

D4.3: The alternative mobility vision

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Contents

Executive summary	3
1. Introduction	4
2. The REBALANCE scenarios	4
3. Visionary workshop	5
3.1. Poll and results	6
3.2. Summary of the voting results	11
3.3. The REBALANCE scenarios and the emerging vision after the workshop	13
3.4. Discussion	14
3.5. Likelihood of the scenarios	14
4. Visionary survey	14
4.1. Survey results	15
4.2. The REBALANCE scenarios and the emerging vision after the survey	19
5. The REBALANCE vision	20
5.1. Approach	20
5.2. The Vision	21
5.3. Transition to the Vision	24
6. Way forward	25
ANNEX I. Survey results	26



EXECUTIVE SUMMARY

This report describes the research and consultation activities carried out in the third phase of the scenario building process of REBALANCE (Task 4.3), and the results achieved. It notably presents the Vision emerging from the whole forward-looking exercise to shape the future of European transport, better reflecting the inner values and beliefs of Europeans, considering the environmental boundaries of the planet and the wellbeing of the people.

Chapter 1 - Introduction sets the scene for the overall scenario building activities of the project.

Chapter 2 – The REBALANCE Scenarios summarizes the main features of the 4 scenarios previously identified

Chapter 3 – Visionary workshop describes the workshop organized with a restricted group of experts and stakeholders to elicit the basic elements of a vision, based on the participants preferences and desirability statements.

Chapter 4 – Visionary survey presents the on-line survey directed to a wider group of experts and representatives from the civil society and how the results feed into the vision of an ideal mobility culture at 2050.

Chapter 5 – The REBALANCE Vision illustrates the main features of the alternative vision of mobility culture emerging from the project activities so far.

Chapter 6 – Way forward recaps the forthcoming, concluding steps of the project, aimed at devising a Roadmap towards the implementation of the alternative vision.



1. INTRODUCTION

REBALANCE is an open, deliberative forward-looking exercise aiming at conception and validation of a new transport paradigm reflecting a new mobility culture. The exercise pushes for a more effective ponderation of the emerging social values not yet fully considered in transport policymaking, and a better alignment with the SDGs and the mounting concerns about climate change.

REBALANCE moves from the assumption that the mobility culture that currently prevails in the world (including Europe) has led to unsustainable travel patterns, in social and environmental terms. From a critical review of the present (see deliverables D3.2¹ and D3.3²) also in the light of the recent COVID-19 pandemic, REBALANCE is building a vision over the future and the roadmap to achieve it, which will be embedded in a Manifesto with the aim to stimulate European policymakers to adapt concrete legal and political measures while moving the wider European communities towards a radical change.

This Deliverable reports on the third phase of the REBALANCE scenario building process. Figure 1 shows the overall sequence of this process. Building upon the outcome of the initial steps (see Deliverables D4.1³ and D4.2⁴) which led to the identification of a set of culture and value-related drivers and how these have helped generate 4 scenarios for future mobility culture at 2050, this report describes the work carried out and the outcome of the final steps of the scenario building process.

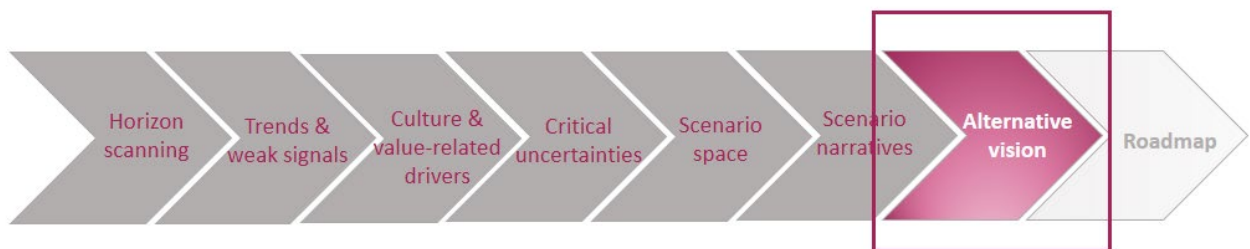


FIGURE 1: THE SCENARIO BUILDING PROCESS

The following chapters give details about the methodological approach adopted for each step and the main findings.

2. THE REBALANCE SCENARIOS

As described in detail in D4.2, the adopted scenario framework is built around two macro characterisations:

- “Type of society”, i.e. the broad characterisation of society in terms of its prevailing values and cultural tenets.

¹ D3.2 – The fundamentals of the mobility culture of today

² D3.3 – Current Values behind the politics of Mobility: Critical Review

³ D4.1 – Multi-sectorial trends and drivers shaping the future of European transport

⁴ D4.2 - Alternative narratives for the future of transport in Europe

- “Powers and politics”, characterising the governance model and its basic instruments.

Combining these two dimensions, four scenarios emerge (figure 2), which we have chosen to name after prominent mythological protagonists:

- *Scenario A: Hercules (the myth of strength)*, where a rigid society is guided by hard powers.
- *Scenario B: Themis (the myth of justice)*, where soft powers prevail in handling the rigidity of society.
- *Scenario C: Gaia (the myth of interconnections)*, where a fluid society is kept afloat by recurring to soft policy instruments.
- *Scenario D: Hermes (the myth of speed)*, where command-and-control policies keep a fluid society in check.

