very salient in the discussion. Some form of decoupling (e.g. in the form of a basic income) was felt to be a useful mechanism to ease part of the felt tension here. The need to build capacity for desirable individual and social action to take place was clearly felt to require not only material resources, but also the resource of time. The idea of working less was felt to be a useful means to free up time needed for the caring society imagined here. From the perspective of GLAMURS, this fits well with the view that time, whilst limited, is a resource of particular importance in understanding transitions to sustainable futures.

8.6 Sources and references

Craig, T., Colley, K., Polhill, G. (2016) WP5, Task 5.3 – Summary report of Backcasting Workshop (Pathway Development) in Scottish Case Study for GLAMURS, internal report, The James Hutton Institute.

9. Pathway workshop results Spain

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9.1 Introduction

In February 12th-13th, 2016, the Second Backcasting Workshop was held in A Coruña, Spain, organised by researchers of the University of A Coruña as part of the field work of the GLAMURS Project. The goal of this workshop was to define pathways and a follow-up agenda for the visions developed in the first workshop, with a focus on GLAMURS domains. The workshop entailed a first stage of further developing and refining the visions formulated in the previous workshop, and involved a wide range of relevant stakeholders at the level of our region, with half of the group attending the first workshop also present at the second one. The 2 half-day workshop was attended by 22 stakeholders on Friday, 12th February, and by 19 people on Saturday, 13th February, 2016. Diversity of those attending was achieved and their profiles varied from key members of the initiatives under study in GLAMURS, to activists from environmental organisations in Galicia, regional and local government policy-makers and researchers from several institutions.

9.2 Workshop preparation

Stakeholder mobilisation

When updating the stakeholder analysis, we aimed to reinforce the presence of civil society initiatives, especially those focused on sustainable and also invite a few key SMEs related to the domains considered in GLAMURS. We thus targeted the platform Rural Areas Want People, which addresses the rural exodus process in Galicia, topic which was not particularly mentioned during the 1st workshop but is a key dimension for future sustainability in Galicia. Finally, we decided to invite Fragas do Mandeo, an initiative devoted to nature and biodiversity conservation. The lifestyle domains in GLAMURS, rural-urban focus and the three categories of stakeholders were taken as criteria for the recruitment process. The political affiliation of participants, when known, was also taken into account. Table 9.1 shows the distribution of participants according to these criteria.

Stakeholder mobilisation was a much easier process than for the 1st Workshop. Only 45 invitations were needed to achieve a group of over 20 attendees, half of the amount than what was needed for the 1st workshop. This was due to participants having had a good experience in the first workshop, the fact the workshop was co-organised with the provincial government and the mass-media dissemination given to the event. Also positive during the recruitment process was that some key actors that had been invited to the 1st Workshop and who had declined due to agenda issues attended the Second.

As for the 1st workshop, the invitation was a general e-mail with the venue and workshop details accompanied by one personalised invitation letter and one information sheet about the aims of the project, the backcasting methodology, and the reason why each specific person was invited. In every e-mail we included a final sentence inviting all the people declining to attend to give us a couple of names within their organisation who we could invite instead. One week before the workshop took place, a reminder e-mail was sent to all the confirmed attendees, with the final agenda attached. Shared transport to the venue was also organised by the UDC team, bringing together those attendees sharing similar trip itineraries.

The input document with the 3 elaborated visions obtained from the 1st Workshop was sent to each of the confirmed participants one week before the workshop took place. For the workshop, we decided to split the attendees in 3 groups, which included participants from all the categories considered.

Stakeholder category	**Attendees (24 in total)**	
Civil Society	10/24	
Government (and affiliated)	7/24	
Knowledge and others	7/24	
Gender	**M**: 13/24	**F**: 11/24
Urban/rural environment	**Urban**:15/24	**Rural**: 9/24

Table 9.1: Overview of profiles among the attendees to the 2nd Workshop

Practical workshop organisation & adjustment to the workshop format

The workshop was held in the "Pazo de Mariñán", a heritage country house from the XVIII century, outside of the city, which provided a relaxed environment that facilitated meaningful participation and engagement. Informed consent was obtained from the participants at the meeting.

The overall program of our workshop was as follows:

Friday 12th, February 2016

16:30-17:00 Check-in, coffee and welcome

17:00-17:30 Opening session: The future sustainability of Galicia, research and collaborative design of measures

17:30-18:00 Presentation of participants

18:00-18:15 Presentation of goals for the workshop, visions and outcomes first workshop

18:15-19:25 Pathways towards regional sustainability of the region, assessment and further elaboration of visions. (Work in small groups)

19:25-20:00 Backcasting & development of pathways. Step 1. Identification of assumptions and further elaboration of visions. (Work in small groups)

20:00-20:30	Plenary discussion
21:00-22:30	Dinner at the Pazo

Saturday 13th, February 2016

08:30-09:30	Breakfast at the Pazo
10:00-12:15	Backcasting & development of pathways, agendas and implementation proposals. Steps 2 & 3. (Work in small groups)
12:15-12:20	Break
12:20-14:00	Subgroup presentations, final discussions and evaluation
14:00	Closing

9.3 Workshop results: applied methods

24 attendees participated to our workshop, together with 4 facilitators from UDC. Among the facilitators, the roles were mixed. We started the workshop with an inaugural session where representatives of the institutions involved in the event (the University of Coruña, the Provincial Government, the Municipality of Coruña and Adina Dumitru as the GLAMURS Coordinator) made a brief introduction highlighting the importance of institutions and civil society to join hands with a view to promoting transition towards sustainability in Galicia. Adina Dumitru opened the workshop welcoming the attendees. After this, the introductory round with participants took place and we asked them to introduce themselves and say one adjective which described how the future and sustainable Galicia would be.

9.3.1 Main results vision evaluation and discussion session

Our vision evaluation and discussion session focused on making participants refresh the visions and knowledgeable about them. For this session we asked participants to answer 6 different questions and we prepared flip-over sheets with the questions to complete, which are shown below:

1. *What is your first response to this vision? What do you like about this vision, or not? (10')*
2. *Are the visions ambitious enough? How could the visions be more ambitious? (10')*
3. *What is positive about this vision? (5')*
4. *What is negative about this vision? (5')*
5. *What is missing in this vision? (10')*
6. *What is critical for this vision? (10')*

While evaluating whether participants liked or not the visions, a wide array of topics emerged, showing that most of participants had read and understood clearly the differences between the 3 visions. These first answers gave us the idea that the visions liked and were seen as

viable by participants (especially the first and second vision). The most of answers by participants qualified the vision, some corrected concrete points and few of them expressed doubts about the feasibility of these visions to become real in 25 years' time, especially those associated with the 3rd vision, on socially embedded growth.

When talking about whether the visions were enough ambitious or not, discussions revolved around unambitious dimensions within them. In a coherent way with the previous discussions, participants talked next about positive elements within the 3 elaborated visions. As the next step we asked participants to focus on negative elements within the visions. During the next session, on missing elements for the visions, results appeared to be redundant also, and many elements had been mentioned already during previous discussions. Finally, working groups identified what they consider to be the critical elements within the visions.

A summary of the elements that emerged are presented in the following pages, vision by vision.

Vision 1: Eco-efficiency

The first group shared the idea that the **vision on eco-efficiency** identified accurately the most relevant actors which should be involved in a transition toward sustainability. More dislikes than likes were mentioned and the main pointed to the idea that self-production of food is not possible within urban environments strictly; that the vision was too narrow; that an ecosystem approach should be taken instead and that specific Galician elements should be added to it.

Among the **preferred elements** in the vision, participants identified that change in consumption patterns leads to lifestyles changes; the made references to land management measures and policies; stressed social inclusion and respect for human diversity; the importance given to public participation and empowerment of people and the fact that the vision focuses on a new (renewable) energy system. On the contrary, the worse valued elements mentioned were the excessive faith in consumption as driver of change; the techno-optimism and golden age nostalgia.

The **missing elements** stressed in the first vision were mixed and pointed mainly to the lack of specific elements taken from the Galician context as land management, the structure of the productive system, the energy model, the links between rural and urban areas, identity processes, the role of youth and children, nature and people-environment relationships or the heritage management and conservation of diversity. Other suggestions in the line of not adding but changing the visions emerged. Some participants said the vision should be in line with natural life-cycles; the gender approach should be made more explicit; references to social technologies needed should be added or the common good economy approach included.

In our participants' view the **critical elements** for this vision are the welfare of citizens; that is focused on urban environments and that includes a comprehensive vision of human development.

Vision 2: Sufficiency

Second, the group working on **sufficiency** made a comprehensive assessment of the vision while answering to this first question and for doing that referred to the other two visions. Among the likes on the sufficiency vision, we find that the vision integrates both rural and urban environments; that focuses on building equity through citizenship co-responsibility; that includes building local sovereignty and that is humanistic. On the negative side, some participants described the vision as utopian, others as palliative, showing diversity among opinions. A number of criticisms related to the endogenous elements missing. Also, one participant added that while this vision implied the idea that transitioning towards sustainability would be a voluntary process, the change in reality would be forced by the energy crisis.

2 elements versus 6 emerged as **sufficiently ambitious**. On the one hand, changes in international consumption patterns and trade and the central role of self-esteem, awareness and motivation towards sustainability were referred as elements that would lead to a deep transformation toward sustainability. On the other hand participants named as missing elements that could help to improve the vision the integration of changes in the cultural area and lifestyles; the good living philosophy; a systemic approach; analysing the consequences of fossil oil scarcity; taking our ancestors' lifestyles as reference to design the future vision; local development based on local resources; implementing strategies to convince people to join the "sustainability cause" and technological improvements to supply energy to local communities.

Next, our guests emphasised as the main **positive features** within the vision its references to things that are already happening in Galicia; that the vision implies energy sovereignty is possible in Galicia and that responsible consumption plays a key role.

When it comes to **negative elements** participants pointed out mainly topics that relate to the role of the state within the vision. According to them, within the vision the state would have lower tax revenues and this could lead to increase tax burdens on citizens. Furthermore, some ideas related to lifestyle activities rose as that free time and energy consumption are indissolubly linked and that it is not reflected in the vision; that the vision is materialist or that the concept of work must be further defined. The idea should be do more other kinds of work, benefiting society, and not stop working to simply have more free time.

The list of **missing elements** for the second vision was long and enormously varied. Among the missing features mentioned we find: specify how this vision would ensure well-being and be

adapted to the cultural context; adding elements related to food sovereignty or participatory budgeting measures; including references to technology adaptation measures and processes; placing the accent on immaterial resources and prosperity based on them; making clear how non-aggression to community life and innovations is guaranteed within the vision; making explicit the process of freeing from oil; adding that the vision involves shifting from a centralised to a distributed model; describing the tax system and adding the idea that taxes should incorporate environmental costs; making clear the role of institutions would be the development of the normative framework to enhance sufficiency and to support directly initiatives working towards it; refining the idea that working less would not involve having more spare time, but spending more time doing other activities and mentioning the deployment of the vision will generate opposition.

According to participants, the sufficiency vision **was based on a long list of features**, as having a dynamic society; the goal to live better with less; a Welfare model based on redistribution of cultural and material resources, not GDP growth; the idea that collective creativity is key to meet needs, solve problems and look for alternative solutions; the implementation of waste management measures that improve the re-use of materials; the acknowledgement of who we are, including self-esteem, language and culture; the importance of praxis: learning by doing, imitation and reputation systems; the fact that the sense of common good is widespread among society and finally that collaborative knowledge and free culture avoid people to start from scratch and enhances efficiency in building sufficiency.

Vision 3: Socially embedded growth

Third and last, the best element within the **socially embedded growth vision** was the idea of reinforcing community life. Also seen **as positive**, social over individual responsibility would be promoted, strengthening sustainable behaviours such as recycling. Both the model of open culture promoted within this vision and the decentralised democratic governance model included were also well regarded by participants. Besides, participants referred to the public ownership of energy plants in Galicia as a positive element. Participants **didn't like** from their vision that it depicts closed communities dominated by rules, which might be as oppressor as the current ones, promoted by institutions; the Implicit restriction of individual freedom and capacity of choice; that the vision is static and does not consider new future illnesses and needs that small communities should be able to face and last, the excessive simplicity regarding provision of health services.

The third group pinpointed 3 elements that were **ambitious** enough and 2 which were not. Stop environmental degradation; Stop irrational consumption and Changes in lifestyles were assessed as key elements of change already considered within the vision. However, this vision would need to include more information on: Proposing ways to obtain resources that today cannot be achieved in the local environment (financial resources or health services) and estimating whether the reduction in the use of oil would be intentional or forced by the peak oil.

Several features were agreed as **positive features** of the vision: the fact that Galicia is depicted as less dependent on energy; that the vision implies changing the way capitalism works; that changes in lifestyles are included; the idea of rebalance the rural-urban areas in the region; that responsible citizenship is included; that people's well-being prevails over companies' profits; that values as coexistence and community life are key within it and finally that proximity networks for trade and exchange of knowledge are organised and help to ease the sense of insecurity.

Opposed to this, among the **negative elements** in the vision participants questioned the implications of some statements within the vision. On the one hand, the principle of who pollutes pays was criticised, on the basis that this would lead to economic discrimination, allowing only those wealthier to pollute. On the other hand, the capacity of the communal organisation to provide services, the probable restriction of individual freedoms and renounces to innovation that would entail this vision appeared among the dislikes.

The **missing elements** detected for the third vision related more to the functioning of community life and how the provision of services and resources, and the ethical principles ensured. Unlike in the second and first vision, the list of missing elements for the third vision does not include extra elements that were not mentioned in the vision.

Lastly, the socially embedded growth model was condensed into the following elements: the changes in education; self-awareness of agency and autonomy; high levels of trust within society; commitment with the common good; conflict resolution, consent building mechanisms and the identification of actors needed to meet the vision and act as pioneers or agents of change.

9.3.2 Main results backcasting, pathways and agenda session

Each group was asked to further develop the vision based on the next six questions, of which the two last ones were decided by the UDC team because the scarce information gathered for these lifestyle categories during the first workshop:

- What are important assumptions/conditions for this vision?(5')
- How do people life their everyday life in this vision (e.g. with regard to the GLAMURS lifestyle categories)? (5')
- What is the role of other actor groups (e.g. government, business) in this vision? (5')
- What is the role of citizen initiatives in this vision? (5')
- What would people do the extra free time (refer to work-leisure balance)?(5')
- How would be the consumption of manufactured goods?(5')

Assumptions

The most of the **assumptions** from the visions refer to changes in the economy but also include modifications in the citizens' involvement and roles in achieving the public good. According to the attendees, the first vision is based on a **shift in the economic model**, which leads to a decrease in the associated footprint. Also, the eco-efficiency vision implies a change in the socio-political organisation, with a strong emphasis on new direct participation formulas, which allow more citizens' oversight. The second vision, however, is focused on a **joint shift on the economy, culture and resource management**. All these changes would be aimed at ensuring sufficiency across society, keeping the footprint level low and involving a prosperity model that would rely on immaterial goods over material ones and serve as basis for the spread of a common good culture. The third vision would be caused by the o**rganisation of a strongly cooperative society**, where both the production and provision of goods and services would be organised at the local level and which would lead to the reduction of the environmental footprint and perceived needs, all oriented towards enhancing the well-being among the population.

Lifestyle activities

The relocation of the production chains and slowing the pace of life are common treats included in **the lifestyle activities for all the three visions**.

First, people would devote less time of their everyday life working within the **eco-efficiency vision**. Instead, more time would be employed for personal development activities and community activities. This fact would increase autonomy across population and would help to slow down the pace of life. The role attributed to responsible consumption cooperatives is key in this vision and these organisations would be the main intermediaries in supplying great part of food and manufactured products to the population. The use of bicycles would become normal. Second and similarly to the first vision, the materialisation of the **sufficiency vision** would imply flexible working conditions and a change in nature of work also, which would now encompass personal and community growth. Regarding mobility, sustainable means of transport would be mainstreamed and fostered, including the organisation of collective transport for everyone. With respect to food consumption, people would mainly eat seasonal and local products. Besides, waste generation would be drastically reduced, partly due to modular construction and repair by parts of manufactured products. The available energy would be locally generated and would come from multiple sources and through a distributed electric network. Third, lifestyles would be healthier within the **socially embedded growth vision**. The most of resources used by communities would be local, produced within the near environment. Food would be strictly organic and seasonal and most of manufactured goods and services would be shared, reducing the levels of waste generated. The nature of work would change and people's quality of life would depend less on their wages from paid work, but more on their community. Coverage of basic needs would be

granted by communities. Less fossil energies would be consumed and dwelling would be eco-efficient in this vision. As a result, people would be happier.

