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Policy Roadmap and Policy Guide

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► **To cite this version:**

Maxime Hachette, Alain L'Hostis. Policy Roadmap and Policy Guide. Université gustave eiffel; LVMT. 2022, pp.55. hal-03875156

HAL Id: hal-03875156

<https://hal.science/hal-03875156>

Submitted on 28 Nov 2022

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Policy Roadmap and Policy Guide

Work Package:	WP 5
Deliverable:	5.3
Due date:	30 November 2022
Submission date:	10 November 2022
Responsible Partner:	Gustave Eiffel University
Version:	Final
Author:	Maxime Hachette, Alain L'Hostis
Deliverable Type:	R
Dissemination Level:	PU

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Executive summary

This report details how REBALANCE aims to re-shape the current mobility culture towards a new culture that better meets the inherent values of the European population while addressing the environmental, energy, social and economic challenges it may face. The objective of this report is to elaborate a Policy Roadmap following the Policy Guide through a back-casting exercise, where the transport and mobility future envisaged in WP4 (the Needs and Hopes of the Future / The Vision) will be set out and, throughout the task, the policies, and programs connecting the envisaged future to the present, as described in WP3 (The Language of the Present / The Claim), will be identified.

A relevant Policy Roadmap suggesting reviewed and updated Policy Guidance will be defined combining soft/hard & short-term/long-term policies: reflected in soft policies such as better information, communication, and education (“nudges”), as well as regulatory changes, key incentives and subsidies. Changes in the official Cost-Benefit Analysis guides and other impact assessment methods will be proposed to European institutions and authorities responsible for transport and mobility-related initiatives. As an outcome of the back-casting exercise, the policy roadmap consists in a set of concrete policy measures and their associated timelines targeting the proposed strategy of task 5.2 (Guidance for infrastructure and investment policies). The policy roadmap integrates additional policy guidance that develops the political process necessary to complete the strategy.

The roadmap was elaborated by involving, in a collaborative workshop and through a series of surveys, not only 8 members of the REBALANCE project but also 12 international experts from different backgrounds and profiles (scientists, decision-makers, stakeholders, private partners, associations...). The result represents a certain consensus, but also generates extensive discussions and further debate on a number of topics.



1 REPORT STRUCTURE

The report is structured in five sections, preceded by an introduction and followed by a set of concluding remarks:

- **Introduction:** Describes the REBALANCE project, recalls the intended policy objectives as described in D5.2: “Guidelines for infrastructure and investment policies” and introduces how they have been converted into operational measures.
- **Section 1:** Explains the procedure applied during the “roadmap” workshop, which uses as its basis the principles of the Delphi technique. It details the method used in converting the REBALANCE vision into policy objectives and then into a set of operational measures, which were then structured within a roadmap.
- **Section 2:** Reflects the proceedings of the expert workshop and relates the evolution of the policy objectives and the resultant practical measures, while detailing the preliminary results.
- **Section 3:** Clarifies the implementation of the workshop results into a finalized roadmap. Following this, a roadmap including both soft and hard measures with milestones will be presented.
- **Section 4:** Presents the most interesting results, detailing the measures and objectives that are still the subject of intense debate among experts.
- **Ways forward and conclusion:** Summarizes the previous 4 sections, and paves the way towards new approaches.



2 INTRODUCTION

REBALANCE was initiated as an H2020 project in response to the consensus that the current and past mobility culture, and more particularly in Europe, has generated unsustainable paradigms with significant negative social and environmental repercussions. Through a critical analysis of the current mobility culture and the needs and expectations of the future, REBALANCE seeks to inspire a new mobility culture that would lead to a paradigm switch towards greater sustainability.

At this stage, REBALANCE has reached several main milestones, through the analysis of Mobility Cultures and Policies for Europe in the 21st Century (WP2, task 2.3), the investigation of the current mobility culture (WP3), the envisioning of the future mobility culture that better meets the needs and expectations of the citizens of the European countries (WP4), and the elaboration of a strategy for the transport policy of the future (WP5, task 5.2) based on REBALANCE's approach towards the concept of "public interest" investigated within the framework of task 5.1.

Some fundamental challenges were identified: how does the strategy developed in the framework of task 5.2 is perceived by international mobility experts? How should it be further refined? What soft and hard measures are required for its implementation? And in which hierarchy of priority (short term, medium term or long term)?

This deliverable D5.3: "Policy Roadmap and Policy Guide" builds on the results of the previous project stages, and more specifically (although not exclusively) on deliverables D3.3: "Current Values behind the politics of mobility: Critical Review", D4.3: "The alternative mobility vision", D5.1: "New concepts for regulatory policies", and D5.2: "Guidance for infrastructure and investment policies". Further elaborations on this deliverable are carried out within the framework of (Politics and Poetry) which seeks to translate the expectations and hopes of European populations regarding mobility into effective measures.

To address the stated objectives, we will first briefly recall the REBALANCE policy objectives and guidance recommended within the framework of D5.2: "Guidance for infrastructure and investment policies". We will then outline the method followed to first upgrade them to consider the concerns of a wide variety of international experts, then to translate them into truly implementable measures and finally to prioritize them in a roadmap. We will finally provide a detailed suggested roadmap, which also reflects the necessary shift within assessment methods, while acknowledging and debating the associated concerns.



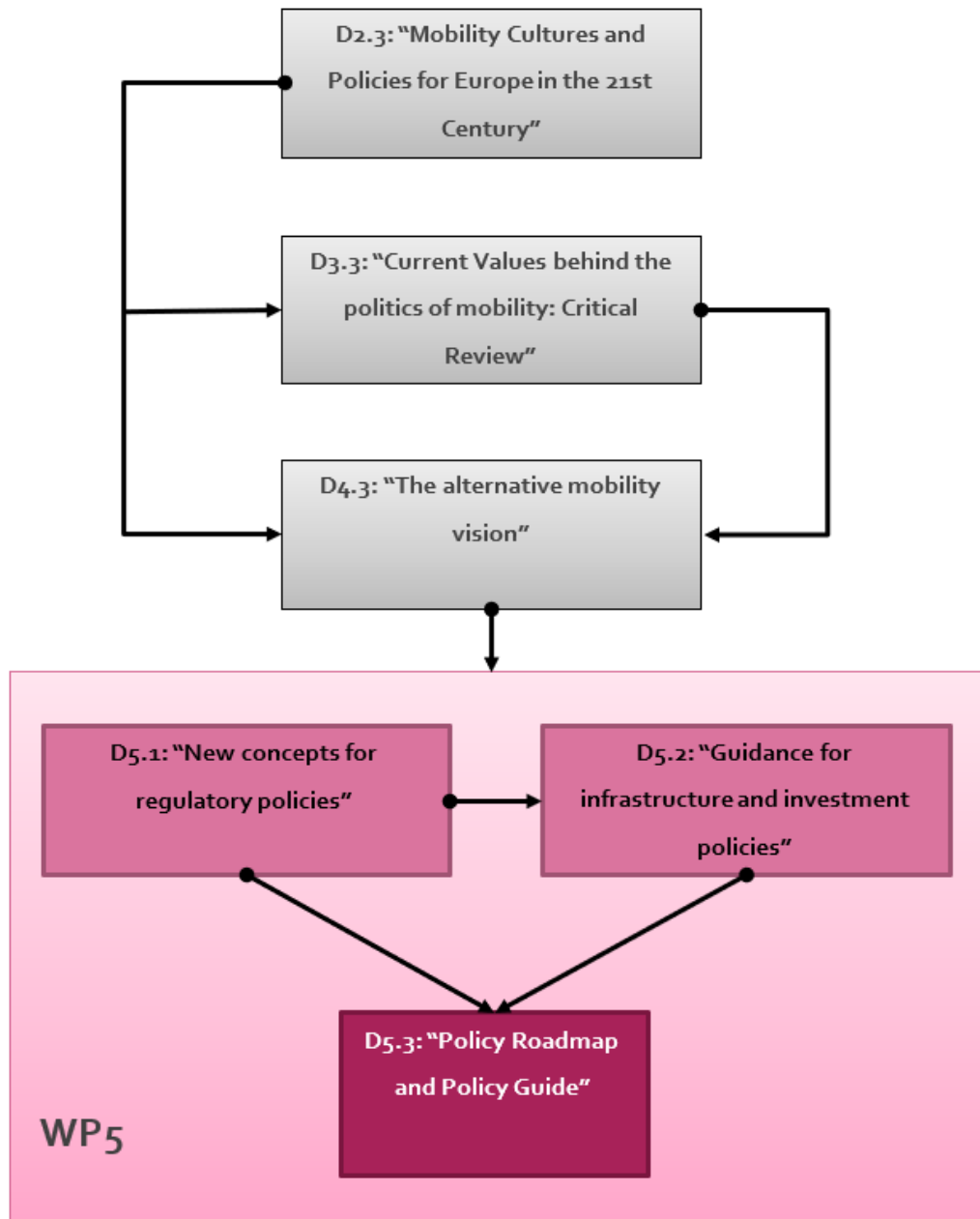


Figure 1: Links between this deliverable (D5.3) and other deliverables and outputs of the REBALANCE project.

As previously mentioned, the main starting point for this deliverable is the outcome of D5.2 "Guidance for infrastructure and investment policies". The latter has proposed a strategy which aims to translate the vision of future mobility as expressed by REBALANCE and which has been structured around 10 points into a reality.

Ultimately, the vision dimensions for rebalancing mobility cultures by 2050 were detailed in D4.3 "The alternative mobility vision". These dimensions are:

- **N° 1:** Cultural change
- **N° 2:** Modernity and mobility
- **N° 3:** Critical revisitation of speed and efficiency
- **N° 4:** Technology preventing place detachment and time alienation
- **N° 5:** Mobility justice
- **N° 6:** Mobility involves human experiences (people-centred mobility policies / cultural change)
- **N° 7:** The social value and political relevance of public health benefits (active mobility / modernity and mobility)
- **N° 8:** The public interest of a given transport policy cannot be fully assessed by applying a conventional Cost-Benefit Analysis, that assumes social benefits mostly related to saving times (Speed and efficiency / new human geography / meaningful travel time)
- **N° 9:** We risk living in a time of more radical dyschronicity (Technology may produce more place detachment and time alienation / sound -visual mobility / New transport technologies should assure affordability)
- **N° 10:** Mobility justice by having human-centred systems (favouring customized mobility / user-friendly and safe transport / hospitality and conviviality / proximity)

The deliverable D5.2 "Guidance for infrastructure and investment policies" suggested a translation of this vision of future mobility into policy objectives and infrastructure investments, while focusing on methods of project assessment that should be adopted and on what European legislation should evolve in order to reach the targets. In order to make the vision a reality, 5 major topics to address have been identified (figure 2):

- The first is defining clear policy objectives and guidance which can be adopted and carried by politicians
- The second identified tangible measures that are required to address policy objectives and which can consist in infrastructures and spatial transformations.
- Then, it was important to review some methods of evaluation and decision-making support in order to ensure the best choice of the project that better meets the stated objectives.
- Thereafter, the first outlines of a policy strategy to be implemented in order to achieve the desired objectives were investigated.
- Finally, we have focused on the general framework, in particular on the legal conditions necessary to provide a framework for the implementation of the intended policies and projects.



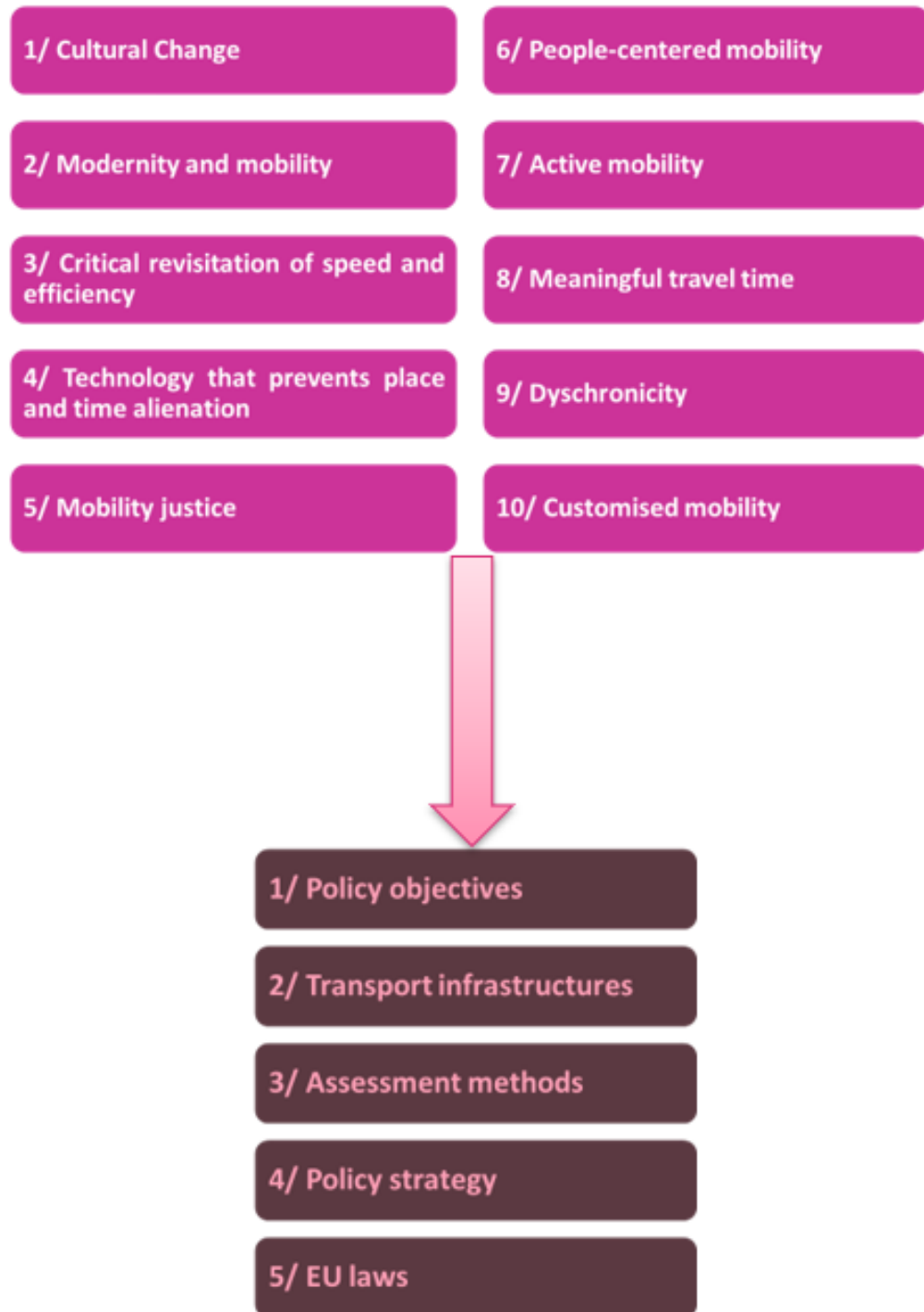


Figure 2: 5 major topics to address, in order to make the REBALANCE vision a reality

The policy objectives represent the 8-policy guidance that were identified (figure 3).