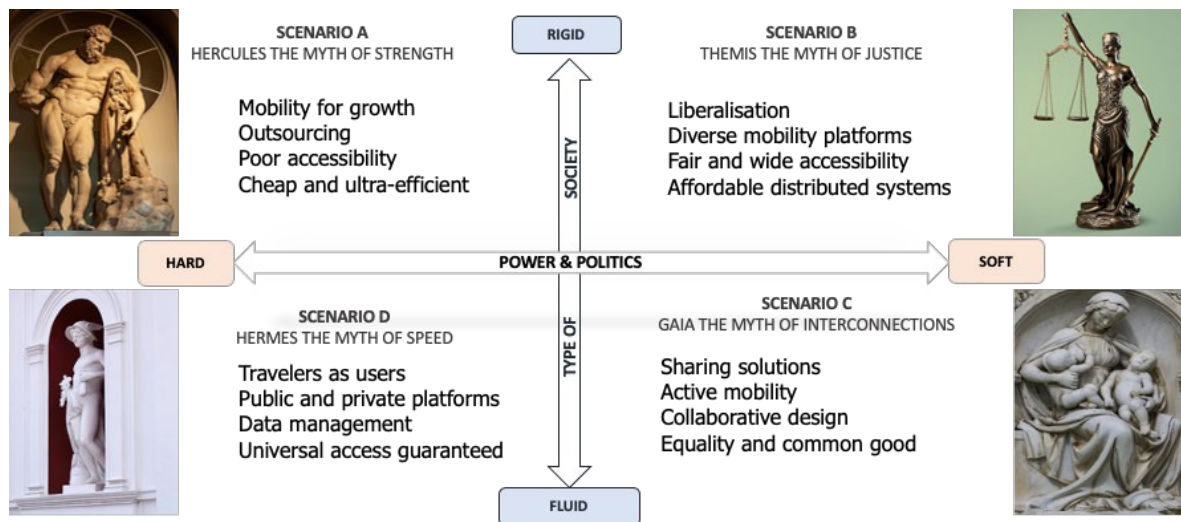


FIGURE 2: THE REBALANCE SCENARIOS

3. VISIONARY WORKSHOP

REBALANCE organized on 24 March 2022 a restricted workshop to help into the pathway of devising a Vision for the mobility culture at 2050. This last phase of the foresight process aimed at the identification, and more in-depth characterisation of the alternative narrative that better combines (i) the most desirable features in terms of long-term sustainability, with (ii) the most faithful reflection of the profound societal values needs and aspirations and of their possible future dynamics, against the backdrop of the agenda 2030 and other inalienable international commitments.

The visionary workshop had a restricted audience of stakeholders and other experts, who had previously engaged in the REBALANCE project through their contributions to explorative conversations and deliberative dialogues on the current situation and future of mobility culture. The meeting was carefully planned regarding the group's

composition and the group discussion in order to create an environment in which people feel free to talk openly. The workshop lasted 2 hours. Andrea Ricci together with his colleagues from ISINNOVA steered the discussion. All consortium members participated in the online event as observers of the process.

The meeting was attended by 20 participants (mix of experts and stakeholders). The downside of this high turnout is that it makes it challenging to ensure that each and every participant has a chance to express his or her views. This constraint was satisfactorily addressed by making use of a ZOOM poll, which allows participants to contribute by answering questions, whether or not they then have the opportunity of taking the floor.

3.1. Poll and results

The participants were asked about their preferred feature of several mobility aspects. In order to avoid undue influence towards any scenario, the possible choices were listed in alphabetical order without any reference to the scenario to which they belong. The results and contributions thus obtained are the following:

1. Future mobility must be essentially...

- Fair 29%
- Fast 0%
- Sustainable 53%
- Useful 18%

Comments: Sustainable mobility implies fair mobility for all. We have no other option but to be sustainable for the sake of survival, and also it is no option to be sustainable at the cost of fairness. The challenge is to achieve sustainability simultaneously with other aspects. Sustainability could be harder to reach in less developed countries.

2. What should be the priority of the future mobility system? First of all...

- Accessibility 53%
- Proximity 21%
- Safety & security 21%
- Seamlessness 5%

Comments: Many polices in cities currently promote proximity. Sustainable accessibility could translate into more proximity. Proximity is one of the factors enabling accessibility, but the opposite is not always true. Seamlessness seems appropriate for freight and goods, not for people. Traditional accessibility measurements (i.e. minutes traveled) are correlated with safety and security.

3. How can mobility best respond to our future needs and aspirations?

- Affordable services 32%



- Convivial services 26%
- Premium services 0%
- **Reliable services 42%**

Comments: Affordability should subsume reliability. Emerging technologies will play a crucial role in terms of inclusion and exclusion. Sustainability must be the premise for all options. Reliability serves as an indicator in many assessment procedures (i.e. Germany). We need movement to be made not at the cost of conviviality (in the sense of Ivan Illich), more cars in cities are not welcome.

4. Which factors will determine service quality?

- Low environmental impact 28%
- **Minimum level of service to all groups and places 44%**
- Network density 28%
- Saving time to all travellers 0%

Comments: Network density is an essential quality of the service. Low environmental impact (related to sustainability) should be transversal to all options.

5. How much do we need to move?

- Increased mobility among distant key origin and destinations 6%
- Increased mobility coupled with growth: We move more 0%
- **Mobility decoupled from growth: We move differently 72%**
- We move less 22%

Comments: To move less could imply the risk of having less freedom. Reduced mobility defined in terms of km per person per day must be reduced in the global north. The answer could depend on the definition of mobility.