Roles

All the three visions include a **deconstruction of the traditional roles assigned to institutions and citizens.** Beyond that, considerable variations are found when defining which roles different actor groups would play within the three visions.

On the one hand, both the Government and the Companies within the **eco-efficiency vision** would see their functions limited to be managers of either citizens' or consumers' decisions, ensuring both social and environmental responsibility criteria are met. On the other hand but close to the latter, the roles assigned to Government within the **sufficiency vision** are defined as a mixture between guaranteeing social rights, freedoms and fair distribution of resources, and managing citizens' demands, which within the vision would be closer to the government due to a model of deliberative democracy that would be implemented. Besides, companies would be in charge of developing their own ethical codes and applying them, leaving room for their self-organisation. Last, the **third vision** includes more permeable relationships among different actor categories, with several roles that would be shared among the local communities, government, public institutions or businesses. Local communities would be at the forefront of social, cultural and economic changes. In contrast, governments would be forced to accept these demands from civil society and be opened to innovations formulated at the local level. Even though Public Institutions would still keep the role of ensuring service provision arrives to the entire population, the provision of it would be organised at the local level also. Similarly, the activity of the companies would be closer to civil society as most of them would be cooperatives and have participatory structures internally, which would also imply the accountability levels linked to their activity is higher and that this is in line with societal demands.

Roles of Citizen initiatives

Citizen initiatives play a central role in all the three visions, as they are considered to be at the vanguard of transition towards future sustainability. These initiatives play mainly a watch dog role within the eco-efficiency vision, controlling the government and ensuring their activity is in line with social demands but also help to disseminate new models of behaviour and increasing awareness on sustainability across society. Their activity is in close contact with public institutions. Their role could be summarised as change-makers from inside. In contrast, within the sufficiency vision, these initiatives are defined as having more autonomy, developing by themselves alternatives and from their own spaces, triggering change. Their role could be defined as change-makers from outside. Finally, these initiatives are responsible for the provision of goods and services in the socially embedded growth vision. Their agency would have led them to penetrate

the institutions to such an extent that the traditional division of roles among public institutions and citizens has disappeared in the vision and more cooperative relationships between them exist. Their role could be defined as being nodes in a network of mutual support and self-management and provision of needs.

Free time management

Having more spare time is a common feature among the three future visions developed, which our attendees linked to increasing well-being and possibilities for self-realisation.

First, people within the **eco-efficiency vision** would dedicate their time on the one hand to be self-sufficient in meeting their own needs. On the other hand, more time would be devoted to the full and relaxed enjoyment of the own life, interacting more with others, raising children or spending more time in close contact to nature. Second, even though this point was not discussed in depth for the **sufficiency vision** due to time constraints, our attendees agreed that having more spare time would be linked to an increased consumption of energy. Third, more time would be invested for public participation, decision making and developing community projects in the **socially embedded growth vision**. Despite this and linked to the deconstruction of the nature of work and leisure implicit in the vision, the self-realisation and enjoyment would not be the sole domain of leisure. As work within the vision would be a voluntary activity, it would also become a source of self-realisation.

Consumption of manufactured goods

We ended this session asking the working groups to think about how **the consumption of manufactured goods** would be within the three different visions. Overall, the three visions envisage a decrease in consumption of manufactured goods.

Consumption of manufactured goods would decrease within the **eco-efficiency** vision, especially the consumption of processed food products. All of them would come from the near environment and their provisions would be organised through short-supply chains. The consumption would be conscious. Very closely, the consumption of these products would also decrease within the **sufficiency vision**, helped by the repair and re-use practices, which would be broadly widespread. The consumption model would be responsible. As regard the **socially embedded vision**, a drastic decrease in the consumption levels of manufactured goods would take place due to several causes: goods tenure would not be necessary; the increased collaborative consumption and sharing of resources; the life extension of manufactured goods and that more recycling and re-use of products would take place helped by RDI efforts. Most of the goods consumed would be organic, local and fair. As a result, waste generation will be reduced.

Second, the questions used for the backcasting were the ones in the Methodological guidelines:

- ***What*** *changes are needed (cultural-behavioural, structural-economic, institutional-regulatory-policy, organisational, technological)?(15 min)*
- ***How*** *can changes be realised? What actions and measures are needed? (15min)*
- ***Who*** *should do these activities (govt, citizens, ngo's, other)? (15 min)*
- ***What*** *are drivers and barriers for this vision? (15 min)*

To avoid repetition, the detailed results from this session and the agenda are gathered in the corresponding Backcasting results section in the extended visions.

After discussing backcasting elements and needed changes, the 3 working groups started to elaborate their answers regarding what were the **drivers and barriers towards each of the visions**. Inertia and market economy appeared repeatedly as some of the main barriers toward sustainability within the three visions. On the drivers' side, the increased political mobilisation and the awareness on the effects the own behaviour has on third parties were common to all 3 visions.

In the case of the **eco-efficiency vision**, the main **barriers** towards it relate to the market economy, controlled by big corporations which benefit from the functioning of the economy and oppose to changes. The latter, in compliance with the mass media and political lobbies, block the possibilities for a transition towards sustainability, and spread the message that such a change would imply a high economic cost across society. At the citizens' level, the market economy model is integrated through consumption habits, which also work against the possibilities for a change. With respect to **drivers** towards an eco-efficient society for Galicia in 2040, the social mobilisation and the development of a social economy model based on cooperatives which would be committed to health issues, and the preservation of the environment are the two main mentioned.

Three **barriers** were identified also as the main responsible for blocking the change in Galicia towards **sufficiency**. First, the integration of values like greed and competitiveness, naturalise neoliberalism and steady growth, making these mainstream. This is reinforced by important actors and institutions, which support the status quo and market economy. At the individual level, several reasons determine inertia and reluctance to change, namely individualisms and lack of social interaction. On the **driver's** side, organised civil society and awareness on inequalities produced by the economy, environmental risks associated and the need for a quality of life are highlighted. Also, technological development is seen as a factor which may help the transition towards sufficiency.

Likewise to the first and second vision, the barriers identified towards the **socially embedded growth vision** related mainly to social stagnation, a conservative and erratic functioning of public institutions, reluctant to innovations and self-organised initiatives; the market economy and its penetration at all levels of society. Besides and in contrast to the other two visions, other barriers are mentioned linked to the demography structure of Galicia and history. On the one hand, the ageing population and the urban- rural gap are seen as disincentives for sustainability. On the other, the group pinpointed the existence of the prejudice of that lack of innovative tradition in Galicia, which also strengthens their invisibility. Regarding drivers, the dissemination, visualisation and acknowledgment of initiatives and experiences dealing with the promotion of common goods was the main mentioned. Also, the fact that many alternative initiatives exist and already operate as a peer network in Galicia, were seen as fostering the transition towards this vision.

9.4 Workshop results: visions and pathways

The 3 final elaborated visions that resulted from merging information from the first and second workshops are summarised next. In accordance to the new information, we changed the names given to the visions slightly:

- Vision 1: Eco efficiency. Collaborative consumption & green growth for sustainable territories in 2040.
- Vision 2: Sufficiency. Human scale territories
- Vision 3: Socially Embedded Growth. Building community life in the Galician rural areas as a driver for sustainability and happiness.

9.4.1 Vision 1: Eco efficiency. Collaborative consumption & green growth for sustainable territories in 2040

Core and main assumptions

The vision is focused on the **green improvement of technologies and shift in consumption patterns** as the two main drivers that would lead Galicia to have a much lower ecological footprint in 2040. The greening process entails that the economic activity and technologies used have a minimal impact on the environment and are low carbon intensive but it also means that the working conditions are decent.

The **new circular economic model** enables a drastic reduction of waste and keeps the aggregate production and demand levels low. This is a result on the one hand of the generalisation of recycling and reuse of products and materials, and on the other a direct result of the new forms of collaborative consumption and sharing of goods and services, very common.

Also, the eco-efficiency vision implies a change in the **socio-political organisation**, with a strong emphasis on new direct participation formulas, which allow **more citizens' oversight.**

Lifestyle activities

Organisational changes have make working hours more efficient and the standard working times are now 8:00-14:00 and 15:00-17:00, which allows **a balance between leisure and work**. Overtime work has been drastically reduced. Large sections of the population are telework. There is flexibility in the negotiation of labour conditions and this allows the reconciliation between working life and family. At the aggregate level people have more free time.

In this context, **more time is employed for personal development activities and community activities**. People devote their spare time on the one hand to be self-sufficient in meeting their own needs and on the other to the full and relaxed enjoyment of the their own life, interacting more with others, raising children or spending more time in close contact to nature. This fact increases **autonomy** across population and helps to **slow down the pace of life.**

The **building and urban planning model** generates the very least ecological impact and is committed to the creation of new public and meeting spaces. As for house building, bio-constructions techniques are the usual ones and many materials are reused, prioritising the restoration of buildings over the construction of new ones.

Less time is spent on mobility. Commuting times between homes and workplaces were reduced thanks to an efficient public transportation system and improved technologies. Teleworking reduces the number of daily trips between the residential areas and working centres. Private cars are shared often and their use is decreasing. The use of bicycles is common.

Regarding the **consumption of food and manufactured products** the new model maximises the reuse of goods and products. Self-consumption (i.e. self-produced energy) and shared consumption are common and the model is conscious. The most of the food consumed comes from near environments and are distributed through short supply chains. Most of the self-consumption for food comes from urban gardens that exist and are productive in all Galician cities. The role attributed to **responsible consumption cooperatives** is key and these are the main intermediaries in supplying great part of food and manufactured products to the population. The consumption of manufactured goods is low, especially the consumption of food processed products.

Organisation and division of roles

Changes in consumer habits together with political mobilisation appear to be the driving force of change in this envisioned future. Active citizenship is ultimately responsible for the maintenance and adjustments in the model and their agency in the design of the socio-economic model is high. Population is greatly concerned about sustainability and many people engage in organisations and take part in the participative mechanisms and forums opened by institutions. There is still a welfare state model. The citizen initiatives play mainly a **watch dog role**, controlling the government and ensuring their activity is in line with social demands but also help to disseminate new models of behaviour and increasing awareness on sustainability across society. Their activity is in close contact with public institutions. Their role could be summarised as **change-makers from inside**. Both the Government and businesses see some of their functions limited to be **managers of either citizens' or consumers' decisions**, ensuring both social and environmental responsibility criteria are met.

Backcasting results

Sustainability in 2040 is explained by two major structural changes: the generalisation of collaborative consumption and the commitment and development of green technologies, more environmentally- friendly. Many material goods before associated private use and benefit are shared in 2040. This happened due to the introduction of fiscal incentives for collaborative consumption, the emergence of prosumers and the spread of short supply chains. Superstores operating in Galicia are forced to sell a minimum percentage of local products and pay taxes to the local administration where they are placed. There are lower consumption levels of material goods and a higher consumption of services, that satisfy the demand for repair and maintenance services of appliances, clothes and other consumables.

A new educational model was designed and extended to a multitude of stakeholders and society advanced towards a learning community. The initiatives of non-formal education have been largely responsible for the population's awareness on environmental issues and social, which are part today of the popular culture. New social references, linked to sustainability have been established in a joint effort by the media, advertising companies and society at large. From the academic biased educational model in past, there has been progress towards a new model which seeks to prepare population for a full life in society.

The technological greening process looked back. New technological innovations were developed, including new services, applications and devices but also the use of old technologies, "greener" and adapted to the local environment was recovered. The development of standards across different economic sectors was fostered by the public institutions, helping their re-use and

recycling. In addition, a democratisation process regarding access and use of technologies took place. Most **dwellings are self-sufficient** thanks to the commitment of both the regional government and the councils.

Pathway

At the very beginning of the transition towards an eco-efficient society in 2040, **civil society plays a driving role**. From **2016 to 2020** a great increase in the levels of public participation takes place and broad sections of society become involved in civil society initiatives. These cooperate among themselves, increasing their capacity for decision-making and their agency. Several social labs aimed at collaboratively designing the future model of society emerge. Big consumer groups appear. The increased degree of organisation within the civil society lead to the launch of pressure campaigns denouncing polluting activities or those not respecting decent working conditions for their workers and to the devolution of responsibilities by the government before 2020. The **government and policy makers** introduce sustainability policies and fiscal incentives for increasing the re-use of goods and reducing the aggregate consumption levels. **New research lines** oriented towards new crops and new uses of local resources are created. Besides, funding is set aside for research projects by social innovation projects. With respect to **businesses**, they are reorganised to create short supply chains which use mainly local resources.

A participatory system against the disposable culture. At the next stage, between **2020 and 2030,** the levels of political participation keep increasing. The networking among the initiatives is reinforced and a joint effort is made in supporting the development of participatory mechanisms. The **government and policy measures** focus on guaranteeing sustainability, local production and green energy provision. Through the regulation of the production processes and increasing awareness regarding consumption patterns, they undermine the "use and throw away culture". **RDI (Research, Development and Innovation)** actions address new ways of meeting social demands as the elimination of planned obsolescence and fostering the re-use of resources. There is a support of free knowledge experiences and a portion of the tax revenue from businesses is devoted to fund research projects on sustainability. Regarding the **business domain**, collaborative networks are set up between cooperatives and SMEs. Those companies supporting local agriculture gain public recognition and specific labelling for those products and companies that respect nature and promote dignified working conditions starts being used. This fosters also a progressive change across the large industry, which becomes more sustainable.

RDI and policies optimise the life of resources and interaction between producers and consumers before 2040. From 2030 on, no extra measures by **civil society** are taken. However, the **governments** increase the interventionism on the economy by banning the sale of products with non-returnable packaging and forcing companies to work with standards. Moreover, the **Research and Knowledge** institutions encourage collaborative and international research projects among different territories to avoid isolation. On the **business** domain, before 2040 their efforts concentrate on ensuring food production is only organic, sustainable and decided through participation. Also, measures are taken for the optimisation of the life of products and resources. Finally, some production and communication models in compliance with consumers that allow on demand production begin to work.

Short term agenda and short term implementation proposals

When it comes to **urgent measures that could be started right away** in line with the eco-efficiency vision, our attendees mentioned a wide amount of them on different domains, indicating they consider important interventions could be done forthwith. The most of proposals refer to measures oriented towards the **reduction of aggregate consumption levels**. Others suggested refer to tenure regime, reducing waste generation, dignifying the own culture or increasing awareness through education.

To complete the vision, several **recommendations for both the government and the whole society were made**. On the one hand, the government is suggested to support small producers, promoting the consumption of long lasting products and to limit the waste generation. On the other hand, some comments rose for the whole society, highlighting the need for rethink about current self-realisation sources and priorities in life; generating new models of society, creating communities. Finally, a recommendation emerged for loosing fear of change.

9.4.2 Vision 2: Sufficiency. Human scale territories

Core and main assumptions

In 2040 Galicia is a resilient and sustainable territory mainly because a **joint shift on the economy, culture and resource management** All these changes are aimed at ensuring sufficiency across society, keeping the footprint level low and involving a prosperity model that would rely on immaterial goods over material ones and serve as basis for the spread of a common good culture. As a result, there has been a sharp decrease in the aggregate levels of demand and supply.

The needs and available resources are well balanced and the welfare of the population is very high, ensured by an efficient system of wealth distribution, policies of gender equality, the promotion of both interculturality and diversity and the consolidation of the process of

progressive re-location of production, consumption and distribution chains. **Sufficiency is the main pathway towards sustainability**.

The administrative organisation and the geographical dimension of everyday life are done at a small-scale. Cities are organised in neighbourhoods and districts. Villages are organised in parishes. People make their living in small territorial units, within which they have all the necessary services (education, hospitals). The resources of each administrative unit are self-managed, generating much diversity between them. There are services that are jointly managed, as waste treatment. Local water management occurs in the smaller population centres. The welfare state still exists and includes a wide range of participatory mechanisms.

The **development of the territory is integrally promoted, including rural and urban areas**, which are both dynamic in 2040. The supply and energy production systems are based on local and renewable resources. The energy sector is owned by citizens, which allows direct control over it for the benefit of all citizens. Energy sources used are wind, photovoltaic, solar, geothermal and tidal.

Education for citizens' empowerment emerged. There is a community education system, interdisciplinary and in which family, school and society, as well as formal and non-formal organisations contribute under the goals of promoting critical thinking.

Lifestyle activities

Fair distribution of wealth is reinforced with measures of responsible consumption and responsible use of resources. Recycling, reuse of goods and collective use of services are strongly promoted. The population is committed to the model.