These objectives are:

- Behavioural change
- Connectivity / accessibility to everywhere
- Accessibility of everyone to the transport / mobility system
- Calming the city
- Reliable, modern, comfortable and safe transport equipment and infrastructure
- People centred transport and public space
- Mobility as a human experience: meaningful travel time, the need for seamlessness
- Reduction of individual mobility needs

Note: The need for seamlessness or not, is still, till now, a hot topic within REBALANCE.

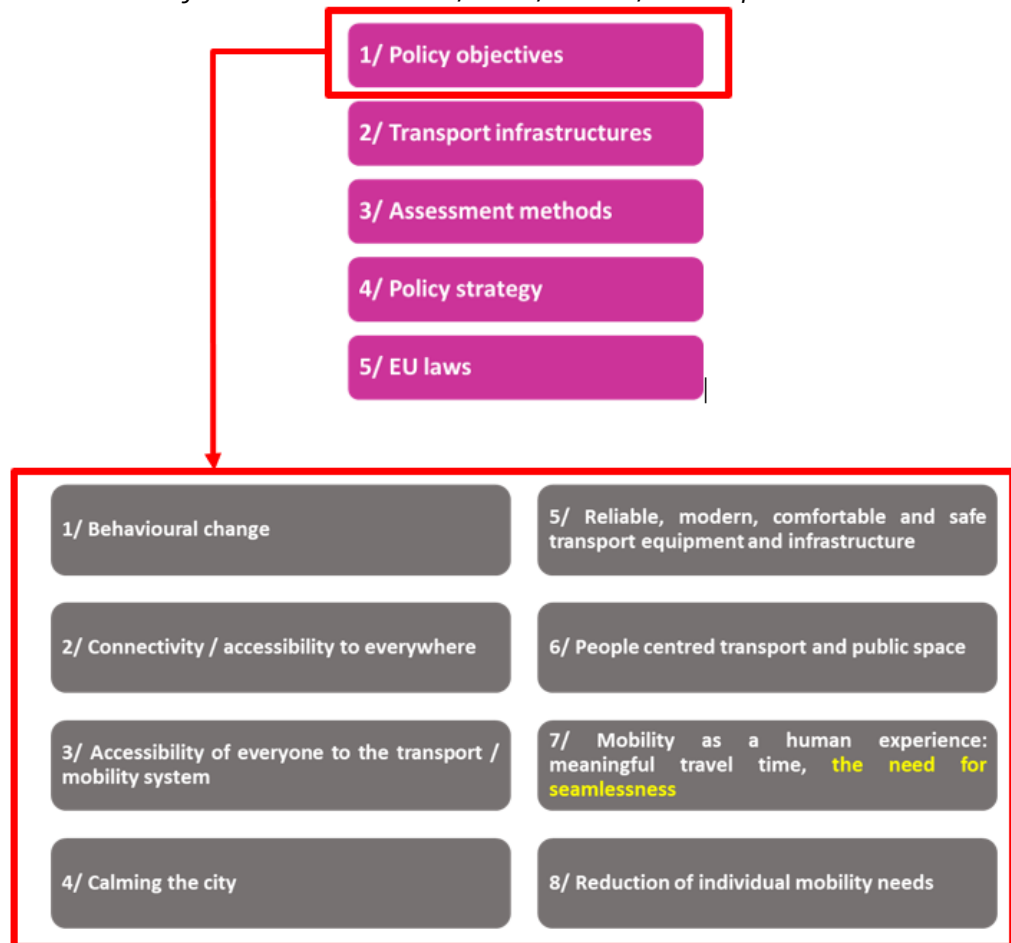


Figure 3: The 8 policy objectives identified in D5.2

3 SECTION 1: THE "ROADMAP" WORKSHOP, OR HOW CONVERTING THE REBALANCE VISION INTO A SET OF TIME-ORDERED OPERATIONAL MEASURES

In addition to the 8 policy objectives and guidance, the aim of REBALANCE is also to present a practical and chronologically prioritized way of implementing them. For this reason, in an expert workshop, we have developed a roadmap with the intention of reaching a consensus at each step based on a Delphi-like process:

1. The workshop started by explaining the vision of REBALANCE and then proposing to the experts the objectives identified and explained earlier.
2. The experts voted for these objectives
3. They also proposed additional objectives
4. which were also submitted to a vote
5. Then the experts were invited to suggest measures to achieve the objectives.
6. These measures were classified in a table according to their priority and the urgency of their implementation
7. A survey was then sent to the experts to express their degree of agreement with the different measures proposed.
8. As a result of all the steps, the objectives were updated
9. and the roadmap too
10. A final survey is still to be considered for a better consensus.

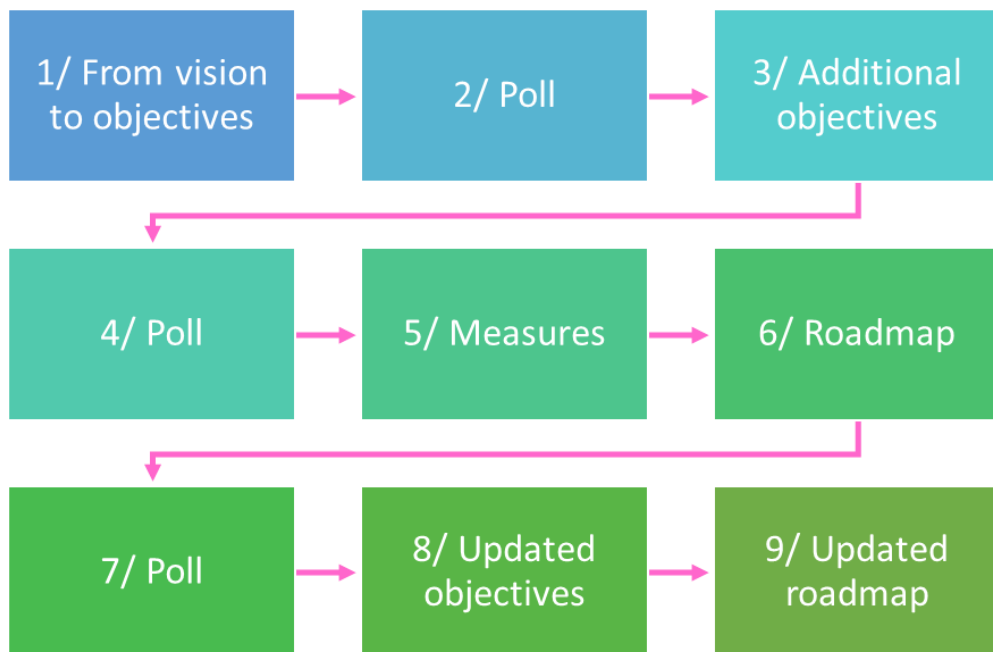


Figure 4: From REBALANCE "vision" to "roadmap"

A total of 20 experts participated in this exercise and 15 answered the surveys (figure 5). The fields of expertise were wide-ranging (transport, mobility, shared mobility, urbanism, temporal urbanism, data, urban policies, economy, legal, engineering). They are not only academics, but also NGOs or stakeholders, private partners, or consultants...

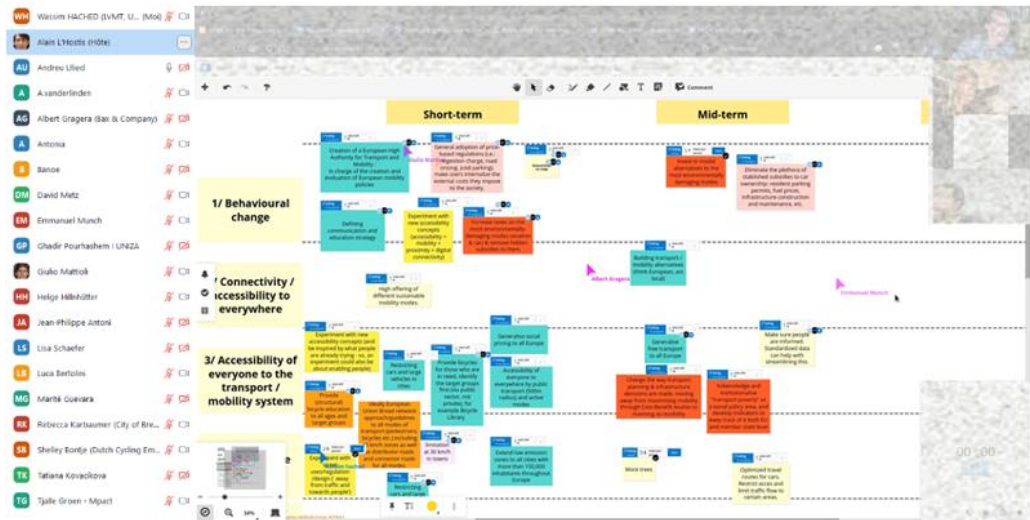


Figure 5: Workshop sequence pictured



4 SECTION 2: POLICY OBJECTIVES AND GUIDANCE EVOLUTION, RESULTANT MEASURES, AND PRELIMINARY RESULTS

The roadmap workshop involved a detailed presentation of the REBALANCE project, followed by a more in-depth explanation of the previously developed “vision” and the proposed objectives and policy guidelines to accomplish the vision. The latter were then submitted to a vote. The 15 respondents consensually agreed with these objectives.

Moreover, they also suggested supplementary objectives to be included. These were grouped under the heading of 4 objectives:

1. Environmental / Decarbonization / Air quality and carbon reduction / Impact of mobility on climate and climate change / Reduction of climate change emissions and other negative environmental impacts of transport
2. Social justice (fairness of mobility budget to reach a minimum of daily life activities)
3. Connectivity (data)
4. Reconsider mobility paradigm through “degrowth” objectives: consider structural change, rather than behavioural change at constant socioeconomic system

These 4 additional objectives were also submitted to a vote. Only one was rejected, and the remaining three were validated. Accordingly, we updated the objectives to combine Degrowth with Reduction of mobility needs, and we added Environmental considerations and social justice to our list. As a result, the set of objectives was reframed into 10 objectives and policy guidance. The figure 6 below summarizes these findings.



Figure 6: Policy guidance and objectives as validated by experts

In the next step of the workshop, the experts were asked to convert each of the 10 objectives and policy guides previously identified into feasible and concrete measures and the resultant actions. The participants were then asked to place them in a chronological order according to the urgency of their implementation (short term, medium term and long term) by 2050. The first outline of a roadmap therefore emerged (figure 7). Following this, an open discussion took place and the experts voted for each of the suggested measures.



Figure 7: The roadmap as envisioned by the workshop experts



5 SECTION 3: FROM WORKSHOP RESULTS INTO A FINALIZED ROADMAP INCLUDING SOFT AND HARD MEASURES

Following the workshop and the vote on the measures proposed by the experts, a post-workshop survey was addressed to the experts to show their level of agreement or disagreement with each of the measures. A statistical study of the results of the survey was carried out. It was based on statistical parameters that describe the distribution of the results such as sum, mean, standard deviation, comparison of standard deviation and mean, median, mode, skew...

Among the 56 measures submitted, 2 were rejected, 7 were adopted while considering that they are still under debate. 47 were adopted with consensus (table 1).

Table 1: Results of the experts' survey

N°	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sum	Mean	SD	Mean-SD	Median	Mode	Skew	Categories	Comments
1	Increase taxes on the most environmentally-damaging modes (aviation & car) & remove hidden subsidies to them	1	1	2	1	2	1	1	2	2	0	1	2	2	2	2	22	1.47	0.64	0.83	2	2	-0.80	Adopted with consensus	
2	Experiment with street uses/regulation/design ('away from traffic and towards people')	2	1	2	1	2	0	1	2	2	0	1	2	2	2	2	22	1.47	0.74	0.72	2	2	-1.07	Adopted with consensus	
3	In general: better link and more communication between policy, practice and research	2	2	0	2	0	2	1	2	2	0	2	1	2	2	2	22	1.47	0.83	0.63	2	2	-1.16	Adopted with consensus	
4	Disincentivize car usage	0	1	2	1	2	2	0	2	2	0	1	2	2	2	2	21	1.40	0.83	0.57	2	2	-0.94	Adopted with consensus	
5	High offering of different sustainable mobility modes.	0	2	1	2	2	0	1	2	1	1	1	2	2	2	2	21	1.40	0.74	0.66	2	2	-0.84	Adopted with consensus	
6	Reallocate street space away from cars / in a fairer way	0	2	2	1	2	1	1	1	2	0	1	2	2	2	2	21	1.40	0.74	0.66	2	2	-0.84	Adopted with consensus	
7	Push for CO2 neutral modes - walking/biking within the announcement systems (route planning, MaaS,...)	1	2	2	2	2	-1	1	2	1	0	1	2	2	2	2	21	1.40	0.91	0.49	2	2	-1.63	Adopted with consensus	
8	Experiment with street uses/regulation/design ('away from traffic and towards people')	1	2	2	1	1	0	1	2	1	0	1	2	2	2	2	20	1.33	0.72	0.61	1	2	-0.63	Adopted with consensus	
9	Fair taxes for air travel rather than subsidising short flights over travelling by rail	2	0	2	0	2	2	1	1	2	0	0	2	2	2	2	20	1.33	0.90	0.43	2	2	-0.78	Adopted with consensus	
10	Invest in modal alternatives to the most environmentally damaging modes	2	1	0	2	2	0	1	1	1	1	1	1	2	2	2	19	1.27	0.70	0.56	1	1	-0.43	Adopted with consensus	
11	Extend low emission zones to all cities with more than 150,000 inhabitants throughout Europe	2	2	2	2	2	1	1	1	0	1	0	1	1	1	2	19	1.27	0.70	0.56	1	1	-0.43	Adopted with consensus	