6. Alone or together?

- **Communitarian 41%**
- Customized to groups 29%
- Individual 12%
- Massive 18%

Comments: In a city, mass transport is the only option if you want to move together.

7. Are we ready to pay?

- Cheap but low quality 0%



- Different prices for different groups 50%
- Different prices for different purposes 50%
- Expensive but efficient 0%

Comments: Different prices for different groups means equity and social inclusion. Different prices for different purposes fit in leisure or business trips.

8. What is the optimal accessibility principle for PT?

- Exclusive 5%
- Free 11%
- Regulated 28%
- **Universal 56%**

Comments: Free means that someone pays for the service, a social cost.

9. Which privacy protection options?

- No privacy concerns 0%
- Opt-in for the sake of profit 18%
- Opt-in for the sake of accessibility 29%
- **Opt-out 53%**

Comments: Everyone has privacy concerns, not really an option.

10. What can realistically turn us away from private cars?

- Active mobility 18%
- Public transport 0%
- Services customized to the needs of users' diversity 23%
- **Smart multimodal mobility 59%**

Comments: Customized services are already part of the smart mobility concept. The other two options are complementary and should be part of smart multimodal mobility.

11. Planning for mobility policies

- Adaptive/reactive policies 24%
- **Co-creation, bottom-up self-organization 29%**
- **Pro-active muddling-through policies 29%**



- Top-down planned investments and regulations 18%

Comments: Regulations are complex and sometimes are centrally defined for the sake of conformity or equality, while in other cases some aspects are delegated to smaller entities (i.e. cities, local authorities).

12. How important is the truthfulness of prices?

- Getting market prices right by internalizing all social and environmental impacts 50%
- Getting market prices right with partial internalization and customized to each traveller 28%
- Prices not a key tool to induce new behaviours 17%
- Transport prices decided politically to generate income 5%

Comments: Indicators of social cost are not valid, we need rules because there is no elasticity.

13. The common good is defined by...

- General interest objectively guaranteed by public administrations 59%
- National interest imposed by central governments 0%
- People's interest as defined by themselves directly 41%
- Private interest advocated by lobbies 0%

Comments: This aspect is directly related to democracy (and what type of democracy).

14. Which range of mobility options?

- Essential mobility only 18%
- Free mobility from/to everywhere 41%
- Mobility on demand 41%
- Priority to long-distance mobility 0%

Comments: Mobility on demand could be one of the instruments for free mobility. Mobility on demand is more connected to the supply side.

15. How should we steer people's behaviour?

- New behaviour mandatory because of regulations 12%
- New values 29%
- Nudged behaviours 53%



- Old behaviour enhanced by technologic evolution 6%

Comments: Lifestyles are changing because of young people, new values are here.

16. Which role for technology?

- Human-centered technology serves the interests of local communities 53%
- Technology enhances system efficiency 18%
- Technology ensures growth 0%
- Technology solves environmental problems 29%

Comments: Not only local communities are served.