The consumption of food and manufactured products is conscientious. In 2040 the productive structure basically consists of SME's. Proximity and seasonal products are sought by consumers when making a purchase, which is in interest of small producers and generates working places. Importations are low but if produced, are conditioned upon compliance with social responsibility criteria decided by society and human rights. Suppliers offer information about quality, origin and properties of their products. Besides, **waste generation has been drastically reduced**, partly due to modular construction, re-use enhancement and repair by parts of manufactured products, which are broadly widespread.

There are many cases in which **consumers and producers agree the levels of supply and demand**, reducing the use of energy resources and time invested in the distribution and sale / purchase. Many companies share equipment and services. There are networks for action and consumption organised across the entire region.

Work is adapted to individual needs and not vice versa. Flexible working conditions and a change in nature of work also, now encompasses personal and community growth. People can adapt the working hours according to their needs. Wages are decent and generally cover the needs of the population. Working from home is common. There are real possibilities for reconciling family life and work. People have more free time. Part of it is devoted to collaborative consumption and exchange activities but some leisure activities are linked to an increased consumption of energy. People show a strong g preference for low energy intensive leisure.

The organisation of housing and urbanism promotes community life and greater contact with nature. People live close to workplaces, in low-storey allowing the use of natural light. Washing machines, Wi-Fi networks, heating systems and cars are shared. Cities are replete with community gardens and in rural areas the communal woodlands are jointly used. The available **energy is generated locally** and comes from multiple sources and through a distributed electric network.

Transport offer is adapted to real demand and guaranteed. The population live close from work. A comprehensive plan for rural-urban mobility was developed and has allowed the existence of a public transport network that efficiently links villages, cities and towns. Public transport uses renewable energy. Sustainable means of transport are the mainstream now and fostered, including the organisation of collective transport for everyone. The train is the main means of transport and the connections are facilitated by interchangers. Mobility by bike and on foot is fostered as a way to discover the own geography. New pedestrian paths connecting natural areas are opened. Even though a big effort has been made in interconnecting the whole region, the public transport network still does not reach all parts of the countryside.

A process of recovery and enhancement of Galician culture and heritage took place. Two languages are spoken, Spanish and Galician. Citizenship is proud of Galician identity and cultural and architectural heritage. **Environmental protection** is a cross-cutting pillar in all the policy design and is granted. There is a plurality of landscapes and agriculture is diverse.

Measures of **technological literacy** have been developed as a guarantee of equal opportunities for accessing the online participatory processes. The development of free software is fostered and 3-D printers are commonly used, as a solution to home repairs.

In 2040 there are still barriers to sustainability. The legacy of the previous bad practices is the main. Deforestation and the ageing population are very difficult to overcome. Educational barriers, the lack of socio-political consensus, short-termism and the imposition of icons and models by the media slow the transition towards sustainability.

Organisation and division of roles

The degree of citizen involvement in public life is very high. The technology and some digital platforms approach policy decision to population by electronic voting and facilitate the direct and agile channelling of social demands. Citizen initiatives are defined as having more autonomy, developing by themselves alternatives and from their own spaces, triggering change. Their role could be defined as **change-makers from outside**.

On the other hand the territory is divided into local assemblies. This leads to a deeper knowledge of reality and social problems, and makes residents and neighbours get to know each other. **The economic structure is composed basically by SME's**. Besides, companies are in charge of developing their own ethical codes and applying them, leaving room for their self-organisation.

The **roles assigned to governments** are a mixture between guaranteeing social rights, freedoms and fair distribution of resources, and managing citizens' demands, which within the vision are closer to the government due to a **model of deliberative democracy** under development.

Backcasting results

Worsening effects from climate change are perceived in Galicia. Due to this, there has been a gradual change in cultural values and behaviour in the relationship between humans and the environment, and people has moved from holding an anthropocentric and economic worldview to a bio centric one. Facing climate change with binding and coercive agreements is a top priority for all public policies.

Transition towards sustainability was a slow process. Strategies of both sufficiency and eco-efficiency were combined, with greater emphasis on sufficiency. Key to initiate that process was the diagnosis on what had been done wrong as a society, process which pointed out the runaway consumerism. A new slow culture, of doing things little by little, is spread and the pace of life has considerably slowed over the past years. **People live less stressed**. The working hours are shorter and organised more efficiently than in 2015.

The sustainability of the territory is based firstly on the changes occurred in the **energy system**. The second pillar that makes possible Galicia sustainable is the integral change of the **education model** that occurred in the last 25 years. **The model of territorial and administrative organisation changed and the value of the common goods and cooperation was recovered**. The levels of distrust and political disaffection were reduced, as well as levels of abstention. The political culture and knowledge by citizens is high and increasing and many citizens are co responsible and involved in public administration and community service tasks. More resources

are devoted to science and the research budget increased. The territory is more integrated and equal access to services and public resources is granted for both rural and urban population.

Rural exodus has stopped and rural areas currently attract new population through the enhancement of rural ways of life and the institutional boosting of economic activities there. A **bottom up cultural awakening process** took place during the last years and it was translated into a revaluation of the own culture, increased levels of self-esteem and pride of the own identity and history among the population. This was helped by the establishment of knowledge exchange networks that reinforce social cohesion and promote inclusion.

In 2040 the idea that there are **knowledge and skills that must be retrieved from past** especially those that have to do with the connection with the environment, is widely accepted. The dependence and consumption of new technologies, however, has decreased. Despite this, **new technologies have appeared that help increasing the level of resource reusability**, especially regarding energy. Those technologies that appeared are aimed at meeting social needs. The most of them are low-impact technologies, developed using open sources and are designed to last longer.

The **aggregate level of energy consumption decreased largely**. The population has learned to live with less and makes responsible use of energy resources, respecting the environment, sharing resources and assets, and with a very large increase in recycling practices. There are major and new forms of collaborative consumption, cooperatives and the exchange of knowledge and services, such as time banks. Less meat is consumed and products have less packaging and labels.

The dependence on transport decreased. The ecological footprint of mobility has been reduced consequently, as many workers are allowed to work from home, even though the population structure still geographically dispersed. Localisms applied to mobility disappeared and there is only one big airport in Galicia. Rail is one of the main means of transport now. Freight transport by ship has also increased, contributing to the reduction of the ecological footprint.

Pathway

The climate change effects and increased citizen involvement in the institutions trigger the transition towards a sufficient region. In the short term, from **2016 to 2020**, the levels of political participation increase. The number of ecologist and neighbour associations, consumption groups, and collectives in defence of public and quality education, experience a boom. These organisations commit themselves to rein the destruction of both immaterial and material heritage. Some proposals are raised for mitigating demography issues and also promoting multiculturalism. Citizens' organisations from Galicia cooperate with peers worldwide in designing

global development plans for rural environments. A normalisation process and recovery of the Galician language takes place. In this period **governments** leave room for the intervention of the organised civil society managing solutions for everyday life problems. Citizens become more engaged in government. The activity from SMES is supported by the institutions and a model of participatory democracy begins to emerge. On their side, **Research and Knowledge institutions** host research projects conducted by small initiatives and give priority to research on carbon capture. The **business sector** focus on increasing their self-sufficiency levels, boosting local agriculture and livestock farming to reduce imports; using less minerals and replacing them with other renewable materials; Incorporating organic farming parameters as the norm. Some short supply chains are created; implying producers get fair remunerations, and that intermediaries are avoided. Farmed animals start being fed strictly with grass, not cereals. The creation of cooperatives and SMEs is fostered. Water and energy supply systems start being organised at local level.

Between 2020 and 2030, **civic efforts** concentrate in fostering responsible consumption. Local assemblies gain ground and start self-managing basic resources. Pressure from civil society leads to stop the over exploitation by those electricity generation plants which use natural resources (i.e. Biomass plants). **The governments and policymakers** take action to decarbonise society and means of production. Several land management measures are taken geared towards the integration of the territory, such as improving rural services, integrating immigrants or developing an integral mobility system. Sustainable natural resources exploitation for energy generation is promoted too, supported by **research** efforts. The **production sector** is in line with these changes and sustainable energy technologies improve. An agreement is reached and weapon manufacturing stops from these decades on. All water and energy supply systems are managed at local level.

In the long term, **between 2030 and 2040**, free education initiatives foster the creation of exchange networks. The degrees of autonomy among the **organised civil society** are high and they manage care services for the elderly and children, leisure time activities and the redistribution of food and products. **Governments** are to a great extent controlled by citizens. Their actions place a focus on ensuring equity, working towards an intercultural society and ensuring coverage of basic needs. A community infrastructure network appears. Citizen assemblies are deployed across Galicia in coherence with the territory integration model with the endorsement of governments. Exploring ways of having a global and community government is among the priorities for **Research and Knowledge institutions.** These, also work on monitoring activities and progresses made in previous decades. New research lines are opened on waste use for energy production. The RDI model consolidates as a socially embedded research one, in which knowledge communities have a key role. Finally, **the business and production sectors,** strive to eradicate emissions from polluting wastes. Waste is eliminated through processing and transformed into

useful resources. Many companies are owned by cooperatives and communities. Supply-demand balance is achieved.

Short term agenda and short term implementation proposals

Proposals for the short term and which will ease the transition towards a sufficient society, our participants stressed the need for **changing our worldview**, and start understanding humans and economy as subsystems within the biosphere, depending completely on the state of nature and the rest of living beings. In order to do so, **political stability** is needed and applying **long-term political measures** on a consensus basis Laws on the Energy and Education fields is mentioned. A lot could be done already in the short term regarding **making energy consumption and production more sustainable in Galicia**. On the one hand, an immediate decrease in consumption levels of fossil resources for electricity production is foretold, as well as replacing centralised electric grid by a distributed one or ensuring all dwellings are energy-efficient. Moreover, waste could gradually start being transformed into resources. Measures aimed at **improving territorial balance** are also suggested. One way of working towards this could be trying to stop rural exodus by providing basic services to the population. Finally, regarding education and research, attendees urge to build a **participatory education community** and developing more research projects as GLAMURS, to explore ways transition towards sustainability could work in Galicia. Table 16 depicts the summary results of the short term agenda discussions during the Second Backcasting workshop.

Regarding recommendations for the different actor categories, our attendees made several addressed to governments, civil society, NGOs and society at large. First, participants think **governments** should ensure greater permeability between citizens and public institutions by reducing bureaucracy and administrative barriers; developing a model of open science; fostering the idea of common responsibilities and awareness among the population; adopting philosophy of " letting people do" and a comprehensive and integrated perspective of the territory when designing and applying policies. Governments and rulers are recommended to prepare themselves to adjust to the new model, training. Measures oriented towards resizing the production system and fostering small businesses are sought.

Second, unpaid voluntary activities should have a boom among **civil society**, as a translation of higher degrees of co-responsibility and of the transformation of the concept of common. A recommendation is made to put pressure on making farmed animals to be fed with grass. Food sovereignty should be among the civil society's priorities. Networking and sharing knowledge with NGO'S should become more common. Finally, making buildings become more sustainable is also a recommendation for civil society action.

Third**, research and knowledge organisations** are requested also to be involved in the networking and sharing knowledge activities and to design measures to transform dwellings and make them more sustainable. Last,developing a model of open science is highlighted as one of the main recommendations for these actors.

Fourth, **NGO's** are encouraged to networking and sharing knowledge with civil society and RDI organisations, easing transition. Fifth, it is recommended the **business sector** to resise, fostering small businesses. Among the measures mentioned to do it, adopting a model of socially and environmentally responsible businesses, making superstores to disappear and demanding respect to landscape and ecology. Finally, the **whole society** is encouraged to build food, energy and manufacture production communities. Besides, it is suggested to take action and increase awareness on North-South interdependence, eradicating such categories as the refugee one. As a manifestation of the collective take of the new paradigm the whole society should foster a model for agriculture that helps soil to regenerate and to promote social integration.

9.4.3 Vision 3: Socially Embedded Growth. Building community life in Galician rural areas as a driver for sustainability and happiness

Core and main assumptions

The economic and social models are oriented toward the generation of a common good, defined within each community. There are local economies and networking between them, not global or large-scale ones. The market and transactions between local economies exist but the use of local resources, the distribution and provision of services work mainly at local level, which leads to the reduction of the environmental footprint and perceived needs, all oriented towards enhancing the well-being among the population However, there are global networks for knowledge exchange organised. The role of the State is very small, questioned, and its reformulation is at the heart of the public debate.

There was a significant **decrease in the levels of consumption and production of material resources**. Assets are now shared and existing services and business are mostly cooperatives. Most of consumption is collaborative and the population has sufficient skills and knowledge as to ensure the degree of self-sufficiency at the local level is high.

People and their environment are understood as a comprehensive system that should be able to meet the needs of the community, at the economic, cultural and social level. To avoid waste generation communities do not produce beyond their needs.

Worsening effects from climate change leads Galicia to start receiving climate immigrants. In 2040 Spain is clearly affected by climate change and environmental problems

associated with it, such as water scarcity, desertification, or an increase in temperature, which turns southern and eastern regions of the State in less liveable areas.

Most of people live in rural areas. There, innovative projects are developed based on strengthening local resources, the production of organic food and sustainable goods and the creation of short marketing circuits. A diversification of the productive activity took place.

The **primary sector recovered importance and the whole economic system is oriented towards food sovereignty**. Local and sustainable production leads to a reduction in the ecological footprint. The activities within the primary sector are diversified. Fishing is mostly artisanal, and favours the conservation of resources and protection of estuaries and seas.

Efforts are made toward a **"culturally free Galicia**". This free knowledge model relies on networks to share wisdom and resources and promotes the diversity among local cultures, the development of projects and community life.

In 2040 **collective responsibility** is prioritised versus individual rights and group interests. There is a greater awareness on the impact of personal decisions. There are narrow interrelations between producers and consumers. A policy of rural defence and dignity, argues people in rural areas take care of a collective good, the environment, without being acknowledged or compensated.

Society is inclusive; everybody is welcome and cared, including the disadvantaged and the elderly.

Lifestyle activities

Lifestyles are healthier within the **socially embedded growth vision**. The most of resources used by communities are local, produced within the near environment. Food is strictly organic and seasonal and most of manufactured goods and services are shared, reducing the levels of waste generated. Less fossil energies are consumed and dwellings are eco-efficient in this vision. As a result, people are happier.

There are new work-culture relationships. The nature of work changed and people's quality of life depend less on their wages from paid work, but more on their community. Coverage of basic needs as well as living conditions is granted by communities. Work is part also of a way of understanding life and not just a means for need fulfilment but a source of satisfaction, empowerment, learning, culture, exchange and participation in the community. The difference between work and leisure is minimised and such concept as free time does not exist. More time is invested for public participation, decision making and developing community project.

Galician society has a low ecological footprint and effects of the peak oil are felt. Access to fossil energy resources is very expensive. This favours local economies and the emergence less-energy intensive sectors. Most of the energy consumption comes from renewable sources. On the other hand, economies incorporate the environmental costs of production and a social redistribution of environmental costs takes place. Most of the goods consumed are organic, local and fair. As a result, waste generation is reduced.

There is a joint planning and rationalisation of demand and supply. Reduction of the surpluses is sought. Consumers are organised in networks at regional level, used for the agreement of prices and production levels. Time margins from when food is harvested until it is consumed are reduced to a minimum, betting on the consumption of fresh produce. There are new and participative ways of commercialisation and labelling. When a product has a harmful ingredient, producers are forced to indicate it.

A **drastic decrease in the consumption levels of manufactured goods** took place due to several causes: goods tenure is not necessary; the increased collaborative consumption and sharing of resources; the life extension of manufactured goods and that more recycling and re-use of products that takes place helped by RDI efforts.

A **technological development process** is taking place linked to the spread of recycling, reuse and repair activities. There are very common spaces such as Bricolabs for the collective construction of new open technologies such as free software and hardware.

Organisation and division of roles

Environment and people relate differently as they did in 2015. The environment is understood as a living space, of cultural and human interaction.

Society is organised according to a **new model of governance** based on shared responsibility and participation in decision-making. Citizens are actively involved in the management of the community. They are co responsible, and make decisions with great levels of autonomy.

There was a renewal of the institutions and new ex-titutions emerged. New institutions emerged and others, whose functions were obsolete, were removed. Among the new institutions, some emerged from either local or regional scope among those innovative initiatives of recognised reputation and social impact, which assumed management responsibilities in public where they have previous experience.

Backcasting results

There was a movement of the local and immigrant population to the countryside. **Rural areas in 2040 are much different from 2015**. Resettlement brought a new vision of communities, people and local development. Social Innovation processes happened, stemming from a greater range of expertise and collective imagination. **Society is now used to cooperate with others and work collectively**. The political sovereignty "returned to the people" and now municipalities, institutions and extitutions develop innovative processes of empowerment. There was a change in thinking, surpassing the "individualist" and "no real demands " society of 2015. Society is now used to work in community, thinking of the public interest.