N°	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sum	Mean	SD	Mean-SD	Median	Mode	Skew	Categories	Comments
12	Overcoming segregation in research, planning practice, policy, and funding in public transport and mobility in general	1	1	0	1	0	2	1	2	2	1	1	1	2	2	2	19	1.27	0.70	0.56	1	1	-0.43	Adopted with consensus	
13	Consider walking as a form of mobility that is of central importance for seamless mobility - and not a problem that needs a "solution" that often increases the complexity of multimodal journeys	0	1	2	1	1	0	0	2	2	0	2	2	2	2	2	19	1.27	0.88	0.38	2	2	-0.60	Adopted with consensus	
14	Encourage a comprehensive public / political debate on the wide range of inequalities related to mobility, and how to deal with them in a just way	1	1	2	1	2	0	-1	2	2	1	2	0	2	2	2	19	1.27	0.96	0.31	2	2	-1.17	Adopted with consensus	Measure already foreseen
15	Spend more money on walking, cycling and public transport rather than prioritising the car. Avoiding that money will only be spent on those who are already travelling/are in the numbers of car usage, but activate and include those who aren't travelling yet. AND give them opportunities to travel in a sustainable and safe way.	0	2	2	1	2	0	0	1	1	1	1	2	2	2	2	19	1.27	0.80	0.47	1	2	-0.55	Adopted with consensus	
16	General adoption of price-based regulations (i.e.: congestion charge, road pricing, paid parking). Make users internalise the external costs they impose on society.	2	2	2	-1	2	-1	1	1	2	1	1	2	1	1	2	18	1.20	1.01	0.19	1	2	-1.40	Adopted with consensus	
17	Building transport/ mobility alternatives (think European, act local)	1	0	1	2	2	-1	0	2	1	1	1	2	2	2	2	18	1.20	0.94	0.26	1	2	-1.04	Adopted with consensus	
18	Provide (structural) bicycle education to all ages and target groups	2	-1	2	2	0	2	1	2	0	1	1	0	2	2	2	18	1.20	1.01	0.19	2	2	-0.93	Adopted with consensus	
19	Increase awareness and knowledge on the role of public space (structure and design) for mobility in cities	2	1	1	1	1	0	1	2	1	0	1	1	2	2	2	18	1.20	0.68	0.52	1	1	-0.26	Adopted with consensus	
20	Zoning regulations to protect green space/nature	1	2	2	2	0	2	1	1	-1	0	0	2	2	2	2	18	1.20	1.01	0.19	2	2	-0.93	Adopted with consensus	
21	Eliminate the plethora of established subsidies to car ownership: resident parking permits, fuel prices, infrastructure construction and maintenance, etc.	0	0	2	0	2	2	0	1	2	0	0	2	2	2	2	17	1.13	0.99	0.14	2	2	-0.30	Adopted with consensus	
22	More trees	2	2	2	0	0	2	0	1	1	0	0	2	2	1	2	17	1.13	0.92	0.22	1	2	-0.29	Adopted with consensus	



N°	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sum	Mean	SD	Mean-SD	Median	Mode	Skew	Categories	Comments
23	Moratorium on the development of new infrastructure catering to the most environmentally-damaging modes (e.g., motorway and airport expansion)	2	0	2	0	2	1	2	1	1	0	-1	2	1	2	2	17	1.13	0.99	0.14	1	2	-0.81	Adopted with consensus	
24	Consider heterogenous effect in transport evaluation system	2	1	0	1	0	2	0	2	2	0	1	0	2	2	2	17	1.13	0.92	0.22	1	2	-0.29	Adopted with consensus	
25	Restricting cars and large vehicles in cities	1	2	-1	1	2	2	0	1	1	-1	1	2	1	1	2	15	1.00	1.00	0.00	1	1	-0.99	Adopted with consensus	
26	Accessibility of everyone to everywhere by public transport (500m radius) and active modes	-1	2	2	2	1	-1	-1	2	1	1	0	2	1	2	2	15	1.00	1.20	-0.20	1	2	-0.87	Adopted with consensus	
27	Change the way transport planning & infrastructure decisions are made, moving away from maximising mobility through Cost-Benefit Analysis to maximising accessibility	2	1	2	1	2	1	1	1	0	-1	1	1	1	2	0	15	1.00	0.85	0.15	1	1	-0.82	Adopted with consensus	
28	Creating local living nodes (Rethinking zoning) / delivery services	1	1	1	2	0	-1	0	2	2	0	0	1	2	2	2	15	1.00	1.00	0.00	1	2	-0.49	Adopted with consensus	
29	Better understanding of multimodal journeys	1	0	0	2	-1	-1	0	2	1	2	1	2	2	2	2	15	1.00	1.13	-0.13	1	2	-0.68	Adopted with consensus	
30	Make sure the "poorer" regions remain accessible, even when gentrification shifts the needs. Keep on top of this over time.	1	1	2	1	0	-1	-1	2	2	0	2	1	1	2	2	15	1.00	1.07	-0.07	1	2	-0.81	Adopted with consensus	
31	Experiment with new accessibility concepts (accessibility = mobility + proximity + digital connectivity)	1	2	0	1	1	-1	0	2	0	1	1	2	2	2	0	14	0.93	0.96	-0.03	1	1	-0.41	Adopted with consensus	
32	Experiment with new accessibility concepts (and be inspired by what people are already trying - so, an experiment could also be about enabling people)	0	1	1	1	1	1	1	2	0	0	1	0	2	2	1	14	0.93	0.70	0.23	1	1	0.09	Adopted with consensus	
33	Ideally European Union Broad network approach/guidelines to all modes of transport (pedestrians, bicycles etc.) including 15 km/h zones as well as distributor roads and connector roads for all modes.	1	1	2	1	1	1	0	2	0	1	0	0	1	2	1	14	0.93	0.70	0.23	1	1	0.09	Adopted with consensus	
34	Make transport policy and planning more participatory	1	1	2	2	2	-1	0	1	1	1	0	0	2	2	0	14	0.93	0.96	-0.03	1	1	-0.41	Adopted with consensus	
35	Defining communication and education strategy	1	1	0	2	0	2	0	2	0	0	0	1	0	2	2	13	0.87	0.92	-0.05	1	0	0.29	Adopted with consensus	
36	Acknowledge and institutionalise "transport poverty" as a social policy	0	0	2	1	2	0	-1	2	1	-1	1	1	2	2	1	13	0.87	1.06	-0.19	1	2	-0.53	Adopted with consensus	



N°	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sum	Mean	SD	Mean-SD	Median	Mode	Skew	Categories	Comments
	area, and develop indicators to keep track of it both EU and member state level																								
37	Make sure people are informed. Standardised data can help with streamlining this.	2	2	0	2	0	2	0	1	1	-1	1	1	1	2	-1	13	0.87	1.06	-0.19	1	2	-0.53	Adopted with consensus	
38	Take advantage of underutilised space (real estate) to make the reallocation for space faster (shift parking towards off-street + reduce & price it)	0	2	2	0	1	0	-1	0	2	1	0	0	2	2	2	13	0.87	1.06	-0.19	1	0	-0.12	Adopted with consensus	
39	Evidence suggests that telecommuting relocation effect (longer trips mid-to long-term due to suburbanization) is larger than the substitution effect (less trips).	0	0	0	0	0	2	1	2	2	2	1	1	1	1	0	13	0.87	0.83	0.03	1	0	0.27	Adopted with consensus	
40	Urban densification	-2	-2	2	1	2	-1	1	1	2	1	1	2	1	2	2	13	0.87	1.41	-0.54	1	2	-1.33	Hot topic	Positive but debated
41	Optimised travel routes for cars. Restrict access and limit traffic flow to certain areas.	0	2	0	0	1	0	1	2	0	0	1	0	1	2	2	12	0.80	0.86	-0.06	1	0	0.43	Adopted with consensus	
42	Restricting cars and large vehicles from city centres	1	2	-1	1	2	2	-1	0	2	-2	0	2	1	1	2	12	0.80	1.32	-0.52	1	2	-0.87	Hot topic	Positive but debated
43	Generalise teleworking when possible	1	0	2	2	1	-1	1	1	-1	1	1	0	1	1	0	10	0.67	0.90	-0.23	1	1	-0.58	Adopted with consensus	
44	Creation of a European High Authority for Transport and Mobility: In charge of the creation and evaluation of European mobility policies	2	-1	1	2	1	2	0	-1	1	1	-1	2	0	1	-1	9	0.60	1.18	-0.58	1	1	-0.27	Adopted with consensus	
45	Provide bicycles for those who are in need, identify the target groups first (via public sector, not private), for example Bicycle Library	-1	0	2	1	0	1	-1	1	0	0	0	0	2	2	2	9	0.60	1.06	-0.46	0	0	0.12	Adopted with consensus	
46	Encourage a public & political debate on which travel purposes / activities ought to be prioritised and catered for, and which ought to be discouraged	1	0	1	1	2	2	0	-1	0	1	0	0	2	2	-2	9	0.60	1.18	-0.58	1	0	-0.57	Adopted with consensus	
47	Generalise social pricing to all Europe	-1	1	0	2	0	-1	-1	1	0	0	1	2	1	2	1	8	0.53	1.06	-0.53	1	1	-0.10	Adopted with consensus	
48	Mobility Hubs with non-mobility offerings.	1	0	1	0	0	-1	0	2	1	-1	1	1	2	2	-1	8	0.53	1.06	-0.53	1	1	-0.10	Adopted with consensus	
49	Implement more flexible land-use policies to account for the interaction between residence/economic activity location choices and transport costs	1	1	-2	1	0	-1	1	0	2	1	1	0	1	2	0	8	0.53	1.06	-0.53	1	1	-0.93	Adopted with consensus	
50	Encourage Relocating households close to their workplaces/needs	-2	-1	2	2	1	1	0	0	-1	0	0	0	1	1	2	6	0.40	1.18	-0.78	0	0	-0.32	Hot topic	Slightly positive



N°	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sum	Mean	SD	Mean-SD	Median	Mode	Skew	Categories	Comments
51	Stop selling fueled vehicles	1	-2	1	1	2	2	-2	0	1	-2	-1	2	1	2	-1	5	0.33	1.54	-1.21	1	1	-0.51	Hot topic	Already foreseen
52	Degrowth: more knowledge and data on the actual environmental impacts on technical mobility "solutions" - electric cars, e-scooters, ... how do these "solutions" perform in a (realistic) sustainability perspective (global - social, environmental and economic)	1	2	-1	-1	0	0	-1	2	-2	0	0	2	2	2	-1	5	0.33	1.40	-1.06	0	2	0.03	Not a measure	
53	Quotas of mobility rights	-2	-2	0	1	0	2	0	-1	0	0	-1	0	1	2	0	4	0.27	1.16	-0.90	0	0	-0.60	Hot topic; slightly positive	Slightly positive
54	Reduction of working hours	-2	-2	0	2	1	2	-2	0	0	-1	0	2	1	2	0	3	0.20	1.47	-1.27	0	0	-0.24	Hot topic; slightly positive	Slightly positive
55	Restricting the sale of fuel to the public	0	-2	0	1	2	2	-2	-1	-2	-2	-1	1	0	0	-2	-6	-0.40	1.45	-1.85	0	-2	0.33	Rejected	
56	Generalise free transport to all Europe	-2	-1	0	2	-1	-2	-2	1	-2	-2	-1	-1	-1	2	0	-10	-0.67	1.40	-2.06	-1	-2	0.94	Hot topic	Reformulated to generate more support: restrict to Public Transport
Colour means																									
Adopted with consensus																									
Hot topic																									
Rejected / Not a measure																									

Based on the obtained results, we summarized the results, to avoid repetition and to merge close or similar ideas. The policy guidance or objectives were first updated to obtain 7 summarised objectives (figure 8):

1. Environmental considerations (Decarbonization / Noise reduction / Light pollution reduction / Revegetation / Calming the city ...)
2. Mobility, transport and public spaces centred on collective well-being (human beings, fauna, and flora)
3. Social justice over all Europe / Accessibility of everyone (regardless of age, ability, or income) to the sustainable transport and mobility system
4. Support behavioural change for degrowth by the reduction of individual mobility needs: Reduce constrained mobility (home/work) and limit voluntary mobility (tourism), particularly with polluting modes
5. Connectivity and Accessibility to everywhere (virtually or physically) to address needs, particularly, with less polluting modes (active mobility, shared mobility, public transport, ...)
6. Reliable, flexible, modern, comfortable and safe transport equipment, infrastructure, public space, ...
7. Think mobility as a human experience: useful travel time / need for seamlessness, particularly for less polluting modes (active mobility, shared mobility, public transport, ...).



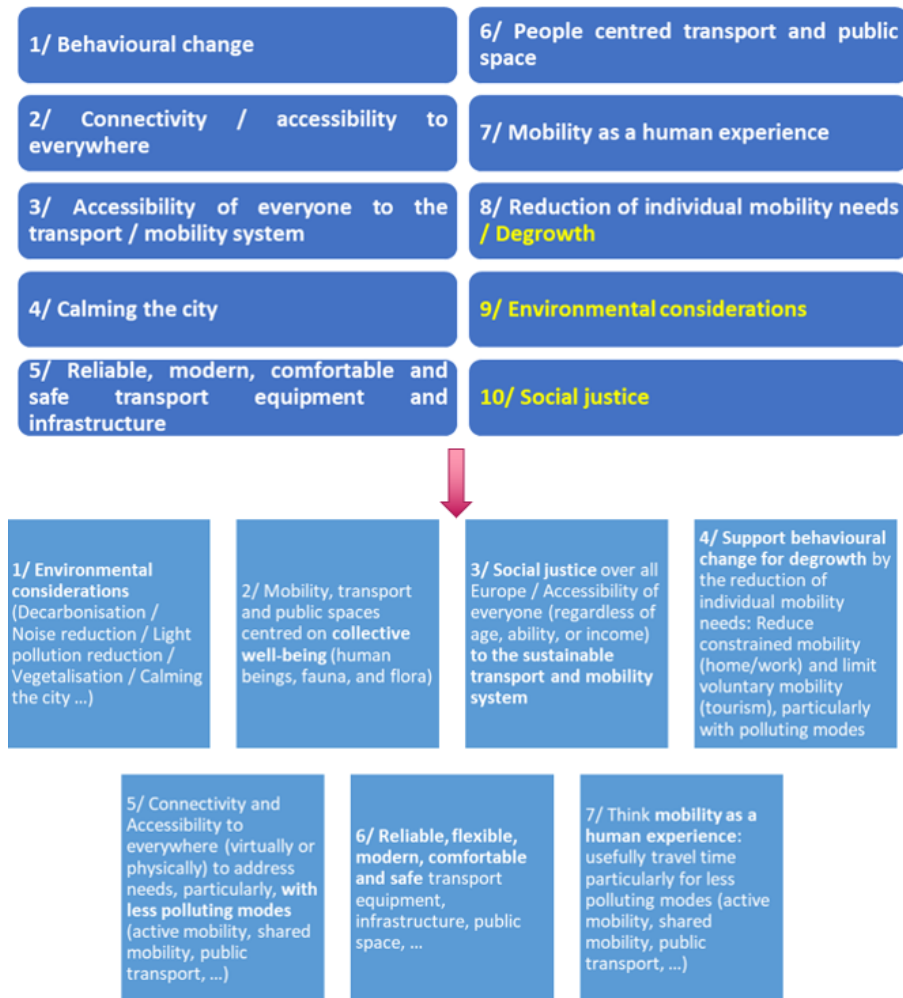


Figure 8: Summarized policy objectives and guidance as a result of the survey on measures validation

In the same way, from the measures we created a new structure, and we grouped measures into topics and sub topics. We distinguished 4 main topics:

1. General framework
2. Mobility policies and public space
3. Mobility reduction and restrictions
4. Mobility alternatives

It was important, after all the iterations in the formulation of the objectives, to make sure the ideas of the vision were reflected in the roadmap (figure 9), so vision items can be associated with measures and measure topics. For example, the measures which are under the topic Mobility and public space reflect mainly 4 REBALANCE visions:

- 5/ Mobility justice
- 6/ People-centred mobility
- 8/ Meaningful travel time
- 10/ Customized mobility

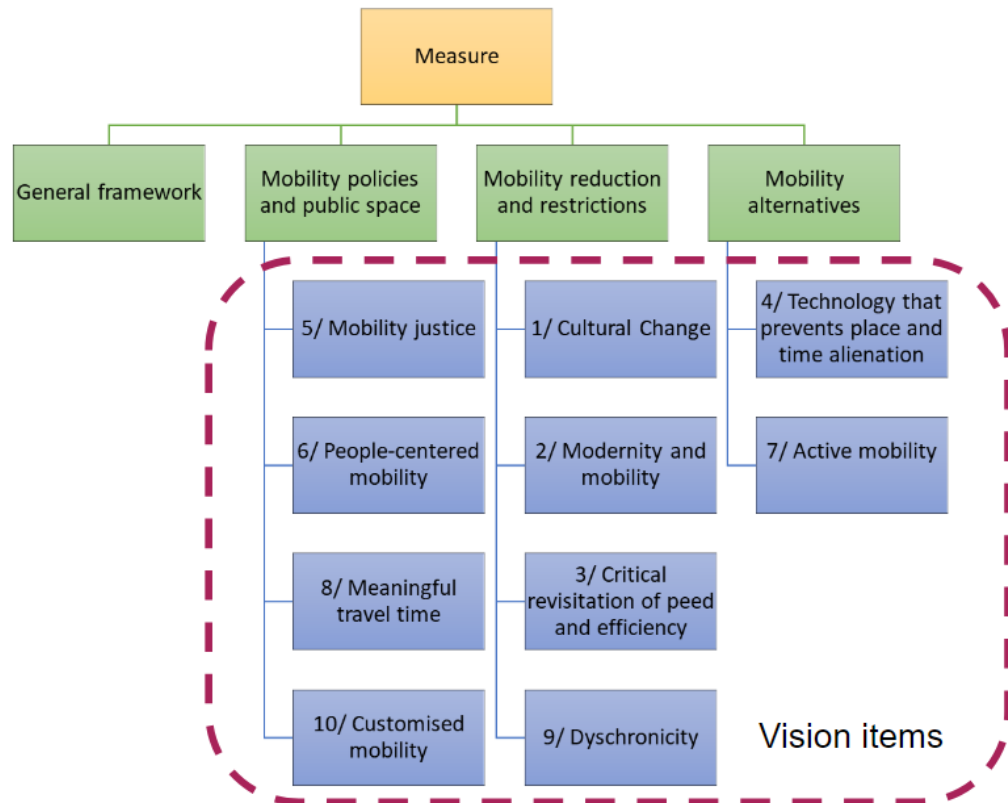


Figure 9: How the roadmap reflects REBALANCE vision

The resulting roadmap shows 47 adopted measures. 40 were adopted with a consensus and 7 called “hot topics” still under debate.



6 SECTION 4: FINDINGS AND HOT TOPICS

As an outcome of this back-casting exercise within the framework of a workshop of experts and stakeholders, where the transport and mobility future envisaged in WP4 were set out and, the policies and programs connecting the envisaged future to the present, as described in WP3, were identified, a policy roadmap was adopted. It consists in a set of concrete policy measures and their associated timelines targeting the proposed strategy of task 5.2. The policy roadmap updated the policy guide, suggested in D5.2, and developed the political process necessary to complete the strategy. The Policy Roadmap and the Policy Guide defined and combined soft/hard & short-term/mid-term/long-term policies: by encouraging soft policies such as better information, communication, and education (“nudges”), as well as regulatory changes, key incentives and subsidies. Monitoring and assessment were also covered. Changes in the official Cost-Benefit Analysis (CBA) guides and other impact assessment methods like Multi-Criteria Analysis were recommended. Develop a new method that leans more in the way of MCA and considers in a more efficient way the concept of “Public Interest” is now necessary. In this way, the adopted roadmap recommends, for example, the Creation of a European High Authority for Transport and Mobility. It should be in charge of the proposal of regulations on mobility, creation, assessment / monitoring of European mobility policies and strategies, and coordination between local and European policies.

In essence, the most interesting findings of the process are the identification of the 7 “hot topics” with debates:

1. Restriction to car uses, which are not easy to implement
2. Stop selling fuel vehicles, interestingly a measure already adopted, but still object to debate
3. Individual quotas generate lots of debate
4. Reduction of working hours: with the aim of generating less mobility
5. Densification: a long-term debate about cities development; ensuring quality of public space to make density acceptable
6. Relocating: very complex process, no known experience in Europe
7. Free public transport: hot topic at European scale, experiences, lots of debates, pros and cons, significant benefits, make restrictions to cars more acceptable

And we would also like to say that the “seamlessness” as a policy guidance raised internal debate. It opposes an idea of meaningful travel time, a critique of speed and efficiency. It would be wiser to replace it by “meaningful travel time”, and to specify it only necessary for sustainable mobility. Whereas, opposed to the car system, there is a specific need to remove barriers and to fluidify the experience of the user.

7 CONCLUSIONS AND NEXT STEPS

7.1 Conclusions

Within the framework of this deliverable, we have mainly based on the previous outputs of REBALANCE. We have mainly focused on translating the 10 points representing the alternative vision of future mobility expressed in deliverable D4.3, first into policy objectives and guidance. A workshop of experts and stakeholders was held as a back-casting exercise based on Delphi process and involving several surveys with the aim to enrich and evolve the guidelines and objectives to be addressed. These objectives have been translated into measures. These were organized by their degree of urgency in a short, medium- and long-term roadmap.

As a result of this process, we have noticed a clear expert's consensus on the major future mobility culture objectives (environmental, social...). This leads us to believe that the European Union is actually able to achieve a shift in mobility culture toward a new one that disrupts current and past paradigms. The resulting roadmap suggests a total of 47 measures that should be considered as a whole and not separately. The majority of the proposed measures (40) were adopted by consensus. However, some measures adopted continue to be points of divergence where a consensus is still to be reached. Among the most interesting findings of the process is the identification of the 7 "hot topics". We can mention: some restrictions to car uses, stop selling fuel vehicles, individual mobility quotas, reduction of working hours, densification, relocating households near to their workplaces, free public transport...

Given the current urgent needs (climatic, social, economic, energy...), some experts are calling for more powerful and radical measures to be taken. We can notice here that a contradiction appears between the demand for more radical measures and the debate about strong measures already adopted by the EU (like stopping the sale of combustion engine cars by 2035) or others proposed during the workshop (like restricting the sale of fuel to public by 2045).

In order to reach a broader consensus, it would be necessary to open the resulting roadmap for further discussion and refinement. It would also be advisable to submit it for an additional expert vote in order to, where possible, unveil the measures that are subject to debate.



7.2 Possible next steps, indications for further researches, beyond the scope of REBALANCE

Although the findings so far are revealing and provide a real basis for reflection, the results of this research have raised many new questions and called for further investigation (especially with regard to more radical or hot topic measures).

So, in order to reach a broader consensus, it would be necessary to bring the experts to a stronger consensus on the measures to be adopted, including the “hot topics”, based on surveys. In the same time, it is recommended to collect suggestions for more radical measures and discuss them with the experts.

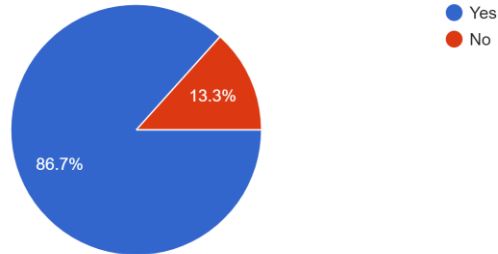
Once a solid agreement between experts has been found, it would be important to broaden the debate to include institutions and populations. In this case, it would be interesting to organize a workshop that includes European elected representatives to refine the timeline of the roadmap, then to submit the roadmap to European mobility associations, then to European citizens, with the aim of reaching a final revised version of the roadmap.



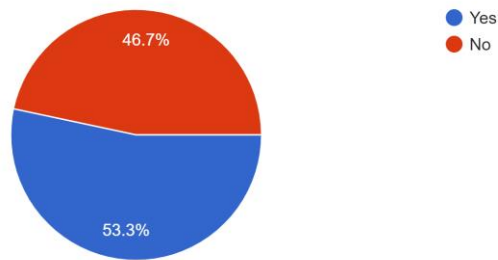
8 ATTACHMENTS

8.1 Policy objectives, survey results

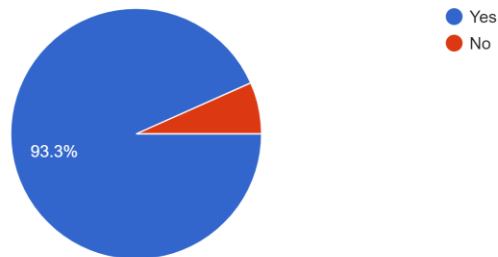
1/ Behavioural change
15 responses



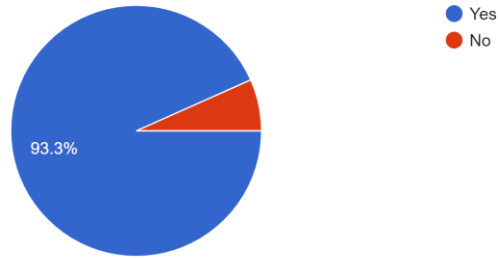
2/ Connectivity / accessibility to everywhere
15 responses



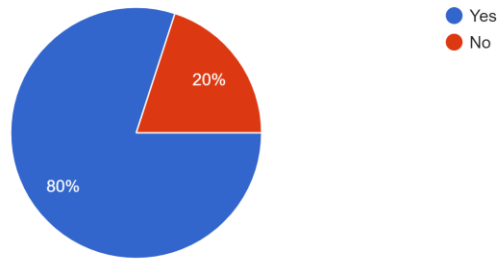
3/ Accessibility of everyone to the transport / mobility system
15 responses



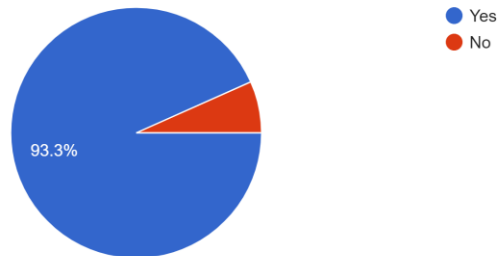
4/ Calming the city
15 responses



5/ Reliable, modern, comfortable and safe transport equipment and infrastructure
15 responses

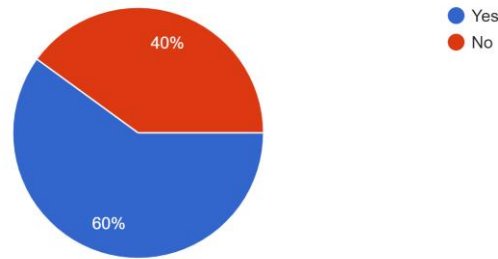


6/ People centred transport and public space
15 responses



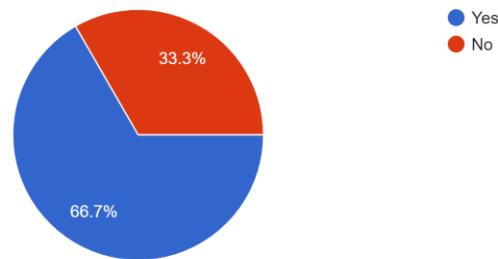
7/ Mobility as a human experience: the need for seamlessness

15 responses



8/ Reduction of individual mobility needs

15 responses



Additional objectives ?

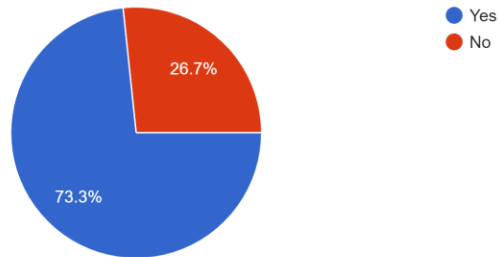
7 responses

- Impact of mobility on climate and climate change
- Environmental, connectivity (data),...
- Reduction of climate change emissions and other negative environmental impacts of transport
- Accessibility (not mobility) justice
- Air quality and carbon reduction
- Decarbonization; Social justice (fairness of mobility budget to reach a minimum of daily life activities)
- Reconsider mobility paradigm through "degrowth" objectives : consider structural change, rather than behavioral change at constant socioeconomic system

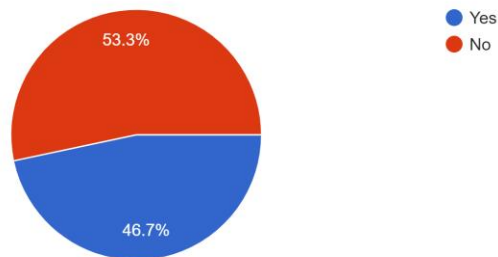


8.2 Additional policy objectives, survey results

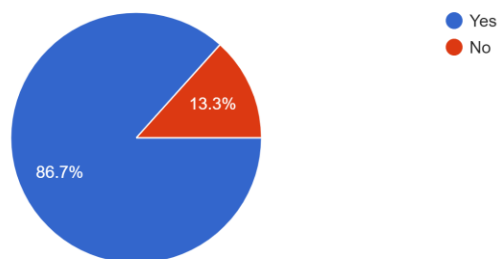
1/ Environmental / Decarbonization / Air quality and carbon reduction / Impact of mobility on climate and climate change / Reduction of climat...other negative environmental impacts of transport
15 responses



3/ Connectivity (data)
15 responses

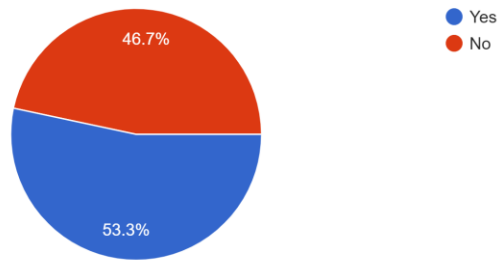


2/ Social justice (fairness of mobility budget to reach a minimum of daily life activities)
15 responses



4/ Reconsider mobility paradigm through “degrowth” objectives : consider structural change, rather than behavioural change at constant socioeconomic system