3.2. Summary of the voting results

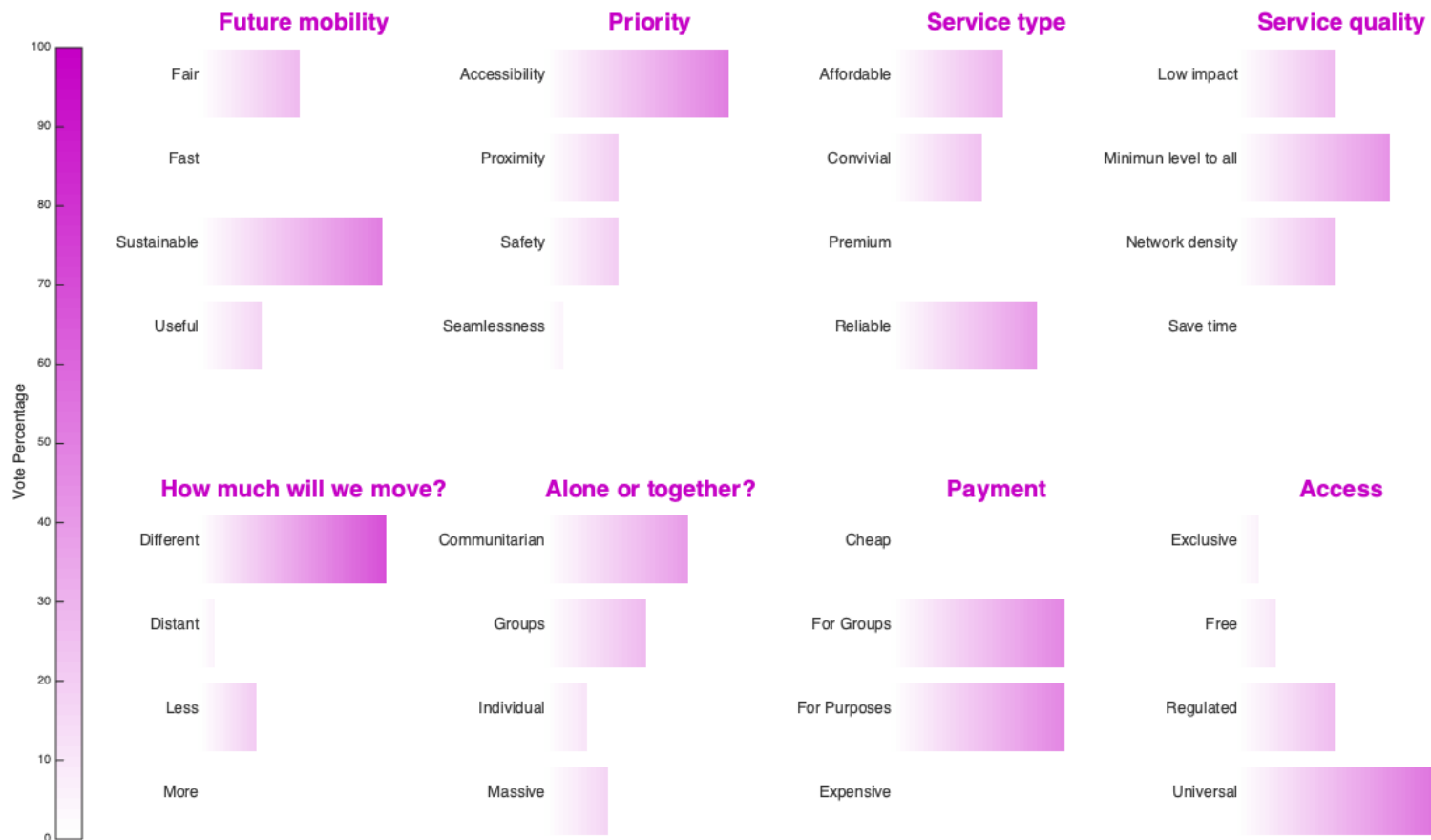


FIGURE 3: VOTING RESULTS (I)



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

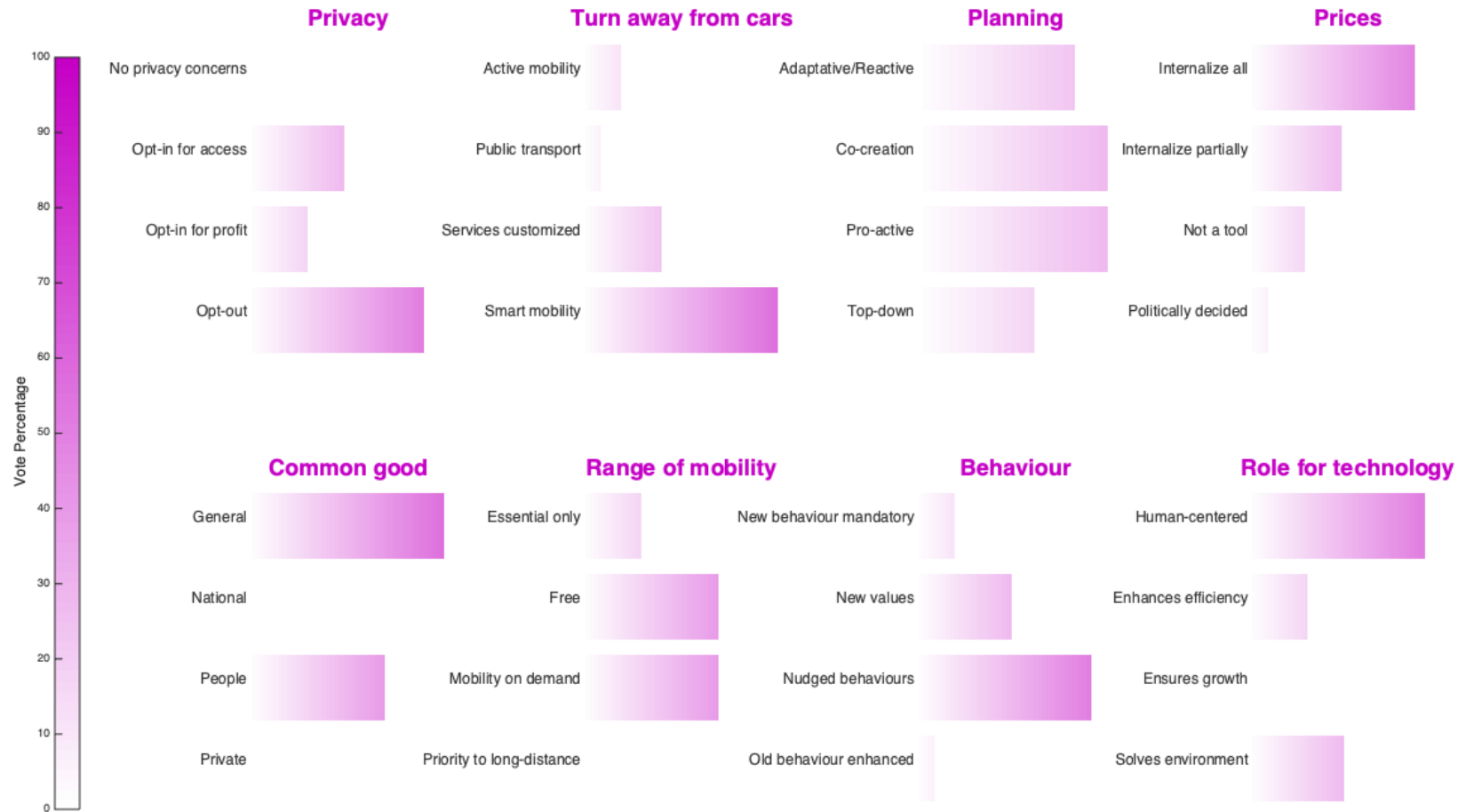


FIGURE 4: VOTING RESULTS (ET II)



3.3. The REBALANCE scenarios and the emerging vision after the workshop

The results were also presented associated with the 4 scenarios. The pathway that links the top-ranked voting results is placed either in Themis or Gaia, except for a couple of features. According to this, the vision would derive from a combination of the two soft-powered scenarios.