The economic system experienced a drastic shift through the dissemination of cooperatives, collectivisation of goods in the search of happiness and self-realisation of people, linked to the experience of community life and generation of ties process. The concept of work has changed, and now more people work for their communities and have more time available for use as they please. **The "Inditex" model of uniformity and globalised distribution** of manufactured goods has been overcome. Production is mainly local. New technologies for sustainability which help to increase quality of life and contribute to environmental conservation were developed.

Public institutions changed and a process of de-centralisation of political competences has taken place. The Provincial Councils were eliminated and the regional government redesigned as well as state competences. There is a higher degree of self-governance. The management of certain services is already decentralised, leading local institutions to assume greater responsibilities. Only when the local management of a certain service is not possible, this is transferred to higher bodies. The institutions are transparent and information is accessible. Public communications and information are understandable now. Customary laws from communities are applied.

Change was gradual and favoured by institutions. The change from 2015 is seen as an "ethical change" model of consumption, education, and ways of living, from radical individualism to cooperation. Much of society assumed that governance is not always positive if you do not count with citizenship or if done, this replaces an action they have been carrying efficiently communities. As a result, the way of life for large sections of the population has changed drastically.

The **education system was transformed**, mainly by eliminating the idea of competition. Formal education institutions are maintained but transitioning towards a model participated by all social actors. There are many more lifelong learning programmes.

The **consumption and energy production was sharply reduced** because of the fossil fuel crisis and the rising costs of transportation and distribution due to the lifestyle changes and new economy models.

Pathway

The transition towards a sustainable Galicia occurs in this vision due to a **radical change in everyday lifestyles**, with the majority of the population living in rural areas and self-managing their needs within their local communities.

In the short term, from 2016 to 2020, citizen initiatives go gradually penetrating the public institutions and their contributions to policy design make them the main players of changes in society (cultural, organisational and structural). Bridges are built with the government, the producers and Knowledge institutions for developing research in sustainable agriculture. The NGOS experience on biodiversity-friendly agriculture techniques is used. New collaboration networks for glo-cal development appear. The degree of self-organisation among the local communities increases. There is an effort made for working out clearly self-management rights to protect communities from external interventions. Short supply chains (together with producers) are implemented. Meanwhile, **governments** start gradually transforming the institutions and opening them to civil society. A new law on public access to official information has been passed. The information is more accessible and institutions are transparent. Activities contributing to the common good are exempted from paying taxes. For their part, **Research and Knowledge Institutions** become involved in joint research projects on sustainable agriculture and boost value of knowledge of older people. The **Business and production domain** turns the focus to promoting organic agriculture and farming; ensuring supply and production are balanced (i.e. emergence of prod-users) and the implementation of short supply chains. Some of them are involved in the joint research projects on sustainable agriculture.

In the **midterm, from 2020 to 2030**, **civil society** together with government promotes the vertical integration of decision making levels (local, regional, communities). Several policies are implemented in support of small-scale communities. They enjoy a higher level of autonomy and at the same time are connected with other communities through networks. In this line, the **governments** transfer competences to local administrations and see some of their powers limited because the self-governance rights of communities. In the field of **RDI**, patents of knowledge are overridden and a new research-action-participation scheme is adopted. Action is taken to ensure decision making processes meet real needs from society. Regarding the **businesses**, these establish good practices in rural areas; optimizing resources due to collaborative production and co-operativising some activities according to local singularities. As a result, more sustainable production and distribution networks are consolidated.

In the long run, between 2030 and 2040, citizens focus on spreading responsible use of resources and devise solutions for waste reduction. **Governments** do not take any extra action and the **RDI sector** focus on applying technology advances to good management and use of energy resources. Finally, the **production sector** brings green services and products closer to citizens.

Short term agenda and short term implementation proposals

Among the most urgent measures required, which Table 20 depicts, participants place those relating to promoting joint work among public institutions, citizens, initiatives and 3rd sector. To allow this future vision to become feasible in 2040 Galicia, citizen initiatives and citizen self-organisation should be supported. Besides both the economic and social system should be reoriented towards ensuring public services work in benefit of the common good and not private interests. One measure that could help this process to happen would be making public information accessible. Moreover, a reputation system should be set up to acknowledge those making efforts towards the common good. The functioning of the economy should drastically change and some sectors should be cooperativised. Finally, the short term agenda for the vision includes measures for building knowledge exchange and collaboration networks towards a more sustainable agriculture.

All the recommendations formulated during the Second Backcasting Workshop related to the socially embedded growth vision were directed to the whole society. The need for the spread of collaborative work is highlighted and linked to fostering active listening among organisations and public institutions. Integrating community knowledge would result from the dynamisation of bottom up discussions and decision making processes. Participants also emphasised the need for a socially embedded research model, involving technologies and knowledge are open and a model of research-action-participation is implemented. Making the production system a more humane one was also discussed. Thinking of the production system in a comprehensive way, considering positive and negative externalities would also help future sustainability. Also, increasing the cooperation between businesses, ensuring freedom and autonomy at the same time, is mentioned. Last, acknowledging rural work and contributions from small producers to sustainability deserve special recognition.

9.5 Conclusions & Methodological Reflections

Throughout this report we have presented the three different pathways and visions, elaborated within the First and Second Backcasting Workshop conducted in A Coruña, reflecting the differences by domains and commonalities between them. Some reflections on the relevance of the visions, contents and implications are shown here.

First of all, **participants stated to feel identified by all three visions**. They found the 3 future visions analysed to be good scenarios and they would agree to start doing things to make them happen. Should any of them become reality, our participants affirmed would be very good news for sustainability and the development of Galicia. Despite this**, future prospects participants held about future sustainability in Galicia were not optimistic**.

Most of the elements included in the elaborated visions were seen as good and ambitious, especially those forming the third one. While in the eco-efficiency vision the most ambitious element highlighted was the **key role attributed to people and the recovery of self-esteem**; in the second and third visions the ones pointed out were the **relevance of the immaterial goods** and the **change in the conceptualisation of work, institutions and culture** respectively.

Unlike in the other two visions, focused on defining the specific measures that would lead to the achievement of the final picture; **the socially-embedded pathway was focused on the how**. In this sense, the main elements that emerged were organisation and ethical pre-conditions that would allow a specific definition of sustainability to happen.

Overall, the main missing element mentioned was the fact that the **three visions needed to be further elaborated and include more elements taken from the real Galician context and history**. Also, participants suggested the need to **problematise the visions**, including possible oppositions and difficulties to them. Are any resistances expected to emerge in the process of upscaling sustainable lifestyles? How would these affect transitions towards sustainability?

The three scenarios and pathways towards them placed great importance to the idea of **building happier societies and ensuring well-being** to the population as key elements of future sustainability. The visions showed a desire for social justice and equality. The concept of common good emerged during the Second Workshop and reinforcing it was referred in the third and second vision as to be the societal aspiration, distancing these visions from more classical perspectives based on the concept of public good.

The implicit conceptualisation of sustainability within all the three visions was maximalist and it combined social, cultural, economic, environmental and political elements. Among the sources of well-being, community living, contact with nature, slowing down the pace of life and having greater autonomy and decision-making capacities at both the individual and societal level were highlighted. Also patent in the three visions was the need to reconsider what we understand today as sources of self-fulfilment. Social status would be untied from consumption issues within these sustainable futures defined.

What drives what? Even though the main strategies toward sustainability focused on consumption issues and helped to frame the discussions and distinguish the three visions during

the workshops, it is not obvious from the visions that participants by themselves would have come to the conclusion that changes in consumption trends are the main drivers for future sustainability in Galicia. Cultural, educational, organisational and political changes were also considered critical for future sustainability, making difficult to establish a hierarchy or cause-consequence relationships among them. The implications of forcing research results in GLAMURS, as the visions to adjust to consumption-based strategies, have been previously discussed and must be always acknowledged.

All the three visions involve a decrease in the levels of aggregate consumption and production and the consequent reduction of the ecological footprint. **Making lives materially simpler but immaterially richer** was a shared element in the visions. Higher degrees of self-sufficiency both at the individual and societal level are considered a measure of closeness to the highest level of sustainability. Thus, all our guests agreed with the idea that the **3rd vision would be the one with the smallest associated ecological footprint.**

The trust and local economy model. Changes in consumption patterns and supply chains were also shared. On demand production and balancing supply and demand were common features among the three visions and a component of the organisation of short supply chains. Cooperatives and SME's are identified as the good companies, allowing more accountability and control by consumers.

In general the three pathways presented were complex and included key roles for all the 4 types of stakeholders considered. The three shared the idea that future sustainability necessarily involves **decriminalising collaborative culture** and **strengthening civil society**, supporting the organisation of it and cutting red tape specially when it hampers the development of a more sustainable and participatory society. Civil society is attributed a more dynamic nature than public institutions. **Active citizenship is needed and sought in the short term.** The most of actions included in the pathways happen in the short term, from 2016 to 2020 and civil society has a major role in leading changes towards sustainability.

Both the visions and the pathways place emphasis on **structural elements required for sustainable lifestyles** to become real. As happened in the 1st Backcasting Workshop, **little information was collected during the 2nd in regard with lifestyle activities** and when speaking about changes in the envisioned futures, we perceived participants had trouble when trying to explain them in terms of their everyday practices and always did it in structural terms.

There is still work to be done on what is the **tipping point that triggers the start of the transition processes towards each of the visions**. While in the second and third vision some structural factors related to climate change and the peak oil were pointed as the game changers, there is far from clear how it is that sustainability and sustainable lifestyles become mainstream

and socially desirable. Albeit to differing degrees the three visions covered several measures to increase social awareness about the impact of our lifestyles upon third parties as nature, biodiversity or the global South. In this regard, educational measures were pointed out as the main ones.

One of the implicit core aims of all the pathways towards sustainability **is building resilience across society reducing the severity and likelihood of any crisis to happen**. The threat of climate change is the main mentioned within the visions and among the solutions included in the visions is the organisation of civil society with different degrees of linkages with the institutions. The spread of learning communities, knowledge exchange practices and different sort of cooperation mentioned in the three visions also head towards reinforcing anticipatory learning and enhancing adaptive capacity across society.

Last, **this systematic conceptualisation of transitions unfolds the idea that changes toward sustainability are considered multicausal processes**. Also, several levels of intervention were referred during the workshops, indicating transitions toward sustainability in Galicia are framed according to a multilevel perspective. Applying Transition Studies concepts to our elaborated visions are useful to understand how we can facilitate sustainability transitions, what our priority areas are where we should seek to make an impression. The three main levels considered in transition dynamics (Grin et al, 2010, Van Raak, 2015) are the landscape (macro level, beyond the influence of niches and regimes), the regime (societal structure) and the niches (where innovations take place). Our visions are clearly focussed on the one hand on the regimes, on the structural dimensions of our society. On the other hand the visions highlight the importance of niches, which are framed as spaces that should gain autonomy and be freed of interferences from public institutions mainly.

9.5.1 Methodological reflections

Overall the 3working groups formed developed complex pathways that contributed to make the three future visions more complete. A wide array of proposals for diffusing, mainstream and integrating sustainable practices into lifestyles emerged during the event. We printed the sets of questions and charts and distributed them among the groups, which also helped participants.

As happened in the 1st Workshop too, pathways towards sustainability were not mainly defined in terms of lifestyles, but in structural terms. Even though the methodology and structure of the workshop was found very useful and worked for the collective definition of pathways towards sustainable lifestyles, more time would be needed in order to be able to collect further information and be more specific about the production stages, the different ecological footprints associated to each vision or the 6 lifestyle domains considered within GLAMURS. Although we extended the duration of the sessions with respect from what the Methodological Guidelines scheduled, many times the facilitator team noticed that the time given to subgroups to discuss

each of the tasks, was scarce. However, with the resources given, it would have not been possible to ask participants to spend more time in a extended workshop.

Attendees were divided into three groups of 8 people during Friday and groups of 6-7 people on Saturday. The number of people per group turned out to be too high, especially on Friday, when the visions were evaluated and work begun. In future occasions, it would be advisable to form groups with a smaller number of participants.

As a result of time pressure and the amount of information we wanted to obtain from participants, the evaluation by them especially in terms of perceived utility from the workshop was not completely satisfactory. Besides, participants did not see the workshop as being useful for defining a short term agenda toward sustainability in Galicia. In contrast to this, it would be interesting to launch a long term process to build implementation agendas with these relevant stakeholders.

Also important, during the workshop, facilitators also noticed that some people attending the event had not read the input document so we decided to leave them some time to read it before starting on Saturday morning. Those who had read did not remember the concrete elements inside each of the visions and when assessing their assigned vision on Friday they resorted to comparison. This could have been avoided and made easier for participants by going for a plenary evaluation of the three visions in the introductory session on Friday, instead of making each of the groups discuss only 1 vision.

9.6 Sources and references

Martínez H., Dumitru, A., García Mira, R. (2016) WP5, Task 5.3 – Summary report of Second Backcasting Workshop (Pathway Development) in Galician Case Study for GLAMURS, internal report, University of A Coruña, Spain.

PART 3: CROSS-CASE COMPARISON OF PATHWAY WORKSHOP RESULTS

10. Cross-case comparison of pathway workshop results

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In this chapter both the process results and the actual contents of the visions and pathways developed during the second backcasting workshops in the different GLAMURS regions is subject to a comparative analysis. For the process part the workshops will be compared on (i) conducted (preparatory) activities, (ii) participation aspects (iii) observed learning and (iv) applied methods at the workshop and whether and how that can be related to the vision pathway results. The content of the visions will be compared on (1) how they relate to the proposed distinction between sufficiency and green growth and on (2) community versus individual orientation, and (3) government/public orientation versus market orientation.

The data underlying this analysis are based on the summary reports that are in a concise way included in chapters 3 to 9 of this report.

10.1 Pathway workshops process results and methods

10.1.1 Preparatory activities

Two main preparatory activities can be discerned as indicated in Table 10.1, which are (i) stakeholder mobilisation and (2) other activities. These activities cover those focused on preparing the contents of the vision workshop. Practicalities like arranging the materials and the location are not taken into account in this comparative analysis.

For the first category of mobilising and inviting stakeholders, the starting point was either the participants of the first workshop, or the list of invitations for the first workshop. This was done by researchers from the case study teams apart from Austria where it was done by one of the stakeholders. For this second round of workshops, some teams learned from the successful approach of the Spanish team to get a high number of participants. The snowball effect of asking declining participants to forward the invitation to colleagues was also applied in the Netherlands and the Italian, German and Romanian teams reached out to new networks and contacts to get the right balance of different stakeholder groups (see also 10.1.2). In some regions, fewer invitations were sent out due to returning participants. In other regions, more invitations were needed to mobilise additional stakeholders.

Among the other preparatory activities, a major task was to update the invitees about the previous workshop session via a summary of the visions developed and/or the aims of the project,

the backcasting methodology and the green growth versus sufficiency principles used in the workshops.

Country	Preparatory activities	
	Mobilising & inviting stakeholders	***Other activities***
Austria	Outsourced to the manager of the LEADER region Donau Böhmerwald. He knows the network and could get participants interested easily.	-
Germany	The participants of the 1st workshop were invited. Additional invitations were send to 'new stakeholders' with an emphasis on local politicians and business people.	Participants received a summary of the visions developed in the 1st workshop and a two-pager about commonly proposed strategies for a sustainable future, like green growth or post-growth systems.
Italy	The participants of the 1st workshop were contacted & involved in setting the date. Participants were invited via telephone and email. Some did not confirm their participation so an additional 4 contacts were invited.	A summary of the vision workshop including a description of the 2 visions, was sent to the participants for a reflection on the results. Additionally a test workshop was performed, where the final schedule for the day was developed and tl all the roles were divided.
The Netherlands	63 invitations were send out by mail to participants of the 1st workshop including several (new) contacts of the case study team.	Snowball approach was used whenever someone declined the invitation to get another representative from the organisation of the invitee. An input document was sent to people that had registered
Romania	Potential participants were contacted via email and phone including new contacts at a non-governmental entity, the local town hall and the local university.	-
Scotland	66 Email invitations were sent to all participants of a previous visioning process (called MUSIC) and to members of the North East Scotland Climate Change Partnership.	A graphic artist was commissioned to create a visual record of the workshop discussions. Participants were provided with a handout detailing the purposes of the workshop, the 3 workshop themes, as well as information on the time use categories used in the workshop.
Spain	45 email invitations were sent out by mail to all potential participants of the 1st workshop and to additional initiatives with regard to agriculture and nature/biodiversity protection.	Next to the general invitations, a personalised invitation sent together with information about the aims of the project, backcasting methodology, and the reason why each person was invited. Moreover, the snowball effect was applied. One week before the workshop, a reminder e-mail was sent. Shared

		transport to the venue was also organised, bringing together attendees sharing similar trip itineraries.