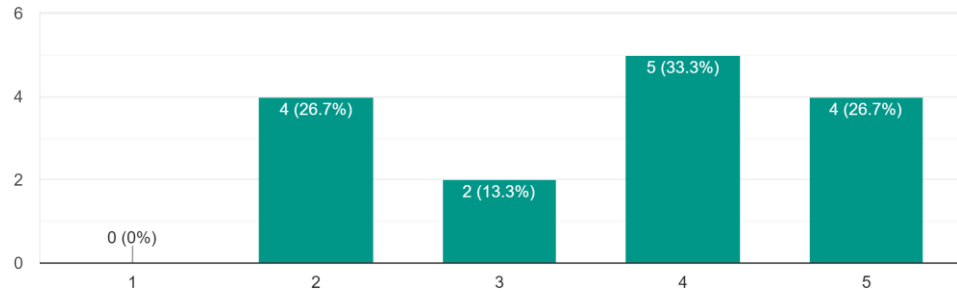
15 responses



8.3 Roadmap measures, survey results

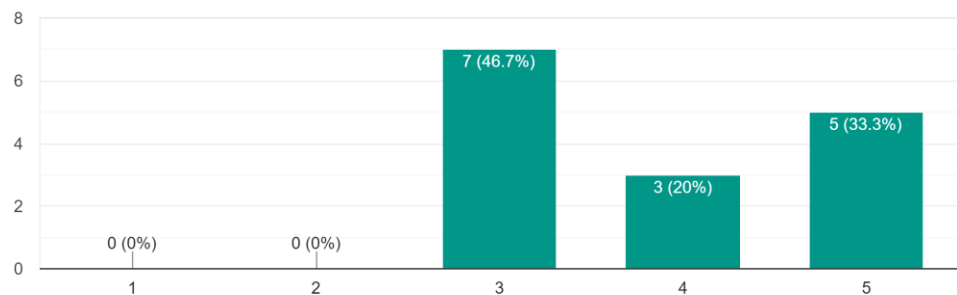
1/ Creation of a European High Authority for Transport and Mobility : In charge of the creation and evaluation of European mobility policies

15 responses



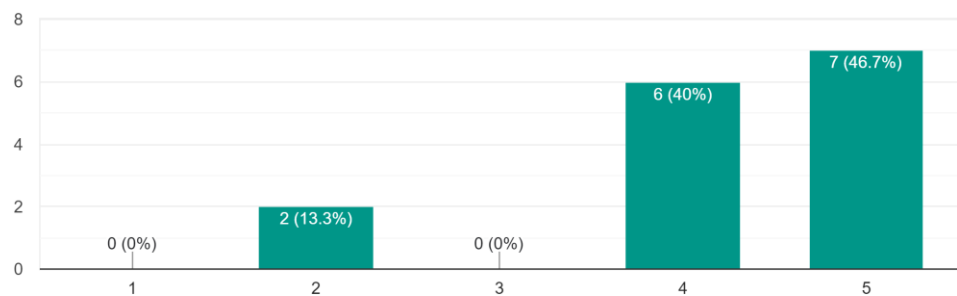
2/ Defining communication and education strategy

15 responses



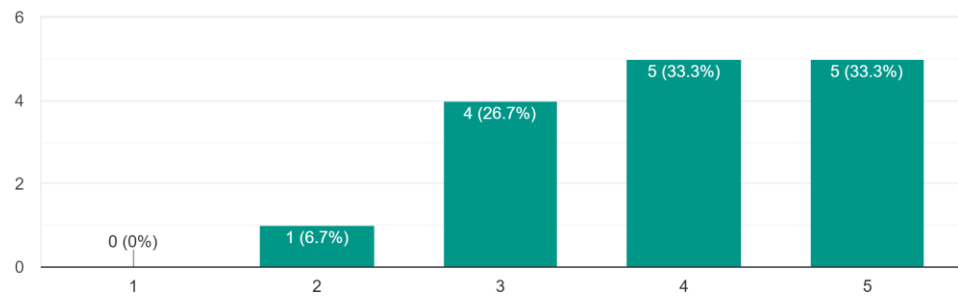
3/ General adoption of price-based regulations (i.e.: congestion charge, road pricing, paid parking).
Make users internalize the external costs they impose to the society.

15 responses



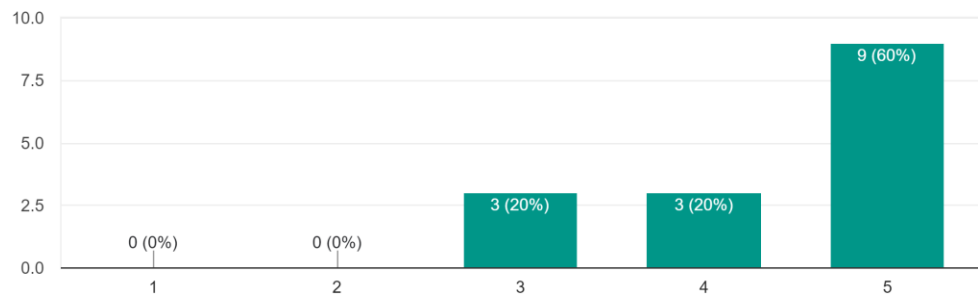
4/ Experiment with new accessibility concepts (accessibility = mobility + proximity + digital connectivity)

15 responses



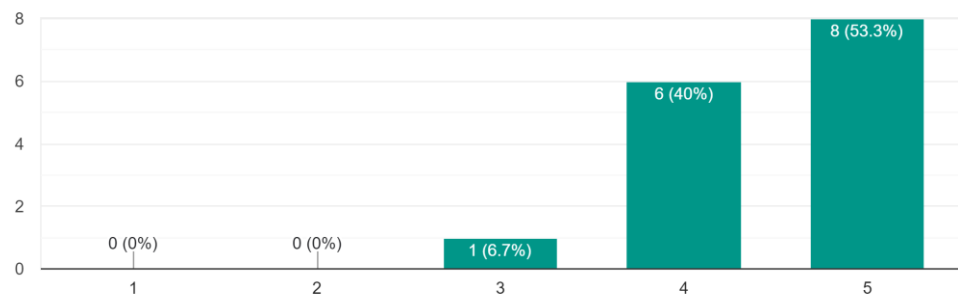
5/ Disincentivize car usage

15 responses



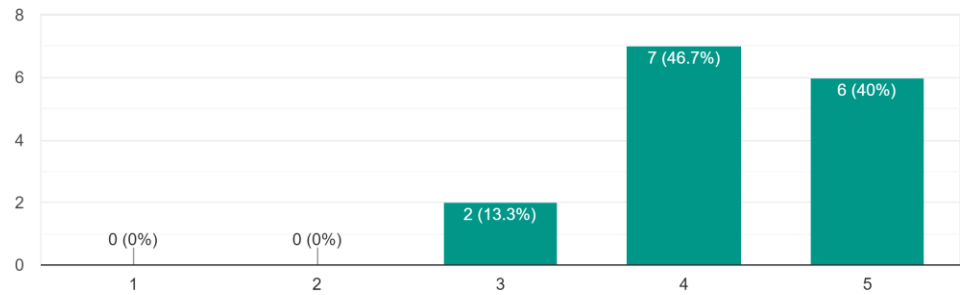
6/ Increase taxes on the most environmentally-damaging modes (aviation & car) & remove hidden subsidies to them

15 responses



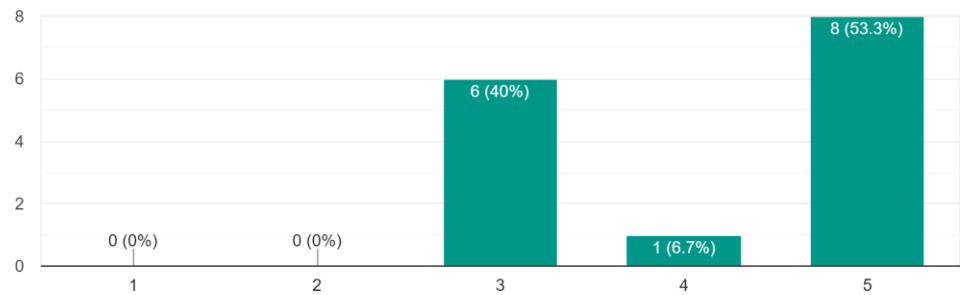
7/ Invest in modal alternatives to the most environmentally damaging modes

15 responses



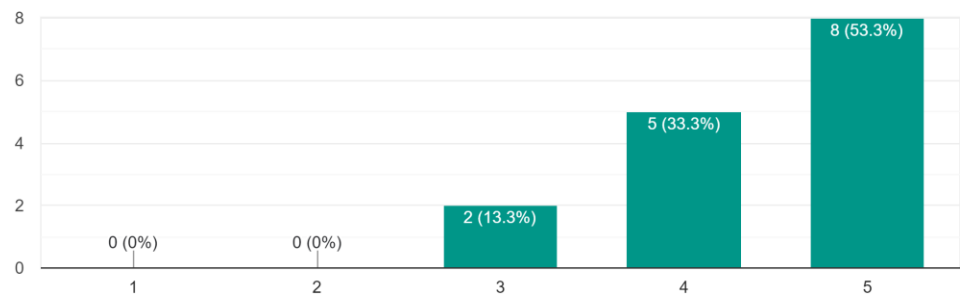
8/ Eliminate the plethora of established subsidies to car ownership: resident parking permits, fuel prices, infrastructure construction and maintenance, etc.

15 responses



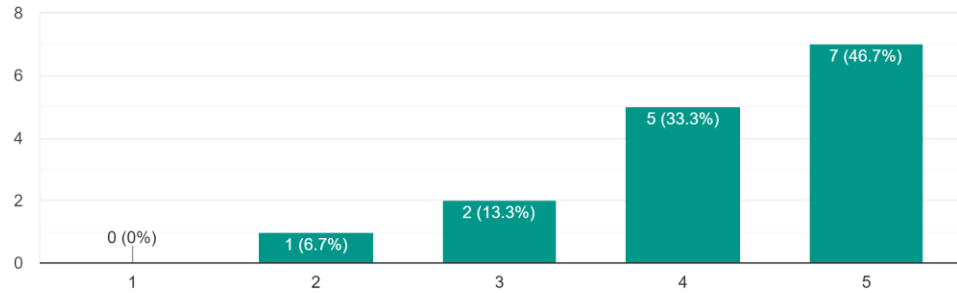
9/ High offering of different sustainable mobility modes.

15 responses



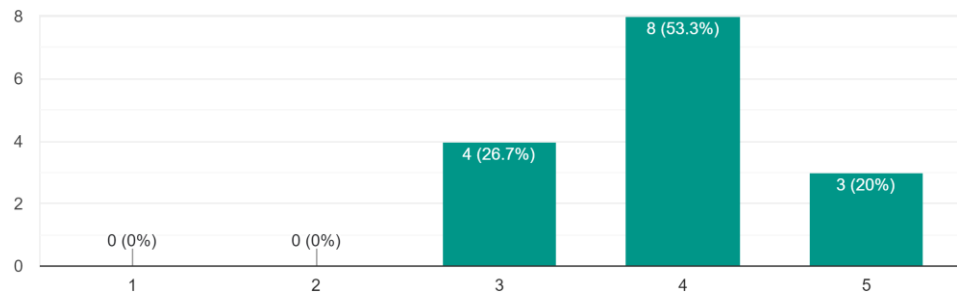
10/ Building transport / mobility alternatives (think European, act local)

15 responses



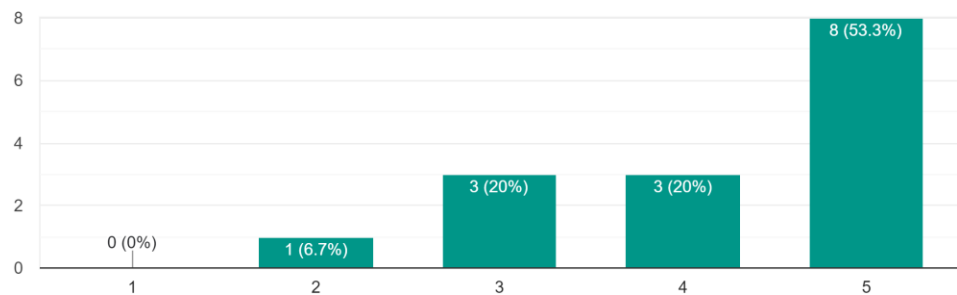
11/ Experiment with new accessibility concepts (and be inspired by what people are already trying - so, an experiment could also be about enabling people)

15 responses



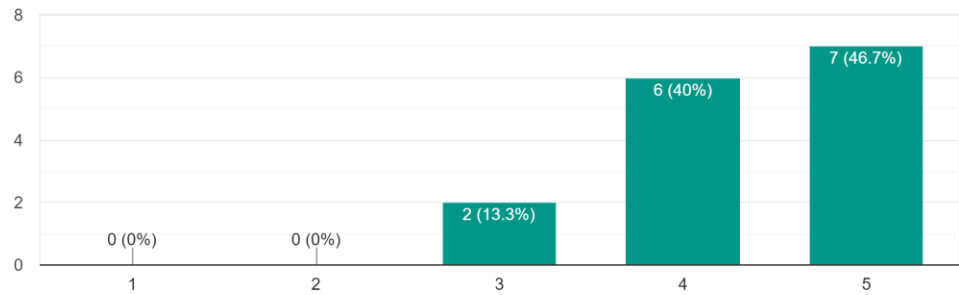
12/ Provide (structural) bicycle education to all ages and target groups

15 responses



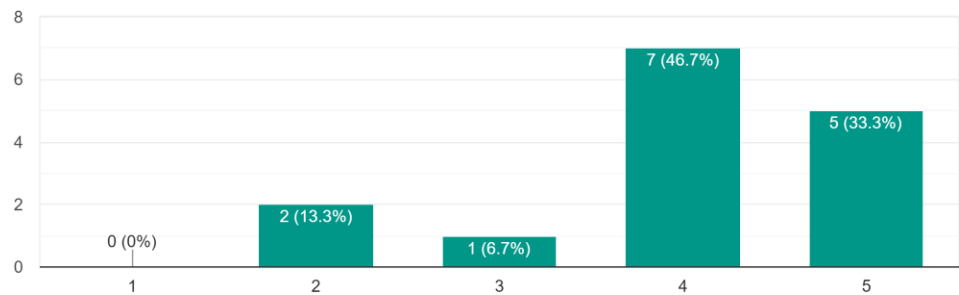
13/ Experiment with street uses/regulation/design ('away from traffic and towards people')

15 responses



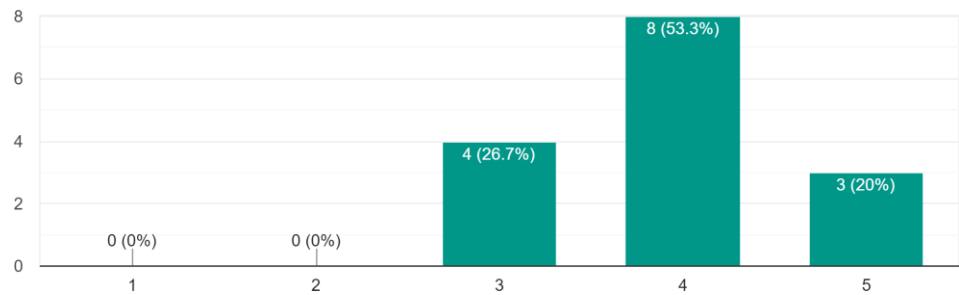
14/ Restricting cars and large vehicles in cities

15 responses



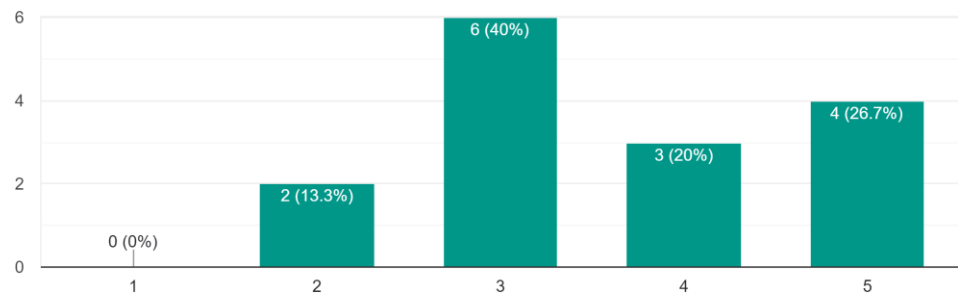
15/ Ideally European Union Broad network approach/guidelines to all modes of transport (pedestrians, bicycles etc.) including 15 km/h zon...stributor roads and connector roads for all modes.