	Hercules	Themis	Gaia	Hermes
What makes this planet a better place	Growth	Equity	Wellbeing	Efficiency
Future mobility must be essentially...	Useful	Fair	Sustainable	Fast
Priority of the future mobility system	Safety & security	Accessibility	Proximity	Seamlessness
Mobility response to needs & aspirations	Reliable services	Affordable services	Convivial services	Premium services
Factors that determine service quality	Network density	Minimum level to all	Low environmental impact	Saving time to all travellers
How much do we need to move?	We move more	We move differently	We move less	Increased distant mobility
Alone or together	Massive	Customized to groups	Communitarian	Individual
Readiness to pay	Cheap but low quality	Prices for different groups	Prices for different purposes	Expensive but efficient
Optimal accessibility principle for PT	Regulated	Universal	Free	Exclusive
Privacy protection options	Opt-in for profit	Opt-in for accessibility	Opt-out	No privacy concerns
What can turn us away from private cars	Public transport	Customized services	Active mobility	Smart multimodal mobility
Planning for mobility policies	Top-down	Pro-active muddling-through	Bottom-up self-organization	Adaptive/reactive policies
Importance of truthfulness of prices	Prices to generate income	Prices internalize impacts	Prices not a key tool	Customized prices
The common good is defined by...	National interest imposed	General interest guaranteed	Interest defined by people	Private interest by lobbies
Range of mobility options	Essential mobility only	Mobility on demand	Free mobility to everywhere	Priority to distance mobility
How to steer people's behaviour	Regulations	Nudging	New values	Technologic evolution
Which role for technology	Technology for growth	Human-centered technology	Technology for environment	Technology for efficiency

FIGURE 5: THE REBALANCE EMERGING VISION AFTER THE WORKSHOP



3.4. Discussion

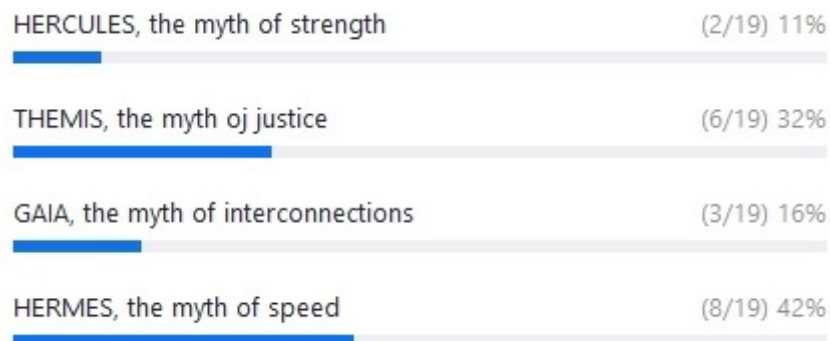
Next to apparent trade-offs (different things some of the participants vote for and some not) there are also things nobody/few vote for, and we seem thus to agree we should not pursue. Interestingly, the latter are often presently dominating values (e.g. fast, seamlessness, premium, individual, exclusive, etc.). The avoided "values", unwanted "keywords" tell maybe as much as those that were chosen.

Focusing only on mobility implies the potential risk of missing opportunities for change in the context, such as land use/destinations and further lifestyles, business models etc. Not taking care of the consequences, and without care of (urban) space consumed we might lose the urban perspective and ignore what sort of cities we want. WP5 will partially tackle this issue.

Mostly, we seem to know what we do not know, in a sort of anti-vision. But on the other hand, the results of the workshop reflect a very European scale of values. The Hercules scenario could be mainly associated with China, while Hermes would correspond to the American approach. The challenge resides in combining all the elements to build an ideal, desired vision in a coherent way.

3.5. Likelihood of the scenarios

At the end of the meeting, the participants were shown the vote results on the likelihood of the scenarios that was conducted during the previous focus group. The results to the question "In your opinion, which is the most plausible scenario?" had been the following:



If we compare it with the results of the visionary workshop, we can clearly see a discrepancy between the most plausible scenario (Hermes) and the desired one (somewhere between Themis and Gaia).

4. VISIONARY SURVEY

After targeted interactions with experts and stakeholders, notably the visionary workshop to help shaping and characterizing the Vision, an online survey was conducted to gather the feedback of a wider range of stakeholders and serve as a basis for the validation of the Vision.

A total of 142 responses were received, 94% of which belong to European citizens. Significantly, more than 60% of the participants are younger than 40, something that



will be reflected particularly in a couple of questions of the survey. Regarding the relation of the respondents to the transport sector, there is an almost perfect split between professionals and non-professionals. The consortium is a bit less satisfied with the gender balance of the survey, being the male turnout more than 14 points higher than the percentage of female voters.