Table10.1: Overview of preparatory activities per case study

10.1.2 Process and participation

The following table (Table 10.2) shows some details on the process and stakeholder participation in the second vision workshop round in all seven case study regions:

	Austria	Germany	Italy	NL	Romania	Scotland	Spain
Nr. of participants	14	14	12	15	8	12	24
Business	5/14	6/14	0/12	0/15	3/8	0/12	0/24
Civil society	3/14	5/12	7/12	9/15	0/8	1/12	10/24
Government	5/14	2/12	0/12	2/15	0/8	7/12	7/24
Knowledge	1/14	1/12	5/12	4/15	6/8	4/12	7/24
Other	0/14	0/12	0/12	0/15	0/8	0/12	0/24
Gender: Male	10/14	8/12	8/12	11/15	2/8	4/12	13/24
Gender: Female	4/14	6/12	4/12	4/15	6/8	8/12	11/24
Recurring participants	13/14	9/12	9/12	9/15	0/8	0/0	12/2·
Date WS2	26-02-'16		03-03-'16	01-03-'16	25-02-'16	18-03-'16	12&13-2-'16
Location WS2	Lembach	Halle	Rome	Delft	Timisoara	Aberdeen	A Coruña
Location type WS2	Gasthouse (inn)	Social/educational foundation	Roma Tre University	Art Centre	Bakery	City Council Townhouse	Country house
Duration WS2	7 hours	7 hours	5 hours	8 hours	5 hours	5,5 hours	8 hours
Nr. of facilitators	3	6	3	4	2	2	4

Table 10.2: Overview of workshop preparation

Comparing stakeholder participation, Table 10.2 shows that in all vision workshops around 10-15 stakeholders participated, except for the Spanish workshop, where 24 attendees were present. Compared to the first workshop round with around 20 participants per region on average (see also D4.3), in most of the regions fewer participants attended in the second pathway workshop. Only in Spain the case study team managed to get a considerably higher number of participants, partly due to participants who could not make it for the first workshop but attended the second workshop. When comparing the different stakeholder categories it can be noted that only in Austria and Germany representative from business were involved. The Scottish workshop had a strong focus on government that can be explained by the governmental nature of the

Scottish initiative under study. In Italy, Spain and the Netherlands civil society was the largest group present, which again relates to the more bottom-up nature of the initiatives in these countries. In Italy, Romania and Scotland, a relatively large share of the participants has a research and knowledge background. A comparison for gender division shows that in Austria, Italy and the Netherlands a vast majority of the participants were males. In Scotland and Romania the opposite was achieved with mostly women participating. In Spain and Germany the most equal gender division was realised. When looking at participants from the first workshop series that returned to the second workshop, it can be noted that the Austrian team managed to get the highest share of recurring participants (13 out of 14). Overall, around half to two thirds of the participants of this second workshop also attended the first workshop.

The workshops were all organised between mid-February 2016 and mid-March 2016. Almost all locations were close to the research institutes involved in the GLAMURS project, except for the Austrian initiative. The type of locations can all be described as 'neutral' for the participants and having a leisure function (e.g. bakery, country house). Only in Italy and in Spain the location changed for the second workshop. The workshops differed a bit in their duration, also depending on the types of social activities. In Spain for instance, the workshop was spread of over two days and participants stayed overnight. All workshops made use of facilitators that mainly consisted of the researchers involved in the GLAMURS project.

10.1.3 Applied methods

The methods applied during the workshop in the different regions are presented in Table 10.3, divided into four main parts of the workshop: (1) introduction, (2) discussion on the first workshop vision content (3) the discussion and development of the actual pathways and (4) the final discussion. It needs to be mentioned that in the introduction and final discussion not really new methods were applied.

Country	Applied workshop methods			
	Introduction	**Vision discussion**	**Backcasting/ Pathway discussion**	**Final discussion**
AT	Reflection based on feelings about the first workshop and main impressions.	1. Presentation of the first workshop vision as a 'commemorative speech to the region at the festivities in 2040'. 2. Round of reflection. 3. Agreement on the next steps. 4. Consent decision on the vision.	1. Individual answers to open questions. 2. Overview of answers and prioritisation. 3. Pathway development in four groups incl. assigning responsibilities for steps via coloured cards. 4. Presenting pathways.	Final reflection on how to go on at the group and individual level.
GE	1. Introduction of	1. Presentation of	1. Prioritising goals for	Collecting possible

	participants. 2. Presenting aims and context of workshop.	visions from the first workshop. 2. Discussion in two groups De Bono's six hats.	the pathway discussion 2. Introduction of backcasting method. 3. Developing a time-line of actions linked to relevant actors in two groups. 4. Plenary presentation of timelines.	next steps to put the ideas into practice linked to responsible persons for starting the action. Listing upcoming events to spread information among the participants and their networks.
IT	Introduction of aims & context of workshop.	1. Presentation of visions from the first workshop. 2. Plenary discussion on first visions using De Bono's six hats.	1. Discussing back-casting questions in two groups. 2. Discussing pathway and agenda questions in two groups. 3. Presenting results.	Plenary discussion.
NL	Introduction of aims & context and presentation of vision results from first workshop.	1. Constructive evaluation of visions in three sub-groups based on De Bono's thinking hats. 2. Plenary feedback and discussion, setting priorities for next step.	1. Vision elaboration with guiding questions in 3 sub-groups 2. Backcasting ques-tions in 3 subgroups 3. Pathway/timeline discussion using s-curve 4. Plenary presentation and feedback.	Closing discussion, follow-up & check-out
RO	1. Presenting aims and context of workshop. 2. Introduction of participants. 3. Expressing expectations of the workshop.	1. Review of vision development workshop 2. Discussion/expansion of visions in two groups using De Bono's six hats 3. Plenary presentation.	1. Discussion on back-casting questions in two groups. 2. Designing transition pathways and timelines in two groups. 3. Presentations.	Final discussion.
SC	1. Presenting aims and context of workshop.	1. Introduction of existing visions 2. Plenary discussion on the first vision. 2. Plenary extension of the second vision with prioritizing via dots.	1. Introduction on backcasting method. 2. Plenary discussion/ brainstorm on pathways.	Final discussion.
SP	1. Introduction of importance of workshop. 2. Introduction of participants via 1 adjective for a sustainable region. 3. Presenting aims and context and outcomes of the first workshop.	Assessment and further elaboration of visions in three pre-defined groups following De Bono's six hats tool.	1. Identification of assumptions and further elaboration of visions in three groups. 2. Plenary discussion. 3. Development of pathways, agendas and implementation proposals in three groups 4. Subgroups	Final discussion and evaluation.

			presentations.	

Table 10.3: Overview of applied workshop methods

When comparing the methods and inputs used in the different regions, many similarities can be found. This is not surprising as the guidelines described in Chapter 2 provided a range of tools and methods. These tools, methods and guiding questions were not only meant to evaluate visions in a creative and constructive way, but also to conduct a basic backcasting analysis, and to develop pathways and follow-up proposals. This included guiding questions, structuring tables and the transition S-curve figure. However, it was also possible to apply other tools and methods using local expertise, as long as workshop goals would be met. The discussion below is organised along the structure of the program, following the four parts of the program as shown in Table 10.3.

In the introduction part of the workshop, all workshops included a welcome and a presentation of the aim. Most workshops also reserved some time for the participants to introduce themselves, while in some workshops specific methods were used to for this check-in. For instance, in Austria it was explicitly asked to the participants to briefly share their impressions and main feelings about the first workshop. In Spain at the introduction it was asked to mention adjectives that would describe the participants' their idea how a sustainable Galicia would be and which were compiled in a word cloud figure.

The second part of the workshops consisted of **constructive evaluation of the visions** originating from the first workshop. In most countries the proposed variety of De Bono's six coloured hats method was used in which different kinds of questions were asked to evaluate from different perspectives. In Scotland and Austria slightly different methods were used to get similar results. In Austria methods of sociocracy were applied to identify unanswered questions and expressions of non-approval in the discussion, followed by reaching consent and an endorsed vision. In Scotland existing visions developed in the MUSIC project (see also Chapter 8) were elaborated for lifestyles, time-use and work-life balance in the future. An interesting tool was used using categories of time-use to which participants could add dots where most changes would take place. A final observation, not relating so clearly to specific methods, is that the critical discussion and constructive evaluation of the visions contributes to getting familiar to the visions (again). In most countries the vision evaluation part was concluded with priorities and suggestions for further vision elaboration and the next part of the workshop.

The third part of the workshops consisted of further vision elaboration and participatory backcasting analysis of the visions, mostly in subgroups working on a specific vision. Further vision development was in general not linked to specific methods, but followed from ideas discussed by the subgroup members working on a vision and the priorities and suggestions identified in the vision evaluation part. With regard to the backcasting – the actual backwards looking part - in most countries the participatory backcasting questions asking for what changes,

what actions and who is needed have been used, as suggested by the guidelines (see Chapter 2). This has been referred to as the WHAT-HOW-WHO backcasting tool (Quist 2013, 2016). In Austria a slightly different approach was applied to get a crossover from the vision to the pathways. Here a set of questions was used that included typical backcasting questions, but these were answered individually followed by ranking them by sticking dots. In Scotland the backcasting analysis connected setting timeline points in such a way that the backcasting analysis and making the pathways became integrated. It can also be noted that in the Scottish workshop all sessions were plenary sessions, whereas in all other workshops subgroups were formed for the backcasting and pathway part. The Austrian team was the only one that also explicitly applied individual tasks in their facilitation methods.

The fourth part of the workshops consisted of developing pathways, presenting, and discussing these. This was facilitated by guiding questions that make use of the results from the backcasting analysis and ask to put relevant actions in timelines towards the envisaged final state, writing these down in tables or on sheets showing an S-curve. In Austria after consent on the vision 8 topics were defined after which 4 groups each elaborated pathways for two topics. Methods for presenting and discussion were rather regular, so are not separately discussed here.

10.1.4 Observed learning

In the reflections on the results and methods applied in the second workshop, some initial learning can be observed. These learning aspects are summarised for the different European regions for both the participants and the organisers in Table 10.4 and include instances of higher order learning.

Country	Learning
Austria	• **Participants**: Participants learned how complex the situation gets, when they see themselves confronted with putting the responsibility for certain steps to specific actors. They realised that one is tempted to put responsibility mainly to politics – wanting politicians to change things by law and tax reforms. • **Organisers**: Organisers learned that the provided structure helped the participants to grasp the tasks. They managed to find a balance of providing structure and keeping flexibility. The time used for revising the developed vision was key for the process since participants had the impression that they continue working on shared vision – goals. The round of reflection on 'what's next' allowed to launch initiatives right away.
Germany	• **Participants**: Some participants seemed to find it difficult to imagine a future in which some current obstacles were removed. Some men clearly dominated the discussions, while women were more reluctant to speak up and formulate bold ideas. • **Organisers**: A different workshop design might have helped to deal with the breadth of the visions and ideological differences. A clear identification of the main obstacles for realising the vision would have helped to think outside the box and find more visionary steps in the medium to long term range. Smaller groups (5-6 people) might have been better suited for a more structured and balanced discussion.
Italy	• **Participants:** Participants learned that elements of tradition (reuse the lands)

	and elements of innovation (new technologies) are a good match for a sustainable green vision. Participants however found it quite difficult to think back from 2040 to 2020. It required a considerable cognitive effort. • **Organisers**: Organisers noted that more time for the 2nd part of the day was needed.
The Netherlands	• **Participants**: Participants learned about the inevitable uncertainties that the transition pathways are enveloped in. To some extent, the explication of the pathways is at odds with these uncertainties. • **Organisers**: The evaluation of the visions helped the participants to develop a better understanding of the visions, and it gave them inspiration for further elaboration. Instead of doing the evaluation in sub-groups, it would have been possible to do this evaluation as a plenary discussion, which would have allowed for more discussion, but would also have required more time in the program.
Romania	• **Participants**: Participants learned that the realisation of the visions seems feasible. • **Organisers**: Organisers experienced some drawbacks with the number of participants and time available, forcing them to reduce the time reserved for certain sections of the agenda and some of the subgroup and plenary discussion.
Scotland	• **Participants**: Participants found it hard to imagine a future defined in positive terms. • **Organisers**: Organisers managed to get a pathway workshop done for already existing visions that were developed in a previous project.
Spain	• **Participants**: Participants learned from sharing experiences, meeting interesting people, horizontal generation of ideas and they became aware of the collective intelligence. Participants also highlighted that the workshop had reinforced their optimism regarding there is future for sustainability in the region. • **Organisers**: The facilitators realised that a plenary discussion of the 3 visions developed in the 1st workshops would have yielded better results than making each of the groups discuss only one vision. They moreover learned that a number of 6-8 people per group was too high.

Table 10.4: Overview of observed learning

In multiple regions the participants stated they found it rather difficult to think back from the envisioned future vision without being pessimistic of some current barriers to sustainable lifestyles. In Austria the participants explicitly also stated the difficulty of assigning responsibilities to the pathway steps identified. This is one of the most concrete steps in the pathway development and in most of the regions the workshops did not reach this concrete last step in such detail. Here, comments were made about the uncertainties in the future visions sketched.

Most of the learning aspects that were named by the organisers of the workshops relate to methodological issues. Some general issues here are a lack of time and the number of participants: either too little participants were named as a learning point or groups with too much participants were mentioned in for instance Germany and Spain. A reflection on the process shows that subgroups of around 5 people are best for pathway workshops. The evaluation session of the previously developed visions was named as a helpful element in the workshop design by the Austrian and Dutch team. A final methodological reflection of the organisers was made regarding the right balance between discussions in subgroups and plenary discussions. The vision evaluation

session could have been a plenary discussion for instance according to the Dutch and Spanish teams.

10.1.5 Post workshop results

Based on the initial pathway results it was noted that - like usual in stakeholder workshops - in most of the visions still some issues were present. Additional work by the case study teams was needed to elaborate and process the workshop results in order to make a more coherent and comprehensive story out of the workshop results. Different types of missing pieces of information have been reported. However, it needs to be mentioned that further processing of workshop results is needed most of the time, due to the limited time at a workshop and the broad scope of the workshops.

In Germany it was for instance noted that little was said about the role of different generations in shaping the visions and actions. Also, religious actors were not mentioned which was surprising since spiritually related topics came up in the discussions during the workshop.

In the Netherlands two visions are explicitly linked to empowerment of citizens, which entails a smaller government that is focused on facilitation. 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 through empowerment of organized citizens. This requires an increased responsibility of citizens and in this way an optimistic view upon human nature is assumed in which everyone takes his/her responsibility. If this is feasible and how such a society could function is still an issue for further study.

In the Scottish workshop a gap was noted in dealing with a move to a more caring culture (for adults and children). The aging population and our current individualistic culture were seen as a particularly pernicious barrier to realising such a vision. Flexible working policies (the central focus of the Scottish workshop) will not in themselves do anything to change such a trend. If flexible working results in a lowering of regular social connection with co-workers (especially in the case of home working) happens, this may well work in the opposite direction. The Spanish team finally noted that there is still work to be done on what is the tipping point that triggers the start of the transition processes towards each of the visions. While some structural factors related to climate change and peak oil were referred to as game changers, it is far from clear how sustainable lifestyles become mainstream and socially desirable.