15 responses



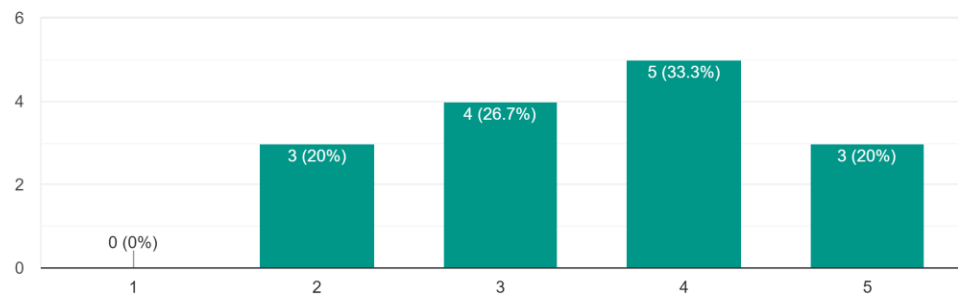
16/ Provide bicycles for those who are in need, identify the target groups first (via public sector, not private), for example Bicycle Library

15 responses



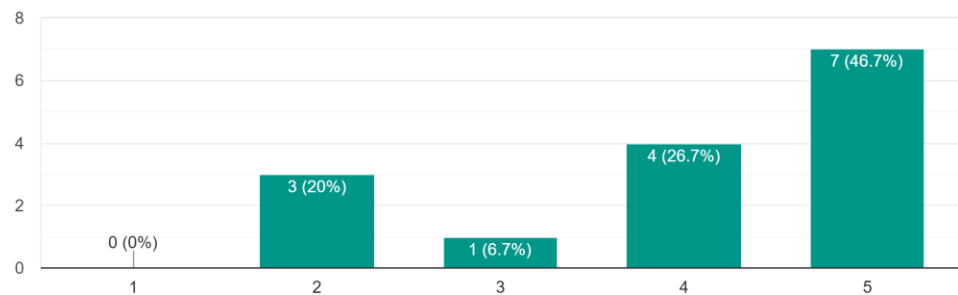
17/ Generalise social pricing to all Europe

15 responses



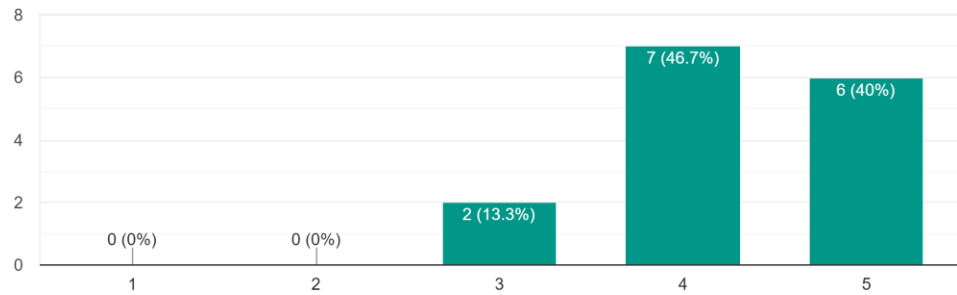
18/ Accessibility of everyone to everywhere by public transport (500m radius) and active modes

15 responses

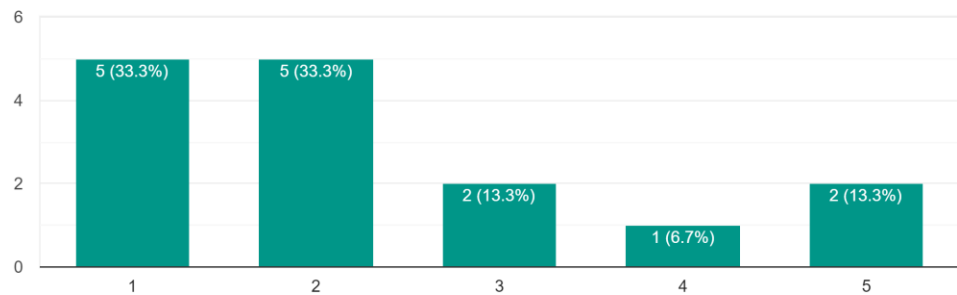


This project has received funding from the European Union's Horizon 2020 research and innovation program under the grant agreement No. 101007019

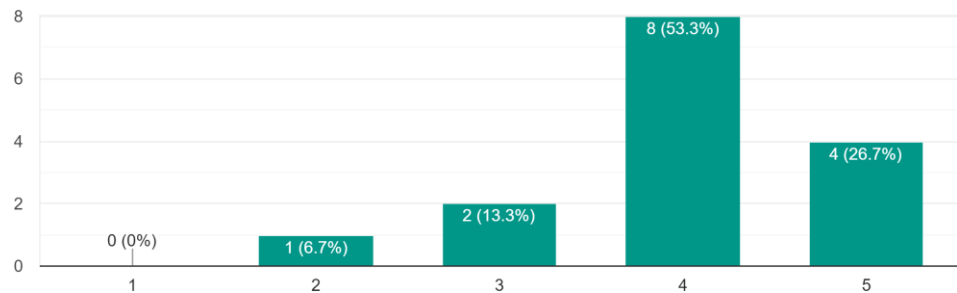
19/ Extend low emission zones to all cities with more than 150,000 inhabitants throughout Europe
15 responses



20/ Generalise free transport to all Europe
15 responses

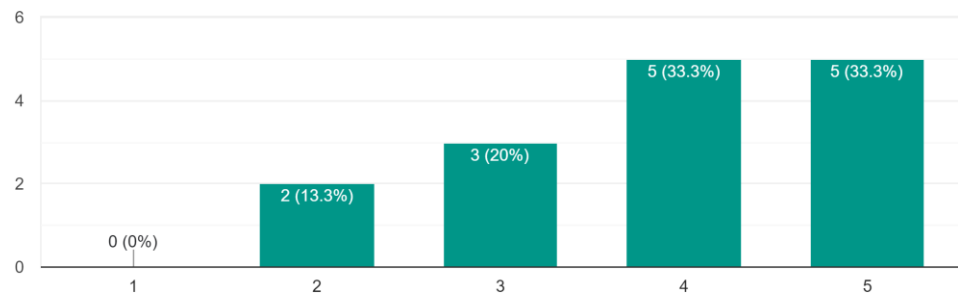


21/ Change the way transport planning & infrastructure decisions are made, moving away from maximising mobility through Cost-Benefit Analysis to maximising accessibility
15 responses



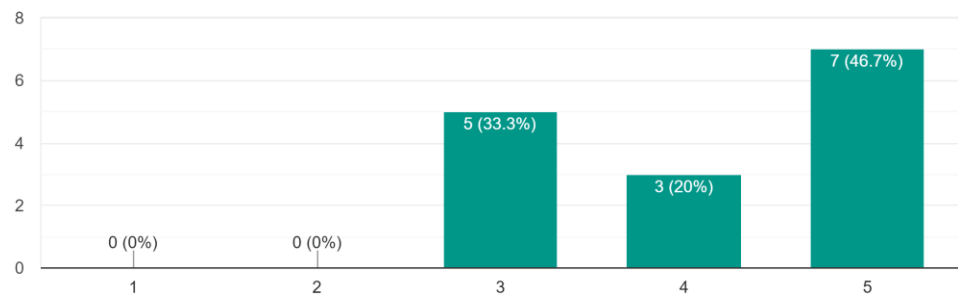
22/ Acknowledge and institutionalise “transport poverty” as a social policy area, and develop indicators to keep track of it both EU and member state level

15 responses



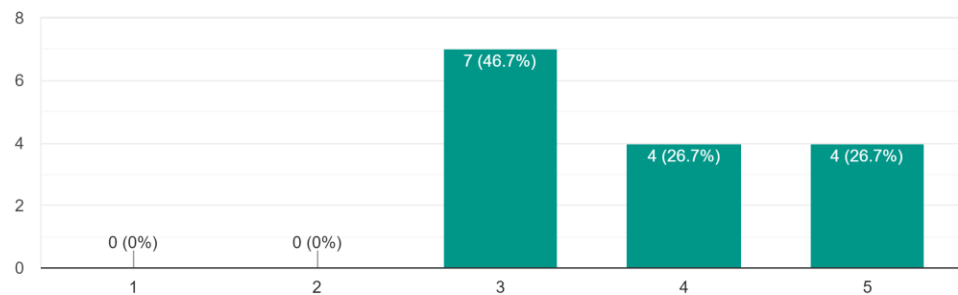
23/ More trees

15 responses



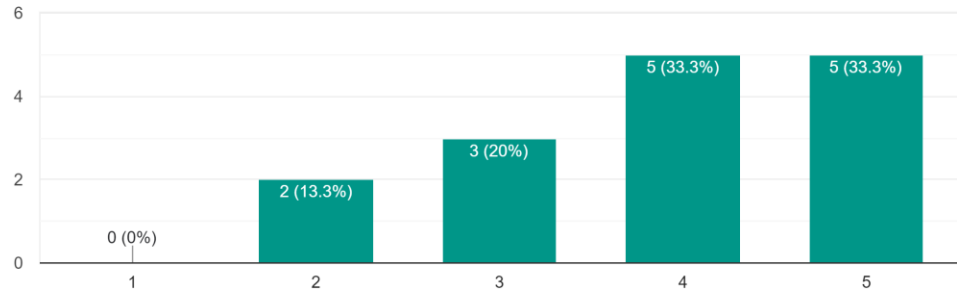
24/ Optimized travel routes for cars. Restrict access and limit traffic flow to certain areas.

15 responses



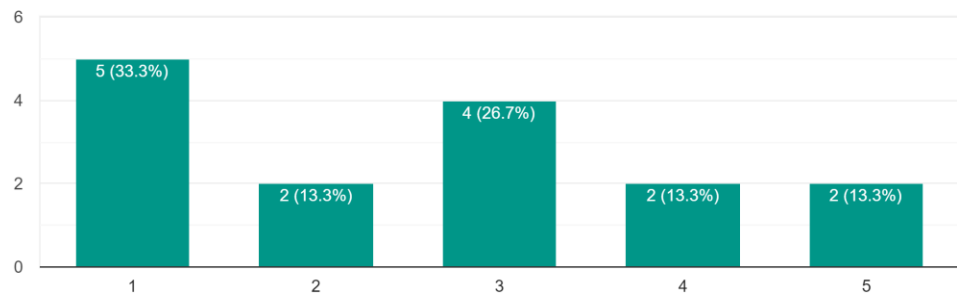
25/ Make sure people are informed. Standardized data can help with streamlining this.

15 responses



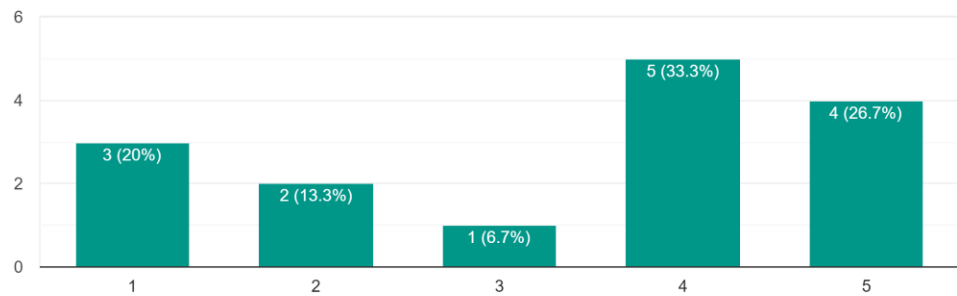
26/ Restricting the sale of fuel to the public .