4.1. Survey results

The respondents were asked about their preferred feature of several mobility aspects. The questionnaire was refined by the consortium, and this resulted in 13 questions out of the previous 16 being posed due to the focus on pure mobility concepts. As was done in the visionary workshop, the choices were listed in alphabetical order to avoid undue influence towards any particular scenario. The obtained results are the following:

1. In an ideal world, which of these characterisations of mobility takes priority?

- Fair 14%
- Fast 14%
- Sustainable 54%
- Useful 18%

Comment: Same result than in the visionary workshop.

2. The mobility system provides a service. If you had to pick one and only one fundamental quality of the mobility service, which one would you select?

- Accessibility 45%
- Proximity 25%
- Safety & security 21%
- Seamlessness 9%

Comment: Same result than in the visionary workshop (lower majority).

3. How can mobility best respond to our future needs and aspirations?

- Affordable services 34%
- Convivial services 12%
- Premium services (supply differentiation according to needs) 3%
- Reliable services 51%

Comment: Same result than in the visionary workshop (bigger majority).



4. The quality of mobility services depends on a variety of factors. Which of these principles do you perceive as the fundamental driver to achieve service quality?

- Low environmental impact 32%
- Minimum level of service to all groups and places 20%
- Network density 21%
- Saving time to all travellers 26%

Comment: In this question the responses were much more scattered than before, but the votes of the under 40 give priority to the environmental approach.

5. Is mobility inextricably correlated to growth? To wellbeing? What does this mean in terms of how and how much we will actually need to move?

- Increased mobility among distant key origin and destinations 6%
- Increased mobility coupled with growth: We move more 20%
- Mobility decoupled from growth: We move differently 63%
- Reduced mobility. We move less 11%

Comment: Same result than in the visionary workshop (lower majority).

6. Alone or together? Mobility has a social dimension. Which of these options corresponds best to your ideal mobility experience?

- Communitarian (focused on the needs of specific communities, geographically or functionally defined) 52%
- Customized to groups (according to socio-economic status, to mobility purpose...) 26%
- Individual 13%
- Massive 9%

Comment: Same result than in the visionary workshop (bigger majority).

7. Is the trade-off between cost and quality of service inevitable? Is price differentiation the solution?

- Cheap but low quality 1%
- Different prices for different groups 23%
- Different prices for different purposes 73%
- Expensive but efficient 3%



Comment: Different prices continues to be the preferred options. In this case, with a majority for different purposes, while in the workshop the participants were equally inclined towards different groups.

8. With the massive advent of artificial intelligence and other ICT-based solutions, is there a threat to our privacy? And how should we deal with it?

- No privacy concerns 14%
- Opt-in for the sake of accessibility 20%
- Opt-in for the sake of profit 27%
- Opt-out 39%

Comment: Same result than in the visionary workshop (lower majority).

9. There is in general consensus on the need to reduce the prevalence of private car use, especially in the urban context. Policy packages may include a variety of options to do so, but what should be the priority lever?

- Active mobility 16%
- Public transport 30%
- Services customized to the needs of users' diversity 20%
- Smart multimodal mobility 34%

Comment: Same result than in the visionary workshop (lower majority).

10. How important is the truthfulness of prices? Is there an inevitable trade-off between fairness and efficiency?

- Getting market prices right by internalizing all social and environmental impacts 52%
- Getting market prices right with partial internalization and customized to each traveller 24%
- Prices not a key tool to induce new behaviours 16%
- Transport prices decided politically to generate income 8%

Comment: Same result than in the visionary workshop.

11. Freedom of movement is an incontrovertible right of EU citizens. Is it sensible, and feasible, to temperate it in the name of sustainability and wellbeing?

- Essential mobility only 20%
- Free mobility from/to everywhere 50%



- Mobility on demand 23%
- Priority to long-distance mobility 7%

Comment: Free mobility is now the sole preferred option, while mobility on demand loses some support.

12. How should we modulate people’s mobility choices and behaviours to achieve an “ideal” mobility of the future?

- Behaviours increasingly reflecting emergence of new values 46%
- New behaviours mandatory because of regulations 25%
- Nudged behaviours 17%
- Old behaviours persist, enhanced by technologic evolution 12%

Comment: Totally different result than in the visionary workshop. Nudged behaviours give way to reflecting emergence of new values, mostly among people under 40.

13. Technology - and the understanding of its implications - are inherently complex. What is the role of technology and what is the best way to introduce and promote advanced technology-based mobility solutions?

- Human-centered technology serves the interests of local communities 45%
- Technology enhances system efficiency 33%
- Technology ensures growth 3%
- Technology solves environmental problems 19%

Comment: Same result than in the visionary workshop (lower majority).



4.2. The REBALANCE scenarios and the emerging vision after the survey

The adjusted results are presented below associated with the 4 scenarios. The pathway that links the top-ranked voting results continues to be mostly placed either in Themis or Gaia. Following people’s preferences, the vision would derive from a combination of the two soft-powered scenarios with a slight preference towards Gaia.