Country	Visions created	Key characteristics
Austria (AT)	1. Integrated vision	• Sharing • Balancing economy and ecology • Regional sufficiency
Germany (GER)	1. Sustainable mobility – traffic – energy sources	• Decentralisation; circular economy on a local level • Based on responsible citizens • Sufficiency, complemented by efficiency & consistency
	2. Increased participation and bottom-up networks	• Based on responsible citizens • High level of participation in local government • Local embedding/connection of economy to society
Italy (ITA)	1. Sufficiency vision	• Sufficiency: development without growth • Active communities system with more solidarity • Decentralised executive activities
	2. Green growth vision	• Develop individual capacities, understand individual needs • Think global and local • Technology and information sharing
The Netherlands (NL)	1. Sufficiency & local communities	• Collective willingness and sufficiency • Society is locally rooted, but globally connected • Respecting the carrying capacity of our planet
	2. Between sufficiency & green growth	• Autonomy at the individual level; cohesion at city level • Society is flexible, causing uncertainties • Advanced knowledge exchange and smart innovations
	3. Green growth through innovation & active citizens	• Technology, firms & motivated citizens enable green growth • Sharing and new business models • Waste will not exist anymore (circular economy model)
Romania (RO)	1. Sufficiency vision	• Focus on personal (non-materials sources of) wellbeing • Group cohesion and sense of community • Openness to other cultures and continual learning
	2. Green growth vision	• Green economy; enabled by technological innovations • People are willing to share goods and resources
Scotland (SC)	1. MUSIC vision (see chapter 8 for more information)	• Virtual and physical connectivity • Equality (trust, openness and inclusivity) • Active citizenship • Less travelling & increased participation in collective transport
Spain (SP)	1. Eco-efficiency: collaborative consumption & green growth for sustainable cities	• Greening of consumption and technologies • Urban vision • Welfare state with participative mechanisms
	2. Sufficiency: human scale territories	• Decrease of consumption, supply and demand levels • Rural and urban vision • Redistribution of wealth mechanisms • Welfare state with participative mechanisms
	3. Socially embedded growth: returning to community life	• Decrease of consumption, supply and demand levels • Rural vision • Collectivisation of goods and means of production • Small & self-sufficient community living

Table 10.5: Overview of vision results.

10.2 Pathway workshop content results

10.2.1 Vision results

The main characteristics of the visions developed in the 1st series of workshops and refined in the 2nd series of workshops are presented in Table 10.5. In most of the regions, the distinction between sufficiency and green growth is clearly possible. The German visions do not fully follow this dichotomy because the visions here focus on two different clusters of lifestyle domains that can be related to different level of sufficiency. Also in Scotland a different set-up was used, related to the fact that the Scottish workshop adds to a previous visioning process carried out in the region focussing on lifestyles, time-use and work-life balance. This offered the opportunity to build on existing work on transition management in the Scottish region, mobilising the same stakeholders. It also means that in the Scottish workshop a timeline of 2050 was used, whereas in all the other regions it considered pathways towards an envisioned society in 2040.

Results presented in this section are based on the regional chapters as presented in part two of this deliverable. For a comparison of the visions several dimensions have been defined. The visions are plotted on a scale between sufficiency and green growth. This distinction is firstly plotted against a community versus individual focus in Figure 10.1. Figure 10.2 plots the visions on the dimension market orientation versus government orientation, acknowledging that a market orientation still requires a strong regulatory framework but that it favours market mechanisms. Figure 10.3 uses the scale between urban and rural focus. For this scoring, excel files were used for scoring the visions on a seven point scale (see Appendix B).

When considering Figures 10.13 it becomes clear that nearly all visions have a community focus and only two visions a focus on individualisation. Two clusters of visions can be identified that combine a community orientation with a sufficiency focus and a green growth focus, respectively. A third cluster includes the two individualist visions although they differ considerably in their scoring on the sufficiency- green-growth dimension.

Figure 10.2 shows the diversity of the visions using the dimensions sufficiency and green growh versus governance with a government focus versus governance emphasizing market mechanisms Only in the Netherlands visions for sustainable lifestyles and a green economy have been developed that have been characterised by the case study teams as emphasising individualisation or using market mechanisms. Also this figure three clusters of visions can be identified, though the vast majority of the visions are government –led rather than market-led.

In contrast, Figure 10.3 showing urban-rural versus sufficiency-green growth shows more diversity and in this figure 4 clusters of visions can be distinguished based on the total of 14 developed visions. These four clusters will be used for a pathway comparison in section 10.2.2. The cluster will firstly be introduced below.

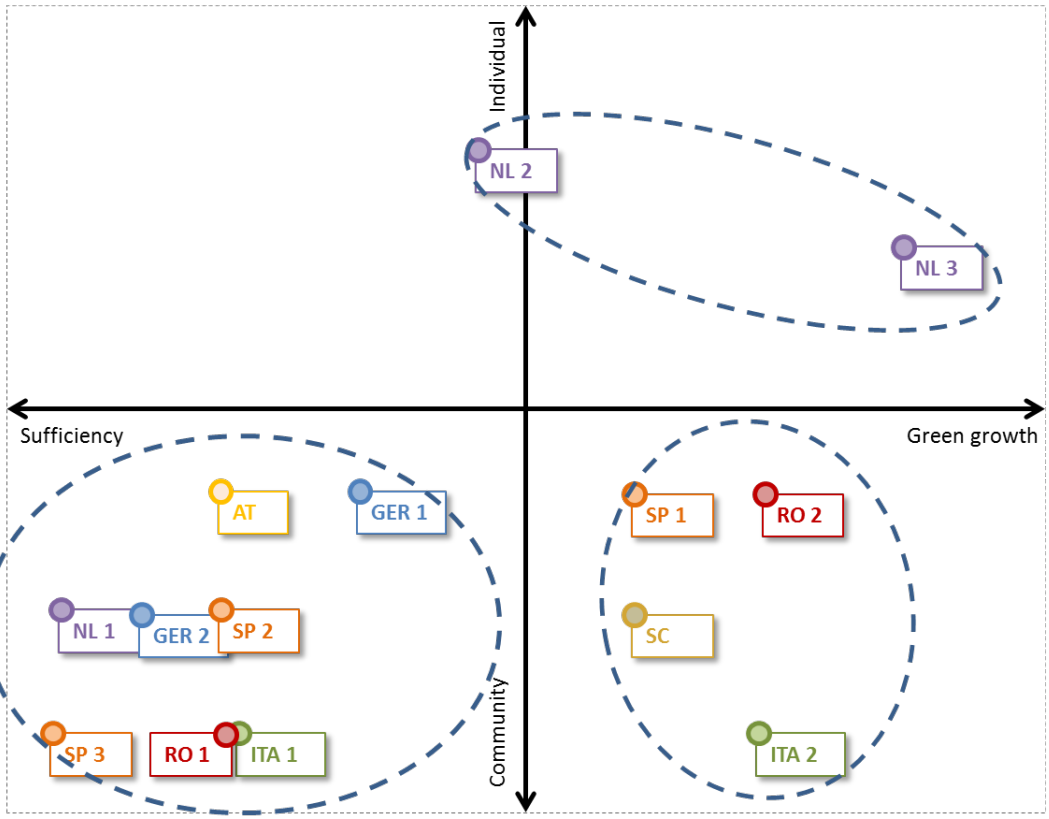

Figure 10.1: Visions plotted according to Sufficiency-Green Growth vs. Community-Individual orientation.

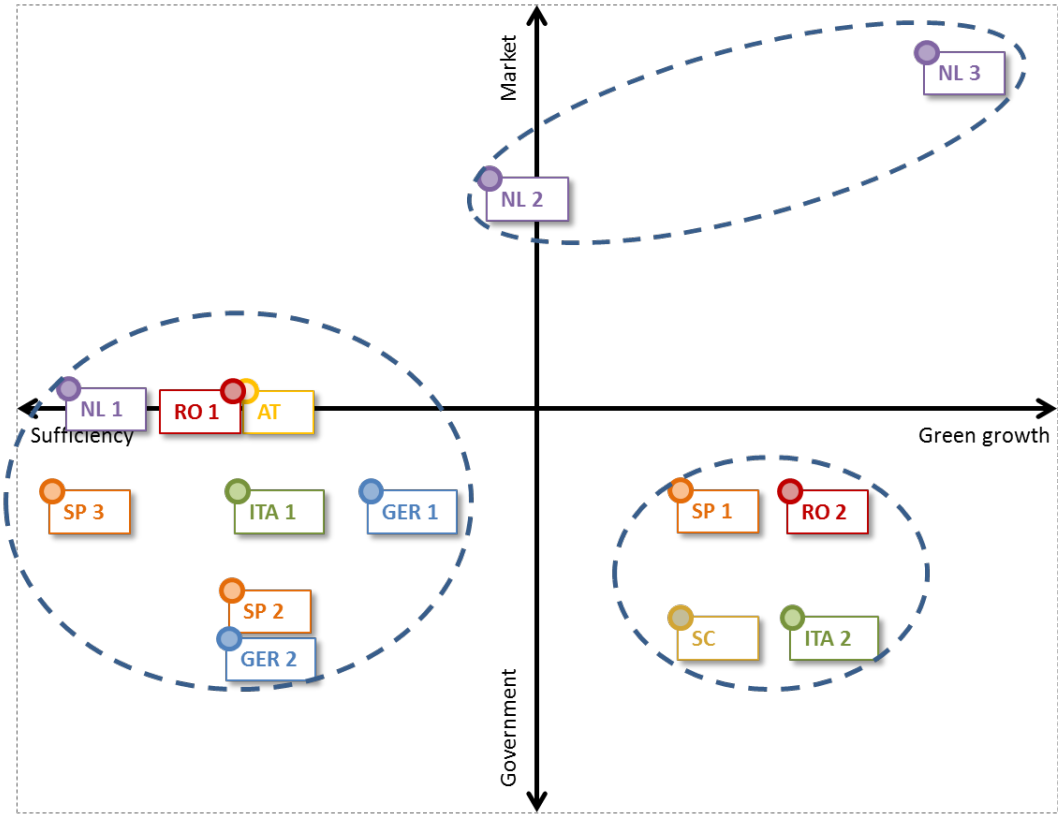

Figure 10.2: Visions plotted according to Sufficiency-Green Growth vs. Government-Market coordination.

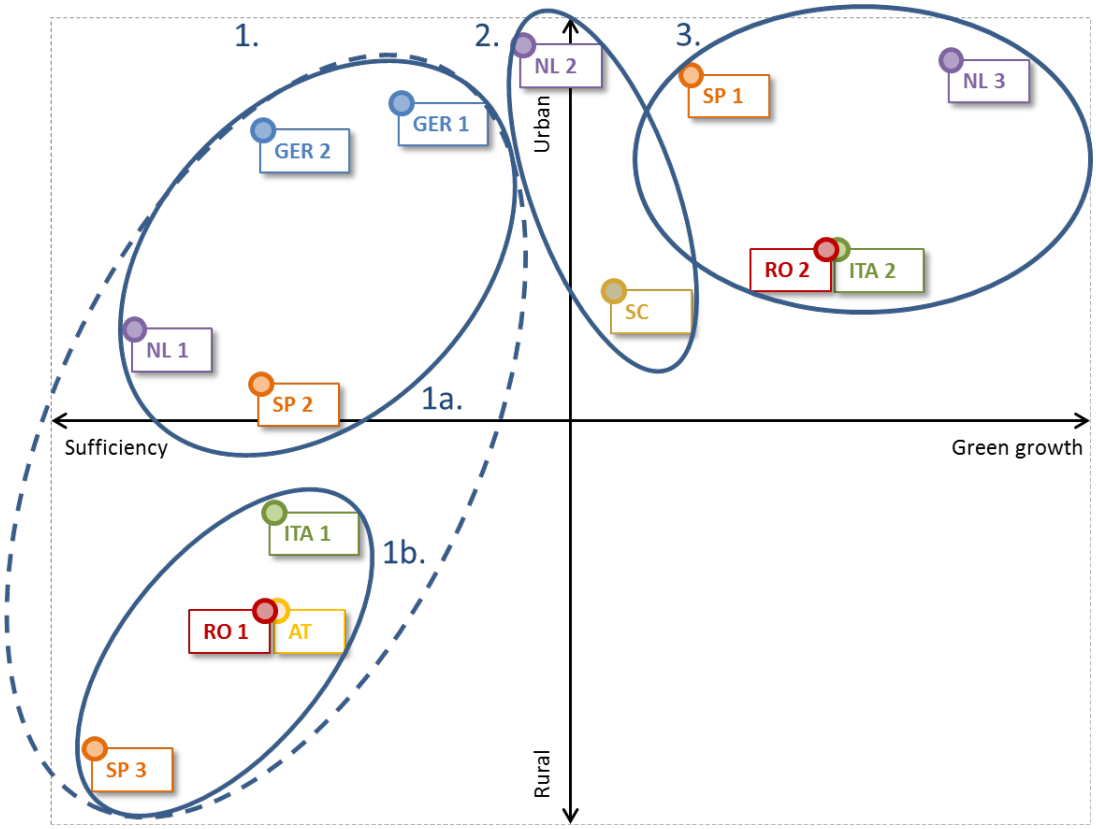

Figure 10.3: 3 main clusters of visions according to sufficiency-green growth scale and urban-rural focus: cluster 1 = sufficiency visions in two sub clusters: urban and rural, cluster 2 = other visions and cluster 3 = green growth visions.

The first cluster considers the sufficiency visions. In total, eight sufficiency visions were developed meaning it is the largest cluster. In this cluster a further distinction can be identified with regard to a cluster of urban centred sufficiency visions and a cluster of rural focused ones. The second Spanish vision actually is right in between the urban and rural focus, but it will be compared to the urban visions due to some overlapping principles resulting from the pathway comparison. Next to the two sufficiency clusters, a third cluster considers the green growth visions. These four visions are all centred around the urban context (see Figure 10.3). A final cluster consists of two visions that contain the Scottish vision and the second Dutch vision. These visions are either not clear about their focus on green growth or sufficiency (Scottish vision) or want to combine elements from sufficiency and green growth (second vision from the Netherlands).

10.2.2 Pathway results

The pathway results for the four clusters of visions in Figure 10.3 will be compared in this section. Since the workshops in the different regions all had their own approach towards getting to the changes, activities and responsibilities for implementing the vision, this comparison will firstly focus on similar underlying patterns and mechanisms. These mechanisms will be described

for the changes in (1) the cultural-behavioural domain, (2) technological realm, (3) structural-policy institutional domain and (4) organisational changes as also explained in section 2.2.4. Since some pathways are developed in more detail, the final part of this comparison will highlight some concrete pathway results for the different clusters of visions.

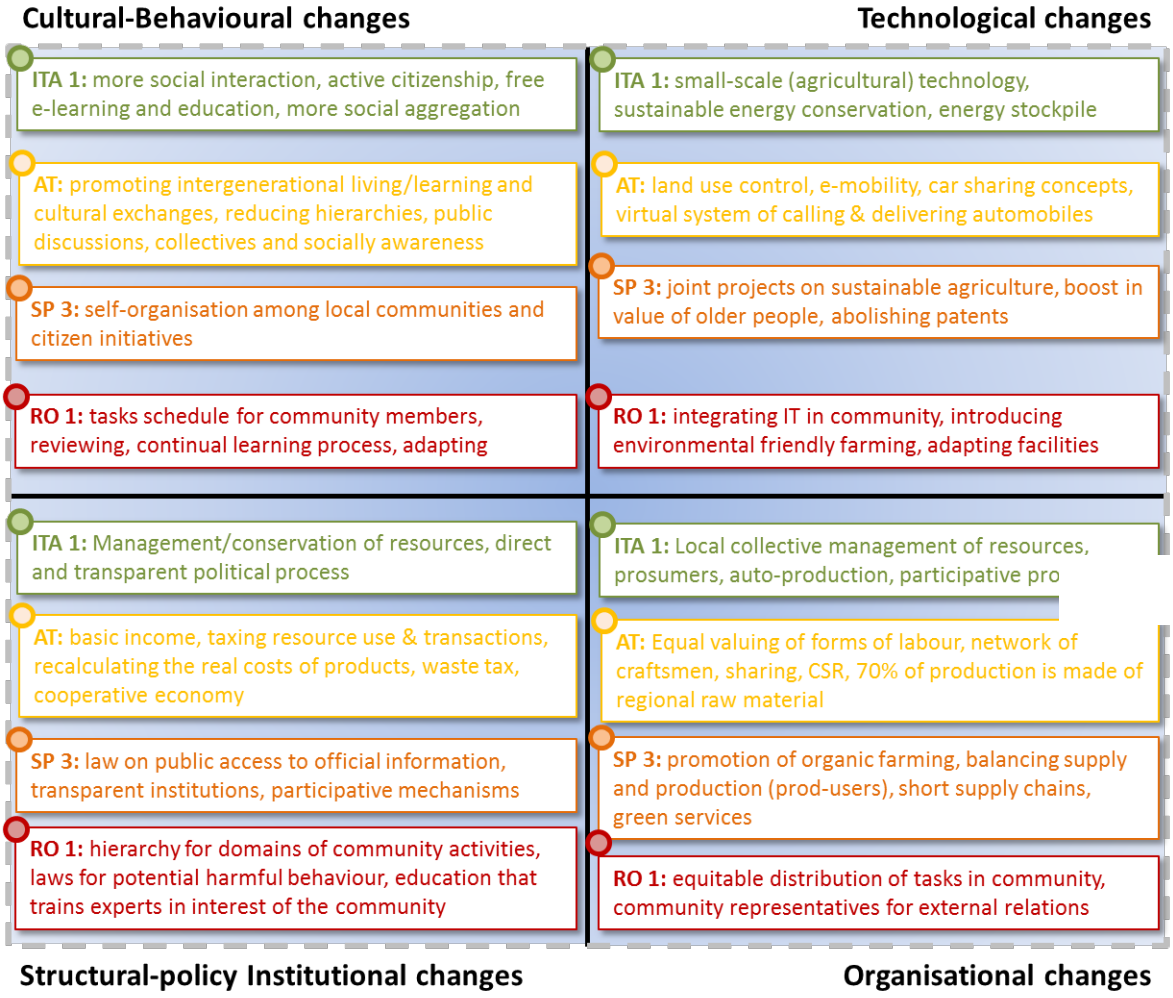

Figure 10.4: Pathway with envisioned changes for the rural sufficiency visions.