15 responses



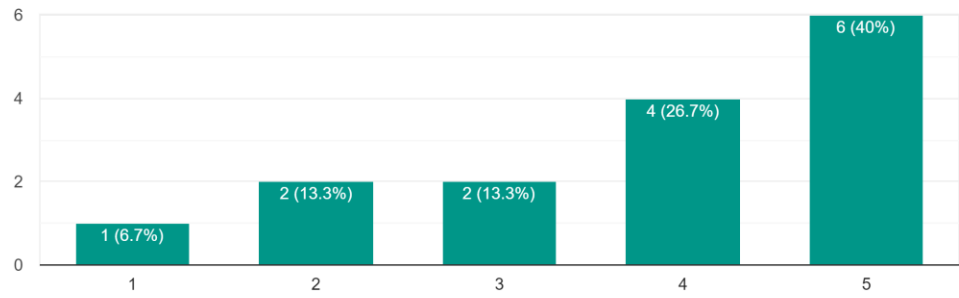
27/ Stop selling fueled vehicles

15 responses



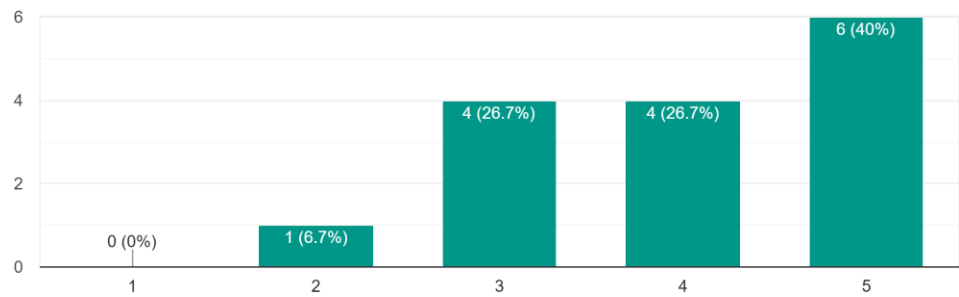
28/ Restricting cars and large vehicles from city centres

15 responses



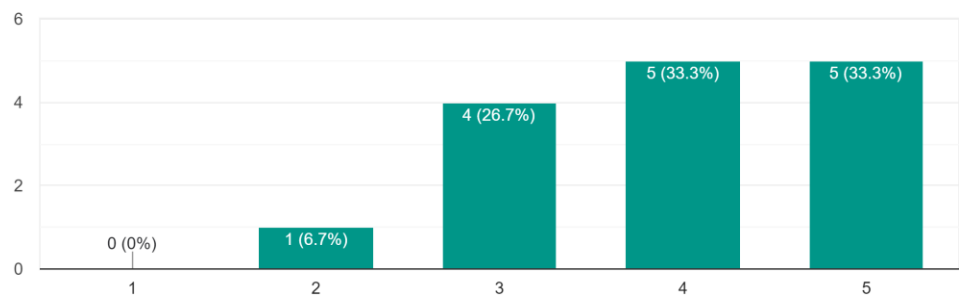
29/ Creating local living nodes (Rethink zoning) / delivery services

15 responses



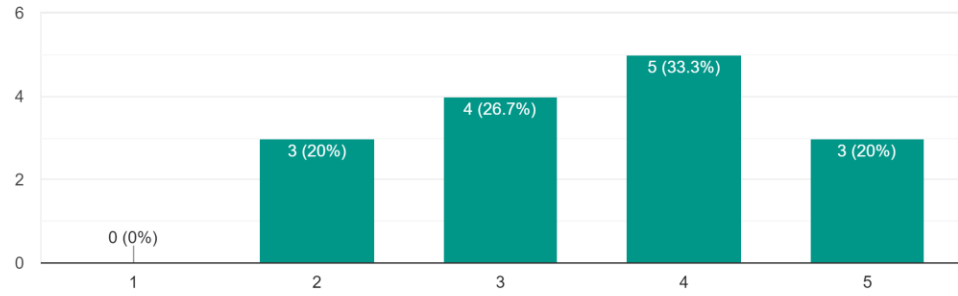
30/ Make transport policy and planning more participatory

15 responses



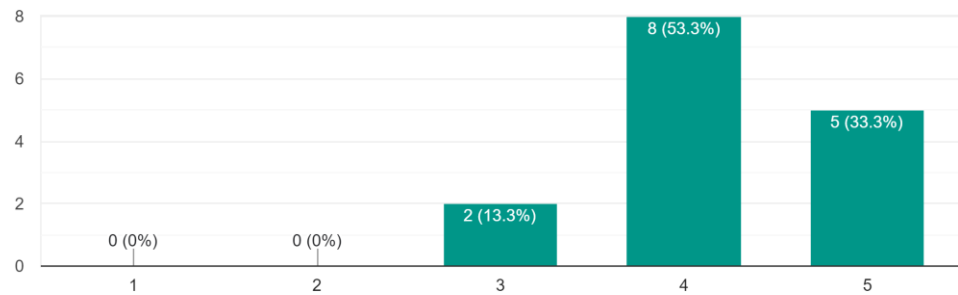
40/ Mobility Hubs with non-mobility offerings.

15 responses



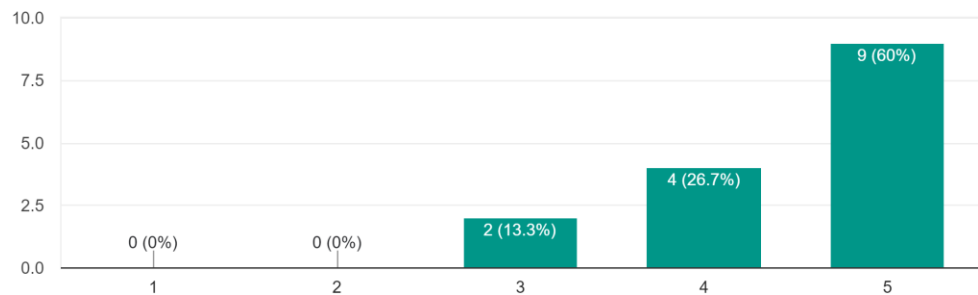
41/ Increase awareness and knowledge on the role of public space (structure and design) for mobility in cities

15 responses



42/ Experiment with street uses/regulation/design (' away from traffic and towards people')

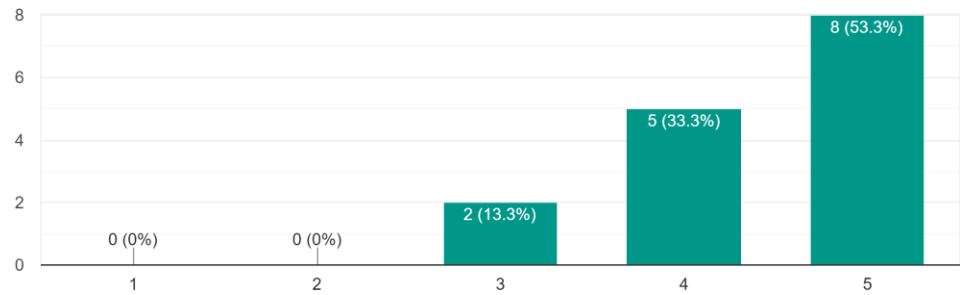
15 responses



This project has received funding from the European Union's Horizon 2020 research and innovation program under the grant agreement No. 101007019

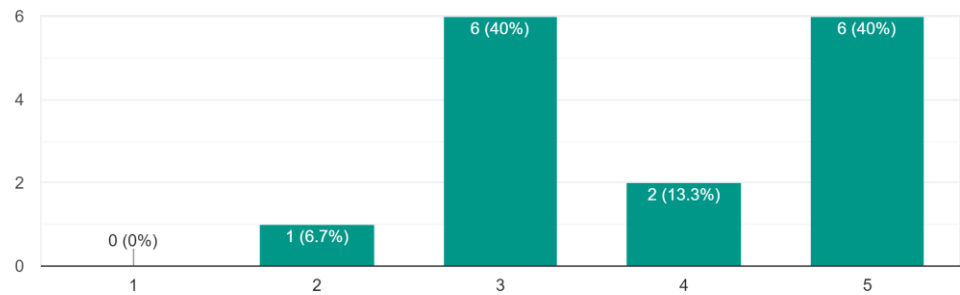
43/ Reallocate street space away from cars / in a fairer way

15 responses



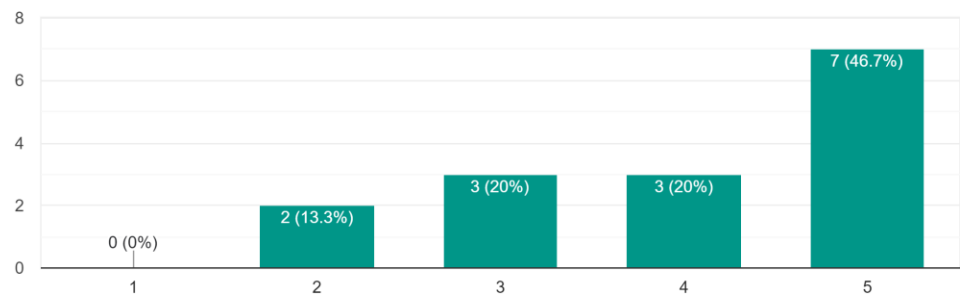
44/ Take advantage of underutilized space (real estate) to make the reallocation for space faster (shift parking towards off-street + reduce & price it)

15 responses



45/ Better understanding of multimodal journeys

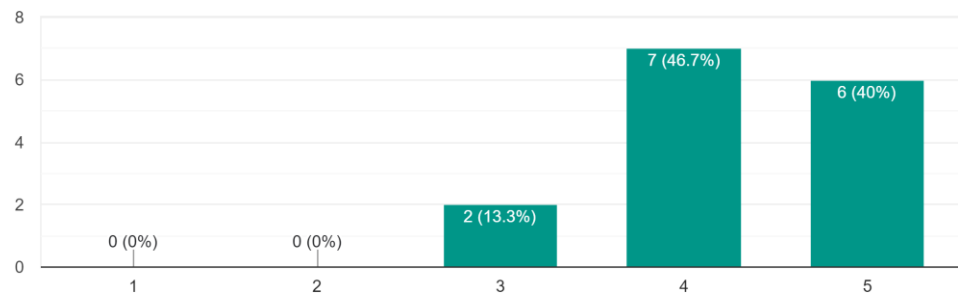
15 responses



This project has received funding from the European Union's Horizon 2020 research and innovation program under the grant agreement No. 101007019

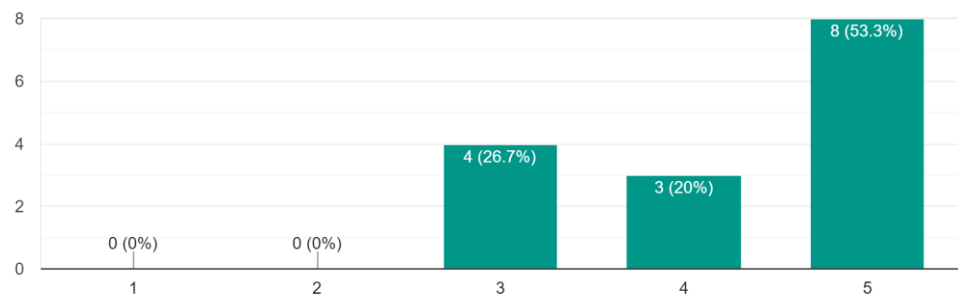
46/ Overcoming segregation in research, planning practice, policy, and funding in public transport and mobility in general

15 responses



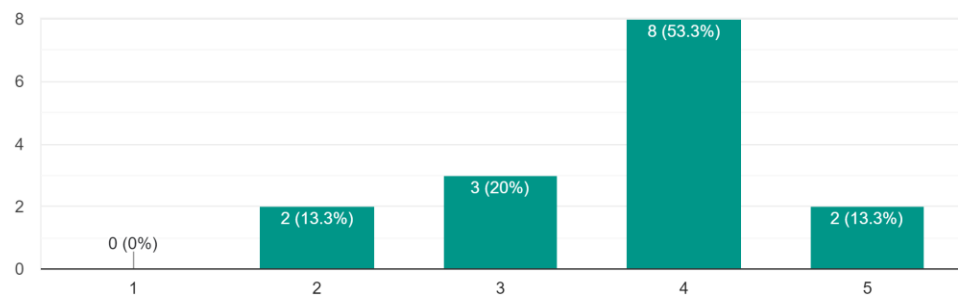
47/ Consider walking as a form of mobility that is of central importance for seamless mobility - and not a problem that needs a "solution" that often increases the complexity of multimodal journeys

15 responses

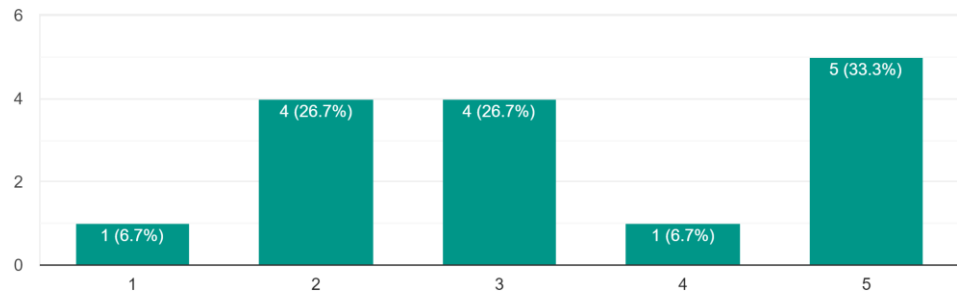


48/ Generalise teleworking when possible

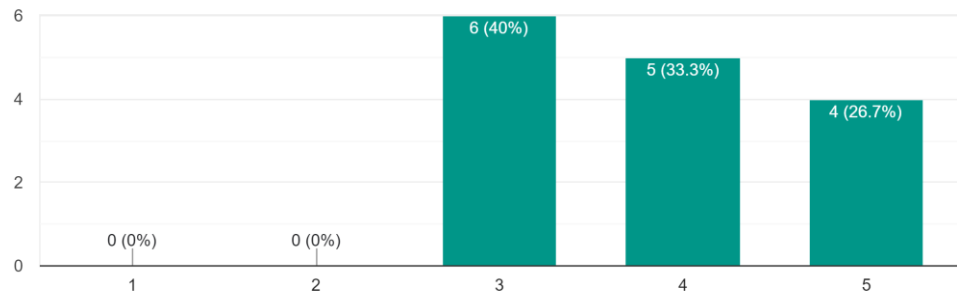
15 responses



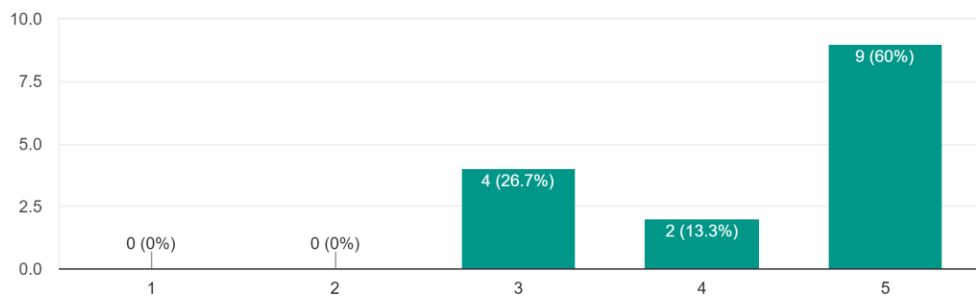
49/ Degrowth: more knowledge and data on the actual environmental impacts on technical mobility "solutions" - electric cars, e-scooters, ... how do ...ective (global - social, environmental and economic)
15 responses



50/ Evidence suggests that telecommuting relocation effect (longer trips mid- to long-term due to suburbanization) is larger than the substitution effect (less trips).
15 responses

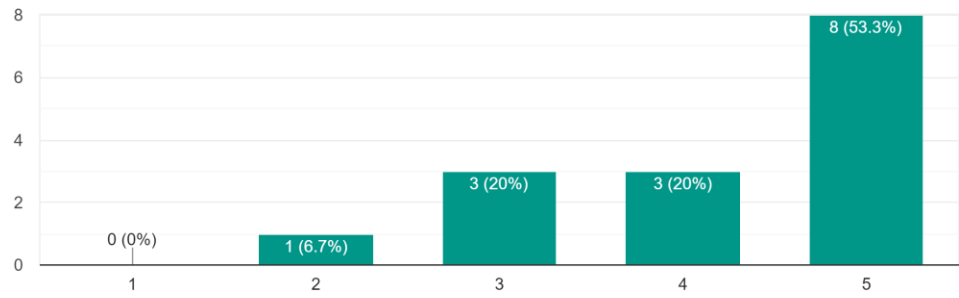


51/ Fair taxes for air travel rather than subsidizing short flights over travelling by rail
15 responses