	Hercules	Themis	Gaia	Hermes
What makes this planet a better place	Growth	Equity	Wellbeing	Efficiency
Future mobility must be essentially...	Useful	Fair	Sustainable	Fast
Priority of the future mobility system	Safety & security	Accessibility	Proximity	Seamlessness
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What can turn us away from private cars	Public transport	Customized services	Active mobility	Smart multimodal mobility
Importance of truthfulness of prices	Prices to generate income	Prices internalize impacts	Prices not a key tool	Customized prices
Range of mobility options	Essential mobility only	Mobility on demand	Free mobility to everywhere	Priority to distance mobility
How to steer people’s behaviour	Regulations	Nudging	New values	Technologic evolution
Which role for technology	Technology for growth	Human-centered technology	Technology for environment	Technology for efficiency

FIGURE 6: THE REBALANCE EMERGING VISION AFTER THE SURVEY



5. THE REBALANCE VISION

5.1. Approach

The project ambition is to devise a vision for an “alternative mobility culture” at 2050, and subsequently draft a pathway towards its implementation. The vision presented here is built on three main pillars:

- i. The analysis of the current prevailing mobility culture, where a critical review of the mainstream mobility culture in Europe has led to the formulation of a series of claims, summarised in figure 7:

CULTURAL CLAIMS	POLITICAL CLAIMS
<ol style="list-style-type: none"> 1. We claim that we are witnessing a cultural change in mobility in Europe. 2. The relationship between modernity and mobility is double-edged. 3. Our culture overestimates the value of speed and efficiency. 4. Technology produces place detachment and time alienation. 5. We live in a time of dyschronicity. 6. Freedom of movement and anonymity can lead us to social disparities and cultural standardisation. 7. Mobility injustices grow. 8. The fear of losing given rights leads to biased political reactions. 9. CV19 pandemic changes our perception of vulnerability, mobility desire and needs. 10. Tempo justo: the right speed to do things right. 	<ol style="list-style-type: none"> 11. Political imagination is needed to expand our moral community. 12. A better understanding of mobility cultures would provide for a more human sensitive political decisions. 13. We believe ethics should be back at the centre of economics. 14. Policies are challenged by the emergence of new disruptive technologies, and changing values of new generations. 15. There is a growing but still weak social and political broad consensus in Europe favouring a paradigm shift.

FIGURE 7: THE CLAIM

- ii. The scenario framework, which has led to the characterization of 4 highly contrasted “models” of mobility culture, each corresponding to different sets of values, priorities and cultural tenets.
- iii. The workshop and the survey, which have allowed to discuss both the likelihood of future mobility culture dynamics and the desirability of changes to achieve the transition towards a mobility culture that better reflects the aspiration to a more sustainable planet and to improved societal wellbeing.

Accordingly, the Vision presented hereafter has been devised to:

- Address the REBALANCE claims;
- Characterize the “ideal” mobility culture that would allow for the materialization of the advocated transition;
- Represent this transition in the REBALANCE scenario framework.

5.2. The Vision

The Vision, as has been stated in the previous lines, summarises the foresight exercise carried out in the project, and anticipates ideas for the final Manifesto based on the assumptions that ethics should be back at the centre of economics, political imagination is needed to expand our moral community and a better understanding of mobility cultures would provide for a more human-sensitive political decisions.

The Vision for rebalancing mobility cultures by 2050 is structured into two different levels. The **first level** is based on **five main cornerstones** which support the overarching objective of imagining a new transport paradigm that reclaims the proper place of culture in the policy-making process:

- **Cultural change:** We are witnessing a cultural change in mobility in Europe. Not only a new trend, but a major change in what mobility is, and how time is experienced, in Europe. We find the same aspiration for a rebalanced way of living and working in the Green Consumerism, the Social Corporative Responsibility and ESG (Environment, Social and Governance) assessment of private investments, the promotion of Environmental Cultures, Slow Food and Slow Cities in the Slow Movement, Slow and Fast Thinking in Psychology, Behavioural Economics, the emphasis on place-making instead of functional urbanism, and Humanistic Engineering. These social movements are part of the cultural change and are likely to keep growing.
- **Modernity and mobility:** This double-edged relationship means that expanding opportunities, creativity and freedom are accompanied by growing constraints. Here we have an important cultural shift: constrained mobility is increasingly seen as a burden, just as the desire for infinite productivity and efficiency, and at the same time the dark side of mobility is under greater attention. This shift is part of a larger cultural change that aims to rebalance the visions of *Vita activa* and *Vita contemplativa*⁵, two confronting ways of understanding human condition. Rebalancing activity-related values with more contemplative-related values is already present in western cultures since Aristotle *mesoteti*, or medium-term understanding of virtues. *Aurea mediocritis* avoids the excesses of too contemplative or too active ways of living.
- **Criticism of speed and efficiency:** Speed, and fluidity, the paramount values of modernity, need to be surpassed. Positive values attached to *Vita activa* have been dominant since Modern times: lightness, quickness, exactitude, visibility, and multiplicity⁶. Now we begin to see the need for balancing these values. Questioning “speed” does not entail that future policies must consistently aim at slowing down any movement, it is rather intended to shed light on the relative marginal value of increasing the speed of physical movement and on the need to reconsider the social value of

⁵ According to the scholastic philosopher Roland of Cremona, *Vita activa* is manifested through a visible and exterior action governed by reason, while *Vita contemplativa* is an interior and intellectual expression.

⁶ Italo Calvino wrote five lectures on these five values in the fall of 1985. At the time of his death, Calvino left unfinished a planned lecture on consistency, the missing value rebalancing other values.



speed in relation to other values such reliability, safety, conviviality, and public health (sometimes called the sufficiency-paradigm). The kind of society we live in is easily visualised by how we move. It is in public transport stations and vehicles, in public spaces, and facilities, where people from different income-levels, age, gender and cultural origin meet together. Hospitality and conviviality is therefore as critical for the quality of a transport system as it is efficiency.