Rural sufficiency visions

The main changes as part of the pathways for the rural sufficiency visions are depicted in Figure 10.4. For the cultural-behavioural changes, these visions show similarities in their focus on learning processes to create sustainable awareness. This is to be achieved via both promotion and education (as pointed out in the Austrian and partly in the Italian results). Another pattern in the

cultural-behavioural changes in these visions is the community. Via collectives and social awareness, the community becomes a valued and central part of the society, that will be able to bring about (most of the) changes in the other domains. In these communities, self-organisation is the mechanism that can be found in these visions, that will actually make the changes happen.

Among the technological changes, a common element is the focus on technologies for sustainable agriculture and land use control. This is related to the urban nature of these visions and their focus on regional food production.

When looking at the structural-policy institutional changes, it is more difficult to find underlying patterns of mechanisms. This also relates to the differences in details of the visions in this domain. In the Romanian and Italian visions, outlines for the changes were developed, whereas the Spanish vision and especially the Austrian pathways developed more details like tax schemes.

In the organisational changes finally, a returning element is the equal distribution or the collective management of resources.

Urban sufficiency visions

The main changes as part of the pathways for the urban sufficiency visions are depicted in Figure 10.5.

In the cultural-behavioural changes, awareness of sustainability and our impacts on the environment are a common theme (just like in the rural sufficiency visions). This awareness is to be achieved via a focus on the environment and sustainability in education. Moreover, also in these visions autonomy for civic society and self-organisation of communities are the appointed mechanisms to bring about the envisioned changes.

In the technological domain, these visions have sustainable energy production, supply and storage as a common theme. This was also to be expected for visions in a sustainable urban context, since this is one of the top priorities for autonomous, sustainable cities that are at the core of these visions.

Changes in the structural-policy institutional domain focus on a facilitating role for government in the Netherlands and Spain. Citizens have decisional power and government only facilitates these responsible citizens.

Finally in the organisational changes, the first Spanish vision and the third Dutch vision both mention also the power of citizens in big companies and corporations. These firms will have to

change towards cooperative owned or led by social shareholders, rooted in local communities, according to the pathways sketched in these visions.

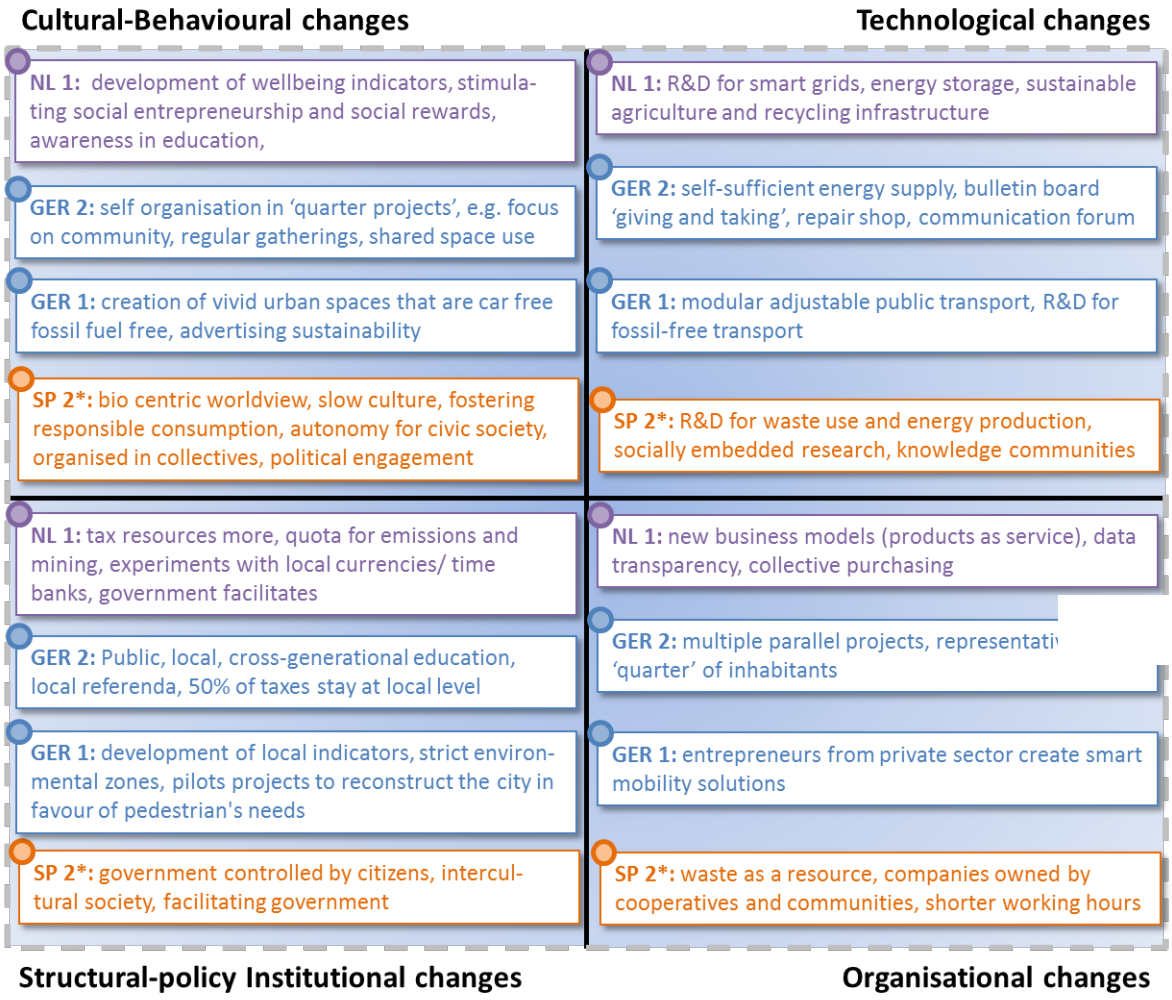

Figure 10.5: Pathway with envisioned changes for the urban sufficiency visions. The Spanish second vision is positioned in between the rural and urban context, but shows most pathway similarities in the pathways with the urban sufficiency visions.

Green growth visions

The main changes as part of the pathways for the green growth visions are depicted in Figure 10.6. Among cultural-behavioural changes, also these green growth visions stress the importance of the awareness of the relationship between humans and nature that has to be achieved via continual learning and/or media campaigns. Especially in these growth oriented-

visions this was pointed out as an important element, to lead this growth into the desired (sustainable) direction.

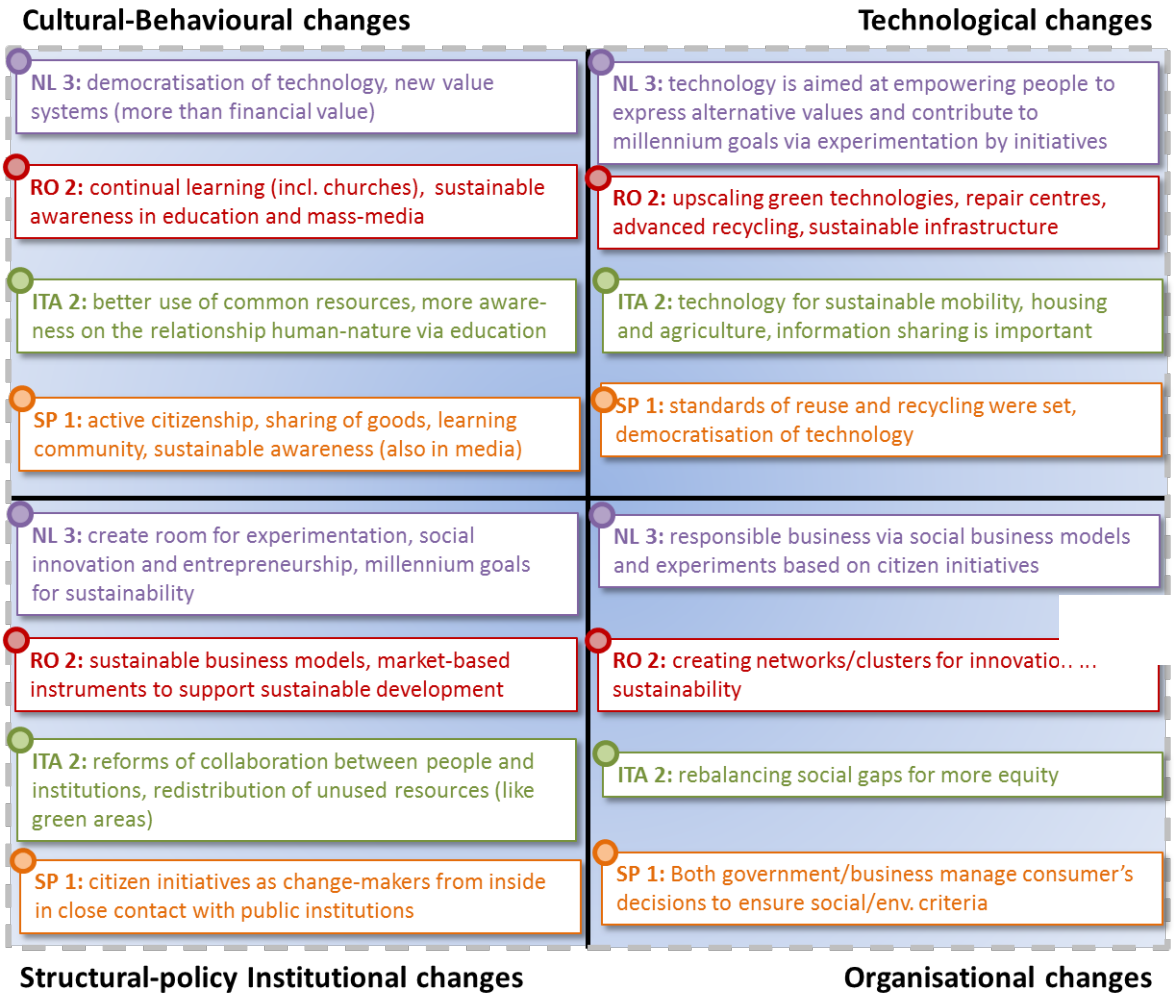

Figure 10.6: Pathway with envisioned changes for the green growth visions.

Green growth principles assume investments in clean technology, so technological changes are among the core changes in these visions. The main focus is on advanced recycling and reuse technologies, based on circular economy principles. In the Spanish and Dutch green growth visions democratisation of technology is another shared mechanism. This means that technology is developed more collectively. The fact that technology is presented as a major driver of change also implies that democratisation of technology will contribute to a more democratic change process.

In the structural-policy-institutional changes, a common mechanism in the Dutch and Spanish pathways is the focus on citizen initiatives as experiments and change makers. These citizen initiatives serve an important role in the transition to the vision via their niche position where alternative value systems can be developed before they will adopted by society (and especially by government and business). In the organisational changes no significant similarities in underlying change mechanisms can be detected.

Other visions

The main changes as part of the pathways for the other visions are depicted in Figure 10.7. Since these two visions are rather different visions, it is not possible to look for similar patterns, so this analysis will show some of the differences in the pathways of these visions.

Firstly in the Dutch second vision, a focus on the individual and his/her talents is central in the cultural-behavioural changes. In the Scottish vision, the team responsibility is mentioned, especially related to the model for care in the envisioned society.

The technological changes are also formulated in different ways and on different levels. The Dutch pathway states the need for technologies that support individuals in their independence and self-sufficiency. The Scottish changes are actually focused on the specific topic of caring for others with housing that allow this (technically).

The differences and articulations of the structural-policy institutional changes align to the technological changes. In the Dutch pathway a smaller role for central government is named, together with institutions (apolitical ones) that guide the long term realisation of the vision in this flexible and uncertain society. Moreover, judicial change and juridical support is named as a change that can empower the individual and its responsibility in this vision. In Scotland concrete measure like caring leave policies or basic income are named in this domain to get to the envisioned society in 2050.

Finally, organisationally, the Dutch vision relies heavily on independent entrepreneurs that provide the goods and services locally. The Scottish pathway uses principles of the sharing economy and Corporate Social Responsibility (CSR) as organisational change mechanisms.

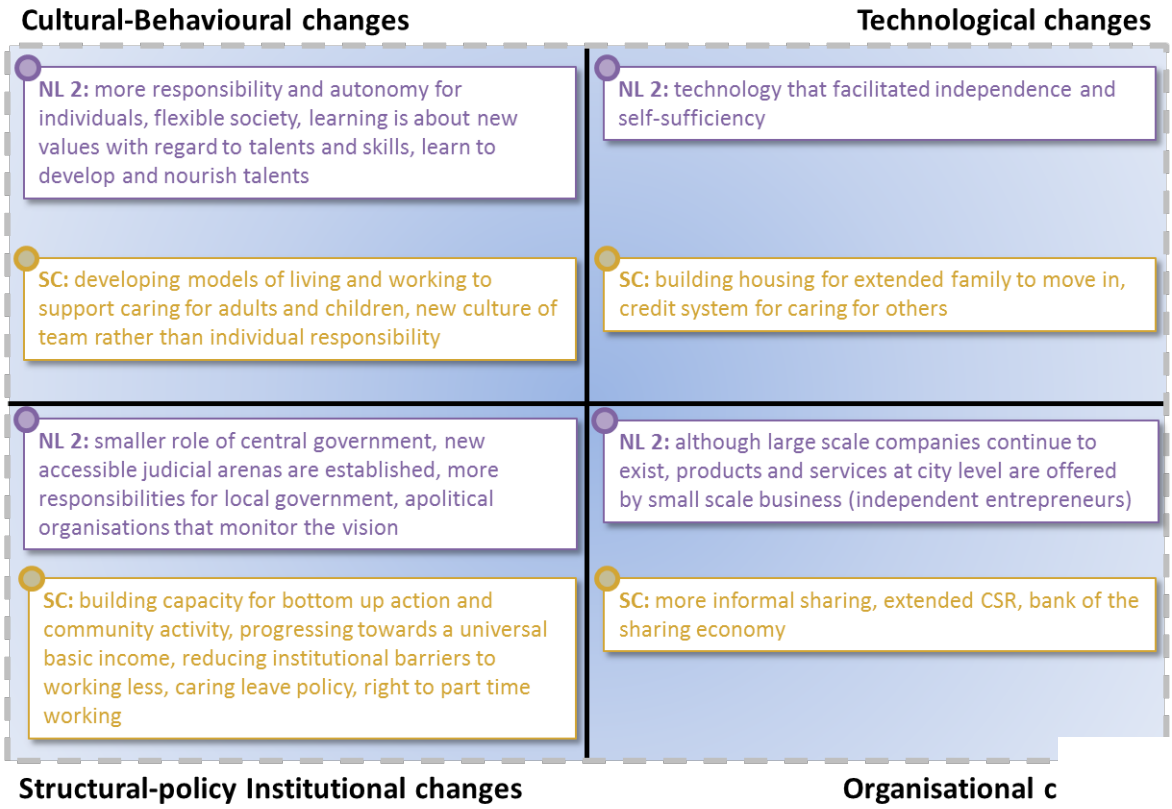

Figure 10.7: Pathway with envisioned changes for the other visions.

Highlighted concrete action points

Next to the comparison on underlying mechanisms in the pathways, the changes towards the envisioned societies will be listed according to more concrete recommendations in Table 10.6 below. This table shows that different actions ways of guiding the transition are still possible. In the sufficiency visions government in general is ascribed a smaller role, taken over by citizen involvement. Economies are also more based on a local scale, with necessary subsidies and taxes in place to reach this situation. In the urban sufficiency visions, SMEs and entrepreneurs take a major role and fulfil new functions in the society.