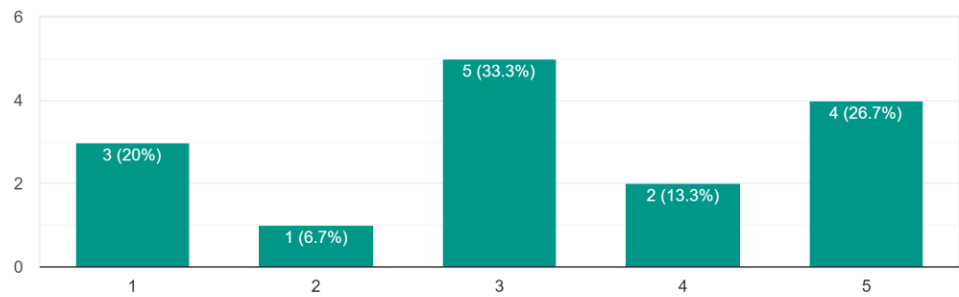
52/ Zoning regulations to protect green space/nature

15 responses



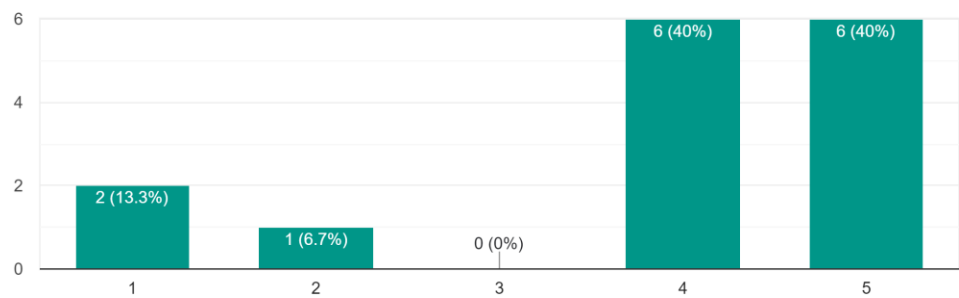
53/ Reduction of working hours

15 responses



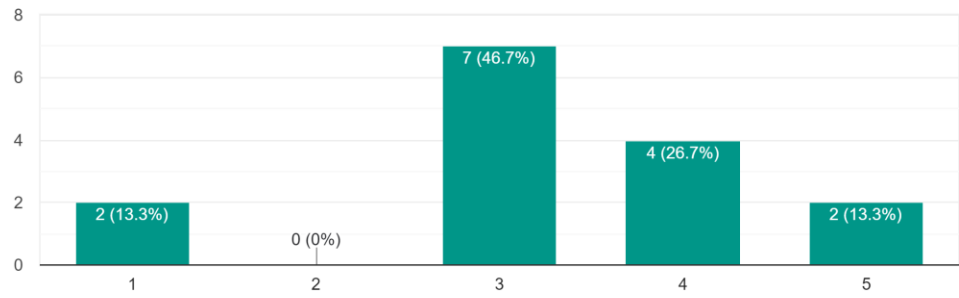
54/ Urban densification

15 responses



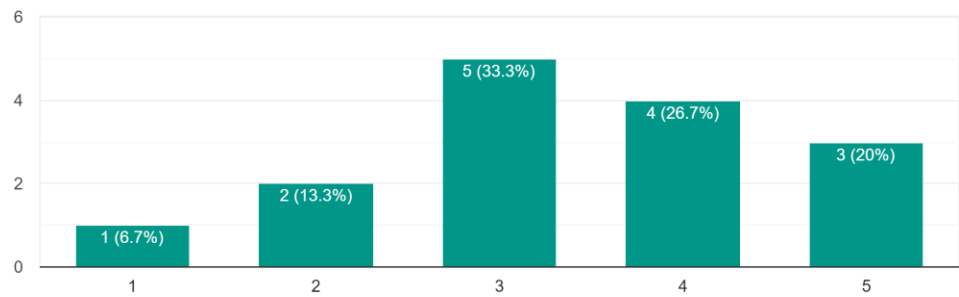
55/ Quotas of mobility rights

15 responses



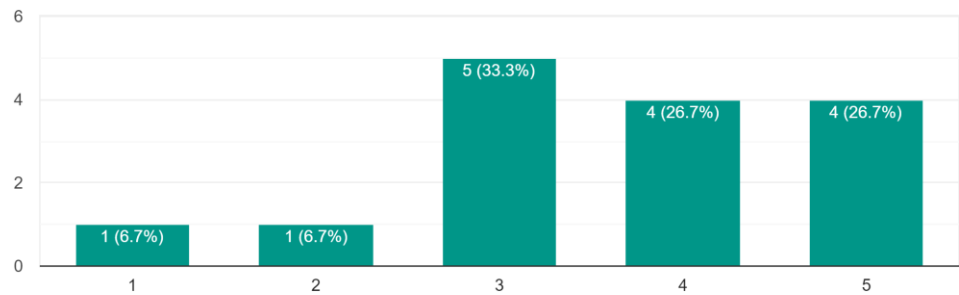
56/ Encourage Relocating households close to their workplaces/needs

15 responses



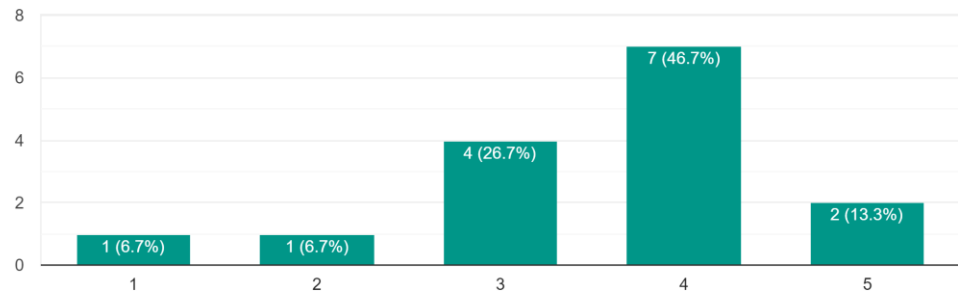
57/ Encourage a public & political debate on which travel purposes / activities ought to be prioritised and catered for, and which ought to be discouraged

15 responses



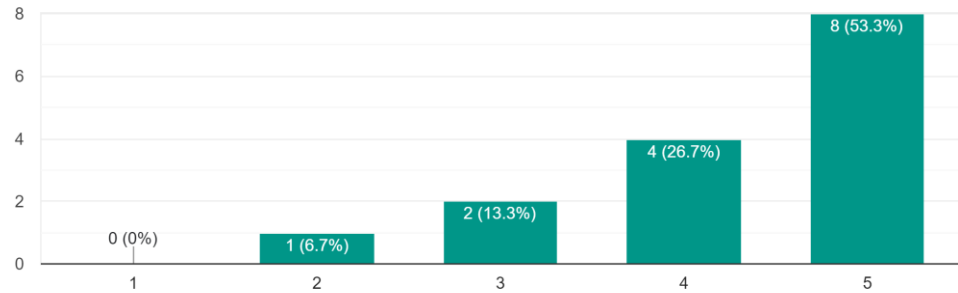
58/ Implement more flexible land-use policies to account for the interaction between residence/economic activity location choices and transport costs

15 responses



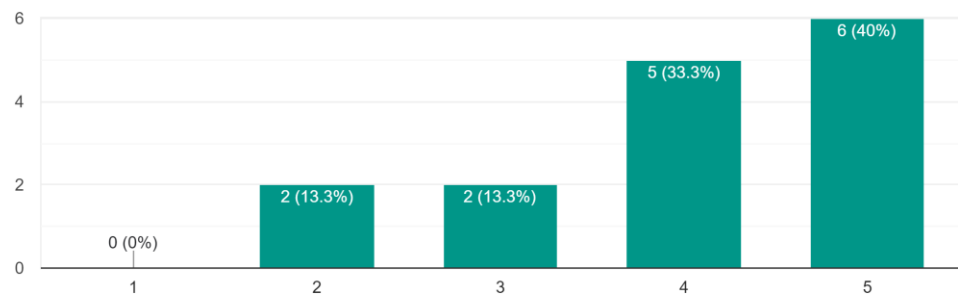
59/ Encourage a comprehensive public / political debate on the wide range of inequalities related to mobility, and how to deal with them in a just way

15 responses

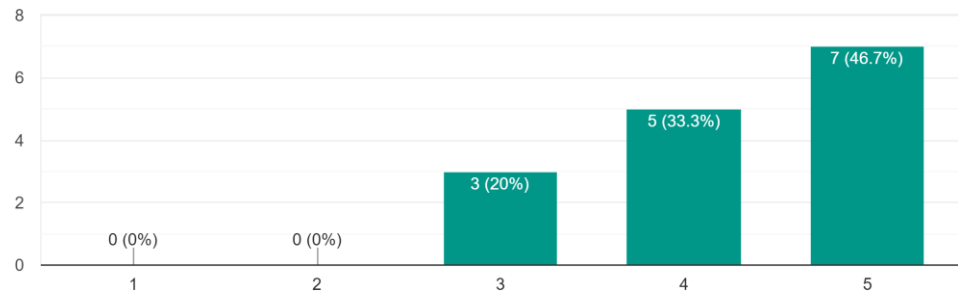


60/ Make sure the "poorer" regions remain accessible, even when gentrification shifts the needs. Keep on top of this over time.

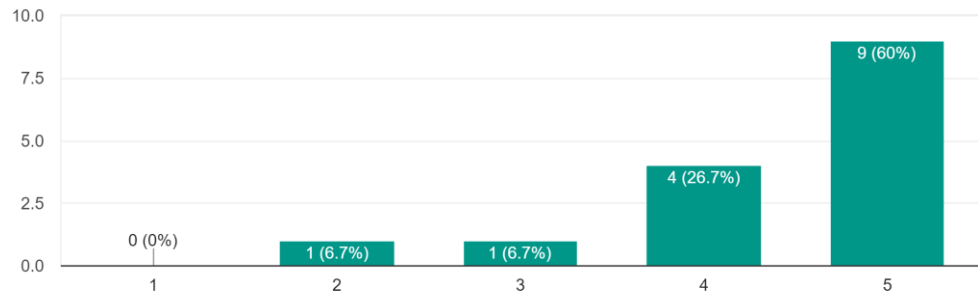
15 responses



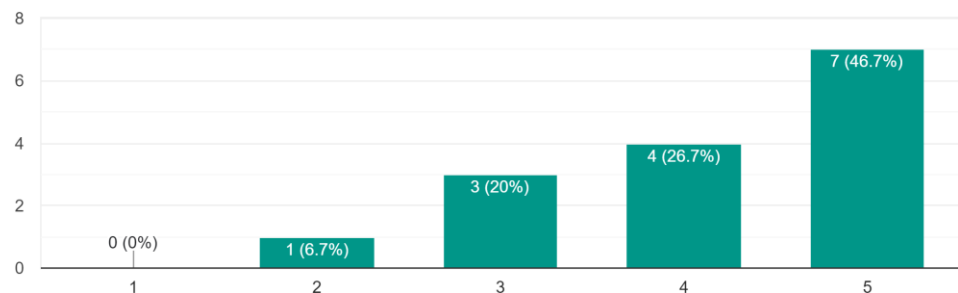
61/ Spend more money on walking, cycling and public transport rather than prioritizing the car. Avoiding that money will only be spend on those who...rtunities to travel in a sustainable and safe way.
15 responses



62/ Push for CO2 neutral modes - walking/biking within the announcement systems (routeplanning, MaaS,...)
15 responses

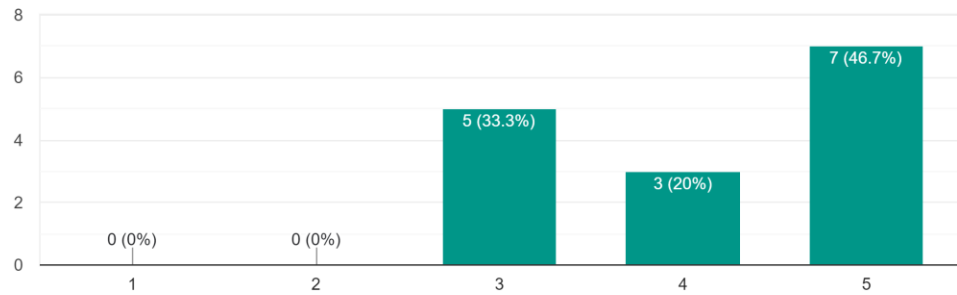


63/ Moratorium on the development of new infrastructure catering to the most environmentally-damaging modes (e.g., motorway and airport expansion)
15 responses



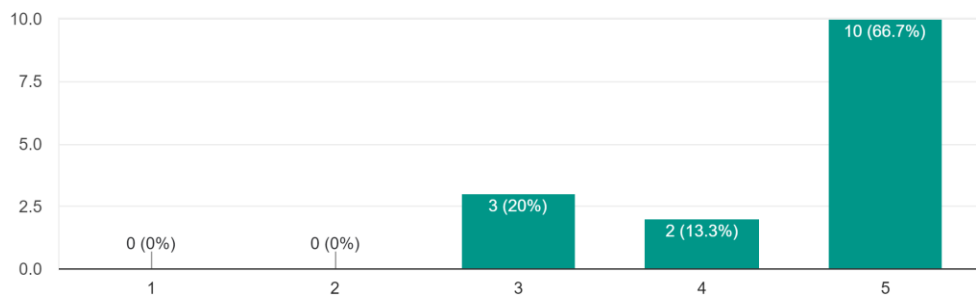
64/ Take into account heterogenous effect in transport evaluation system

15 responses



65/ In general: better link and more communication between policy, practice and research

15 responses



Any comment ?

5 responses

Many questions are policies already in place and well accepted. I suggest to focus the analysis on those more radical and/or innovative.

14 and 28 are same...

We should move away from only people centred (mobility) policy objectives and take a holistic approach whereby the environment and (farm & wild) animals are taken into consideration

We need probably all of these suggestions, and more. The question is what might be most effective? We need to remember that the EU does only what the national governments want. Getting national governments more involved in challenges that are so far mostly handled on the city level might be an important large scale strategy.

I believe the link between transport, housing (real state) and the environment are key. See some thought on it here: <https://academic.oup.com/cjres/advance-article-abstract/doi/10.1093/cjres/rsac021/6607697>



9 ILLUSTRATION TABLE

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