In the green growth pathways collaboration is an important theme. Via a collaborative consumption and technological development the goals for these visions will be met. Also in this vision, a cultural change (via education for instance) is of importance, together with tax mechanisms and financial incentives for collaboration towards a sustainable society.

The other visions are more difficult to compare, so this won't be done in this section.

Domain	Actions
Rural sufficiency visions	
Cultural-Behavioural changes	• Environmental education from kindergarten to university • Compulsory cooking classes for all public employees • Education shows ways for young people to live a happy life in the region, e.g. regional education pathways • Compulsory praxis days/job orientation year to facilitate the transition of young people from school into the working life, into their work in and for society
Technological changes	• Development of aquaponics systems and protein production for domestic consumption • Improved land use via offering of numerous courses on sustainable agricultural land use management and via transparent communication about land use plans • Building knowledge exchange and collaboration networks towards a more sustainable agriculture • Use of rainwater will be compulsory • Farming cooperatives that create energy and heat storage • Virtual system of calling and delivering automobiles. This system allows for a collective fleet of automobiles that will reduce the number of cars to a minimum. • Patents of knowledge are overridden and a new research-action-participation scheme is adopted
Structural-policy institutional changes	• Small scale territorial institutions (small municipalities) replace big centralised ones • Development of indexes that could calculate the well-being and the economic growth of a given society at the aggregate level • Financial support for public housing for intergenerational living and communities • Reduced incidental wage costs, whereas machines, resource use and financial transactions will be taxed more heavily • Introducing "time accounts" that facilitate mutual help and doing business outside the monetary system. • A basic income for everyone • Introduction of local currency (to strengthen local economic cycles) • Introduction of a waste tax • Law on public access to official information. Information is accessible and institutions are transparent • Activities contributing to the common good are exempted from paying taxes
Organisational changes	• Co-housing, participatory process to urban renewal, more socially shared usage of common public spaces, sustainable restructuring of existing urban spaces and buildings • Companies focussing on international business without taking regional distinctiveness into account will face special taxes. On the opposite site, incidental wage costs will be reduced for all companies which offer solutions for regional challenges • Business will pay for cultural exchanges, because the value of this has been recognised • Prohibition of plastic bags or a heavy taxation of those • Second-hand buying will drastically increase and all respective subsidising systems will be redesigned in a way that they help to try using a product as long as possible • Food and products are for at least 70% made of regional raw materials
Urban sufficiency visions	
Cultural-	• Recovery of the local languages takes place • Unpaid voluntary activities are booming

Behavioural changes	• Stimulating social entrepreneurship and social shareholder ship (via rewards) • Live a simpler life via education that reveals the limits to growth • Embed sustainability in education: economic sciences should be embedded in ecology and the natural sciences and vice versa
Technological changes	• Boosting local agriculture and livestock farming to reduce imports; using less minerals and replacing them with other renewable materials; organic farming as the norm • Short supply chains are created; implying producers get fair remunerations, and that intermediaries are avoided • Water and energy supply systems start being organised at local level • Development of technology for smart grids and energy storage • Research for sustainable agriculture • Developing a model of open science • Additional R&D for recycling infrastructure
Structural-policy institutional changes	• Inverted pyramid of governance: supra-local governments are responsible for monitoring, local governments are responsible for facilitation and citizens are the executive force • Networking and sharing knowledge with NGO's, civil society and research organisations • Development of wellbeing indicators • Lower taxes on labour and increase taxes on resource use • Set quota for emissions and mining
Organisational changes	• Other ways of consuming (collective purchasing) • Business sector resizes to smaller businesses, that respect landscape and ecology • Many companies are owned by cooperatives and communities • Achieving supply-demand balance • New business models (products as service) • Data transparency
Green growth visions	
Cultural-Behavioural changes	• Non-formal education makes population aware of environmental issues and prepares for a full life in society • Increasing degree of organisation in civil society (big consumer groups) • Introducing summer schools in which students could have the first contact with nature (e.g. teaching how to manage a vegetable garden) and new subjects are introduced (e.g. ecology, anthropology). This will develop a new awareness on the relationship between humans and nature and between people • Building a participatory education community
Technological changes	• Mobility: car-sharing, carpooling, and use of electric vehicles • Apps on smartphones will help people to adjust their personal footprint, for example checking one's own energy consumption levels • Democratisation of technology based on stronger collaboration between citizen initiatives and knowledge institutes
Structural-policy institutional changes	• Urban wastelands will be reused and give to citizens for urban gardens • Fiscal incentives for collaborative consumption • Reducing monopoly of large companies on technological development by abolishing patents, open sourcing knowledge, and stimulating data transparency • Establishment of millennium goals for sustainability
Organisational changes	• Support and cooperation between the school as place of education and the government with job reforms, scholarship and job formation • The emergence of prosumers • Spread of short supply chains

	• Superstores have to sell a minimum percentage of local products • Part of the tax revenue from businesses is devoted to fund research projects on sustainability • Set-up of collaborative networks between cooperatives and SMEs supporting local agriculture • CSR: the experimentation with, and adoption of green and social business models and strategies, based on (among other things) experiments created by citizen initiatives
Other visions	
Cultural-Behavioural changes	• Learning-by-doing to learn how to be a responsible individual • Different talents and skills are needed for a successful career: develop individual capacities optimally • More informal sharing • Access courses for leadership and management in voluntary sector
Technological changes	• Development of technology that facilitates independence and self-sufficiency • Piloting new co-operative housing for elderly/adapting housing for extended family to move in
Structural-policy institutional changes	• Institutions promote the vision of autonomous and responsible individuals • The role of government is to set and safeguard boundary conditions and critical infrastructures, and leaving a lot of freedom for individuals to act within that. Central government decreases and local government gets a bigger role • New, accessible judicial arenas are established to support individuals in their rights • Establishments of apolitical organisations to maintain and monitor vision; done by citizen initiatives • Remove institutional barriers to working less / right to part time working • Employees focus on outcomes rather than hours • Caring leave policy • Voluntary work is paid for by employees
Organisational changes	• Although large scale companies continue to exist, products and services at the level of the city are offered by small scale business (often independent entrepreneurs).

Table 10.6: Overview of highlighted concrete recommendations and actions per vision cluster.

10.3 Discussion of results

Different dimensions have been used to map the diversity of the visions and whether meaningful clusters can be made. It appeared that most diversity was found in the figure comparing sufficiency versus green growth and urban versus rural, while still meaningful clusters could be identified. It also emerges from the results that the emphasis of the generated visions is on community and on a trong role for the government. It can now be noted that sustainable lifestyles in market-oriented society and in an individualist society are less extensively covered in the visions. Clearly, these results emerges from the workshops and the contributions and preferences by the participants. However, given the prominence in the EU of both individualisation and market orientation, it needs further study how sustainable lifestyles in an individualist and market-oriented society could look like.

Furthermore, the analysis has only touched upon the similarities and complementariness among the visions in the three main clusters. It offers opportunities for further development of a set of aggregated and more comprehensive visions at the European level and to define pathways and policy packages for these clusters of visions. However, that is beyond the scope of this deliverable, but is recommended to elaborate on this in the final part of the GLAMURS project.

11. Conclusions and Recommendations

Jaco Quist and Eline Leising (TU Delft)

11.1 Conclusions

Within the GLAMURS project a backcasting workshop methodology has been applied for generating future visions for sustainable lifestyles and a green economy in a first series of workshops and for developing pathways towards those visions in a second series of backcasting pathways workshops. In seven regions in Europe studied in the GLAMURS project, case study teams have successfully conducted those workshops involving a broad range of relevant stakeholders. In all regions at least one vision on sustainable lifestyles has been generated and in the second series visions have been further discussed and pathways towards the visions have been developed.

Most of these visions are based on the dichotomy between sufficiency and green growth that clearly reflects different future economic models. Moreover, the visions show diversity in both urban and rural futures for sustainable lifestyles and a green economy. Eventually, four clusters of visions could be identified.

What can be noted from the final set of visions is that eight out of a total of fourteen visions are based on principles of sufficiency or degrowth. These visions can be characterised as mainly community oriented, rooted in decentralised societal systems also pointing to lower levels of government steering and less emphasis on market mechanisms. Two clusters can be identified here, urban sufficiency visions and rural sufficiency visions.

Four out of the fourteen visions are based on the green growth concept and make up a third cluster. The focus on green growth is combined with a preference for communities rather than individualisation. These visions are based on the assumption that inclusive technology will solve current societal and environmental problems. These technologies can also be applied on a larger scales. In this way these visions are linked to concepts like circular economy and the sharing economy. The developed green growth visions show a preference for the urban context. However it needs to be mentioned that not all green growth visions have only an individualist orientation. Some of them combine green growth principles with a stronger community orientation than is currently the case. That points to an additional way of development that may be attractive to both larger groups of citizens and policy makers in current societies and seems to be an interesting way to explore further.

A fourth cluster consists of a vision, which was motivated by a preference to combine sufficiency and green growth (Netherlands) and the Scottish vision which was not so explicit on the economic context and therefore scored low on the green growth dimension. Interestingly, to

the second Spanish vison (SP2), which was meant as depicting socially embedded growth (Smulders 2015) was evaluated more as sufficiency, than as green growth related.

What is interesting about the identified clusters is that further development and aggregation is possible, which could result in more aggregated European visions and pathways. The clusters used in the pathway analysis of this report that emerged bottom-up are a useful start for this.

In general the methods and tools proposed in the guidelines have been applied in the second series of workshops and have led to good results with regard to vision evaluation and elaboration, backcasting analysis and pathway generation. In general, a variety of methods can be used in such backcasting exercises as this comparative analysis showed. Important elements however are well prepared introduction to get all participants at the same level and at a similar mindset with regard of scope and focus of the workshop. In the second series of workshops it were the vision evaluation and discussion that contributed to this. Moreover, final reflection and discussions were also reported as valuable methodological elements.

11.2 Key results and recommendations

- A participatory backcasting methodology has been developed for the GLAMURS project, entitled participatory backcasting for sustainable lifestyles and a green economy. It consists of two stakeholder workshops; a first workshop for problem exploration and development of visions for sustainable lifestyle and a green economy followed by a second workshop focussing on pathways and implementation.
- In seven regions studied in the GLAMURS project pathways and implementation workshops have been successfully executed using the developed format and guidelines with the flexibility to adjust to local aspects and available expertise in the organising teams.
- In order to get sufficient diversity in the generated visions, the distinction between a sufficiency society based on degrowth and moderation of consumption and a green growth society based on solving sustainability problems via environmental innovation and a circular economy has been used as an input for the vision workshops and the pathways and implementation workshops consequently.
- The second workshop round attracted on average 10-15 participants from civil society and bottom-up initiatives, government, and knowledge institutions, whereas the presence of business was lower.
- Methods applied during the backcasting pathways workshops are rather similar, but show some diversity, which all contributed to reaching the goals as set..
- Considerable learning has taken place among both participants and local case study team organisers.

- Fourteen pathways and implementations proposals based on the (elaborated) visions have been generated. In all workshops it was needed to process workshop results further and to elaborate on the pathways to provide a coherent and integrated storyline.
- Visions have been compared on several dimensions including (1) sufficiency versus green growth, (2) individual versus community orientation, (3) governance by government or market, and (4) urban versus rural focus. The combination of the first and fourth dimension appeared most useful to show diversity in the set of visions and reveals four clusters of visions.
- The four clusters of visions that emerged are: a cluster of four rural sufficiency visions, a cluster of four urban sufficiency visions, a cluster of four green growth visions, and a cluster of two "other" visions.
- Based on these four (sub)clusters pathways have been compared on (1) cultural-behavioural changes, (2) technological changes, (3) structural policy institutional changes and (4) organisational changes.
- It is recommended to elaborate the four clusters of visions further in order to develop pathways and recommendations that have not only broader relevance for countries in Europe, but also have relevance at the European level.

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Appendix A: the format of the summary reports

A1. Goal and scope of the summary report

The purpose of the backcasting workshop summary reports is to exchange the results within the GLAMURS project and to make results available in English. The size of the summary report will be around 15-20 pages main text and will largely follow the subtasks of T5.3. The overall format is as follows:

1. Introduction
2. Workshop preparation
3. Workshop results
   3.1: Overall program & welcome session
   3.2: Main results Vision evaluation & discussion session
   3.3: Main results Backcasting, pathways and agenda session
   3.4: Main results of final discussion
4. Post workshop results: further development of visions, backcasting results and pathways
5. Conclusions and reflections (including evaluation among organisers and feedback from participants in the final discussion)

References

Appendix 1: List of participants (names, organisation, type of organisation)

Other appendices if appropriate

Ad 2: Workshop preparation

Here it is reported what is relevant for others to learn from and for getting an overall view of the workshop preparation.

Ad 3: Workshop results

Overall program & welcome session

This part reports concisely the overall structure and program of the workshop and how the case study teams updated the GLAMURS project to the audience, and to what kind of discussion and feedback it led.

Main results vision evaluation and discussion session

The main results from the vision evaluation and discussion session are reported here, as well as the exact questions that were used in the workshop. Results can best be reported in a table, graph or appendix. Also, main outcomes and conclusions from the discussion can be reported here.

Main results backcasting, pathways and agenda session

The main results from the backcasting, pathways and agenda session are reported here, and if case study teams have worked in sub-groups, they have to report concisely for each sub-group. Tables or figures are a good way of presenting results in a concise way.

Main results of final discussion

Final discussion and conclusions are to be reported here.

Ad 4: Post workshop results

Further development of visions

This is the most important part of the second workshop summary report, as it elaborates on the visions, the backcasting analysis, timeline or pathway and possible short term implementation proposals. It should present the entire vision updated from the first report and extended elaborated with second workshop results.

It should use the same structure as the first summary report, but it is extended with backcasting, pathway and proposal sections. The following structure can be used:

1. Core and most important assumptions of the vision(s)
2. Lifestyle activities (how do people live in the vision and how do they conduct activities in the lifestyle domains (e.g. acquiring, storing, treating, using, consuming, disposing)
3. Organisational aspects of the vision and division of roles (e.g. what do other actors do in this vision)
4. Backcasting results (changes, actions, actors responsible for the actions)
5. Pathway (aggregated actions over time, distinguishing between short time (now-2020), midterm (2020-2030), and long-term (2030-2040))
6. Short term agenda and short-term implementation proposals.

Ad 5: Conclusions and Reflections

Here it is reported concisely what the conclusions are of the workshop. Moreover reflections are added based on the evaluations among participants (if done) and the organisers (what worked well, and what could be improved for a future workshop). Reflections on the content of the visions and/or pathways can be stated as well.

Appendix B: Scoring of the visions

Instruction for scoring the visions:

Please use this sheet to score your visions on the different dimensions on which we would like to compare them. Use the dropdown-menus to select one of the possible scores. The definition of each dimension can be found below to aid in the interpretation when assigning scores.

Definition dimension green growth-sufficiency: This dimension indicates whether the degree to which the vision builds on principles of sufficiency/ degrowth versus green growth.

Definition dimension individual-community: This dimension indicates the degree to which the vision leans on individualist tendencies in human behaviour versus social/collective tendencies in human behaviour.

Definition dimension government-market: This dimension indicates the degree to which governance of the societal transition is primarily in the hands of government versus market forces.

Definition dimension urban-rural: This dimension indicates the degree to which the vision focuses on urban life versus rural life.

Vision	Vision title	Sufficiency-green growth	Individual - community	Government - market	Urban - rural
Austria 1	1 Integrated vision of 4 visions	2 sufficiency	1 community	neutral	2 rural
Germany 1	mobility – traffic – energy sources	1 sufficiency	1 community	1 government	3 urban
Germany 2	participation & bot-tom-up networks	2 sufficiency	2 community	2 government	2,5 urban
Italy 1	Sufficiency vision	2 sufficiency	3 community	1 government	1 rural
Italy 2	Green growth vision	2 green growth	3 community	2 government	1 urban
Netherlands 1	Sufficiency & local communities	3 sufficiency	2 community	neutral	1 urban
Netherlands 2	Between sufficiency & green growth	neutral	2 individual	2 market	3 urban
Netherlands 3	Green growth vision	3 green growth	1 individual	3 market	3 urban
Romania 1	Sufficiency vision	2 sufficiency	3 community	neutral	2 rural
Romania 2	Green growth vision	2 green growth	1 community	1 government	1 urban
Scotland 1	MUSIC vision	1 green growth	2 community	2 government	1 urban

Spain 1	Eco-efficiency	1 green growth	1 community	1 government	3 urban
Spain 2	Sufficiency: human scale territories	2 sufficiency	2 community	2 government	neutral
Spain 3	Socially embedded growth	3 sufficiency	3 community	1 government	3 rural