- **Technology that prevents place detachment and time alienation:** The development of the technological sphere around individuals contributes to detach them from their environment, from places, from people. The flow of people, information, freight, material resources and energy are increasingly interconnected and interdependent, to the point that physical distances are subverted and the connection to networks often matters more for interaction than the spatial distance. One can envision a world of fluid, flexible spatial alliances: new kinds of spatial organisation for production and distribution, more time- and space-responsive forms of decision-making, possibly new systems of supply-chain management, and new labour contract arrangements that alter commuting patterns. Emerging technologies, in particular ICT development, overthrown former certainties regarding needs, desires and motivations to move or not. The ICT proliferation is constantly changing corporeal mobility needs in daily life for all age ranges and people's potential movement is currently reliant on access and, personal aptitude and skills the use of ICT. The concepts we still use in transport planning, largely inherited from the late sixties, will become blurred due to technological and organisational changes. The significance of public and private, collective and individual, infrastructure and service, user and producer, will become less meaningful.
- **Mobility justice:** Acceleration affects groups, classes and sectors differently. It is likely that society become divided by those able to control their own time and mobility (the "kinetic elite") and those unable to do so, either those always-on attached to standardised schedules, and those unplugged. Mobility injustices will spontaneously tend to grow if we do not react. Many people who live at the edges of our big cities are continually pushed further from the city centre. As a result, their commute times are growing, sometimes up to 2 hours of travel just to get to work. They arrive tired, work long hours, return home tired, and do it all again tomorrow. This is simply unacceptable and we should re-discover mid-size cities.

The **second level** of the Vision consists of a set of secondary values and desires that depend on the aforementioned five cornerstones and how these (may) provide direction into policies and measures. The elements of this level help devise the "mobility turn" to generate long-term cultural change in the way we understand mobility and take personal, business and policy decisions:

- Mobility involves human experiences. From efficiency as key political aim, **people-centered mobility** policies should emphasise values such as wellbeing and equity, be more sensitive to human needs and wishes, and reflect the **cultural change**. Mobility is a meaningful living experience for people.



Policies still matter and have to be focused not much on achieving a “Seamlessness mobility” but “Tempo justo”: the right speed to do things right.

- The social value and political relevance of public health benefits due to **active mobility** may overpass the costs of increasing time spent travelling and make the most of the relationship between **modernity and mobility**. The quality and inclusiveness of the public transport system, the public spaces and facilities indicates how healthy a given community is.
- 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** can no longer be the only references. Because this measure provides for a reasonable, objective reference, it has to be enhanced by considering relevant public health and conviviality improvements. For instance, regarding street design, public interest could mean shifting circulation space to spaces dedicated to conviviality.

Beyond the slow/fast and collective/individual dichotomies, a **new human geography** can be imagined surpassing these dichotomies as well as the local/global conflict. Places may restore their cultural landscapes and ecologies, while people and activities become connected from everywhere to fast communication networks able to transmit information. The concepts of “proximity” and “connectivity” are not necessarily in contradiction.

Mobility services will not have always to be planned to save time to as much as possible people moving from one place to another, at the minimum cost. Travel time is not wasted time, it can be **meaningful travel time**. Seamless and fully reliable communication may be ideal for the transmission of information, and the transport of energy or goods, but not always for human beings since all sorts of breaks needed to recharge movement (petrol stations, railway stations, cafés, benches), interruptions, unexpected delays, or detours, unexpected surprises, may become meaningful experiences as well. We have to start implementing mobility policies aiming not just efficiency and sustainability.

- We risk to live in a time of more radical **dyschronicity**. **Technology may produce more place detachment and time alienation**. ICT subverts physical distances. The ICT raises the urban sprawl which may lead to even more transport needs for passengers and goods. Digital exclusion will be a big challenge. The digital literacy as a value in use of transport and mobility services can increase the inequality for vulnerable-to-exclusion groups in society that lack adequate skills or infrastructure to benefit. Space is shrinking and shriveling, and time is accelerating, everything can be contiguous and simultaneous. We cannot let our lives lack continuity, synchronicity.

Policies have to disincentivate long-distance mobility when its costs are not well justified by the generated social benefits. Getting market prices right by internalizing all social and environmental impacts of long-distance transport is of paramount interest at continental and global scales in order to achieve **sound -visual mobility**. The fast pace of digitalization and ICT development will replace lower added value trips, while encouraging higher added value trips.



Different prices for different groups means equity and social inclusion. Different prices for different purposes fit in leisure or business trips.

From free to universal mobility. New transport technologies should **assure affordability** in order to allow all people to move by themselves. Emerging technologies will play a crucial role in terms of inclusion and exclusion.

- Transports systems must aim at **mobility justice** by having human-centered systems, more sensitive to the needs and wishes of each traveller, **favouring customised mobility**. From mass standardisation to mass customisation. Human-centered technology is the technology best adapted to the interests of each person and each community.

Designing **user-friendly and safe transport** does not imply standard services indifferent to who is providing the service, who are other travellers or which path the service follows. Vehicles and infrastructures will have to be designed to facilitate travellers to increase the value of travel time while on move by carrying out other valuable activities. Safety and security should become paramount policy aims.

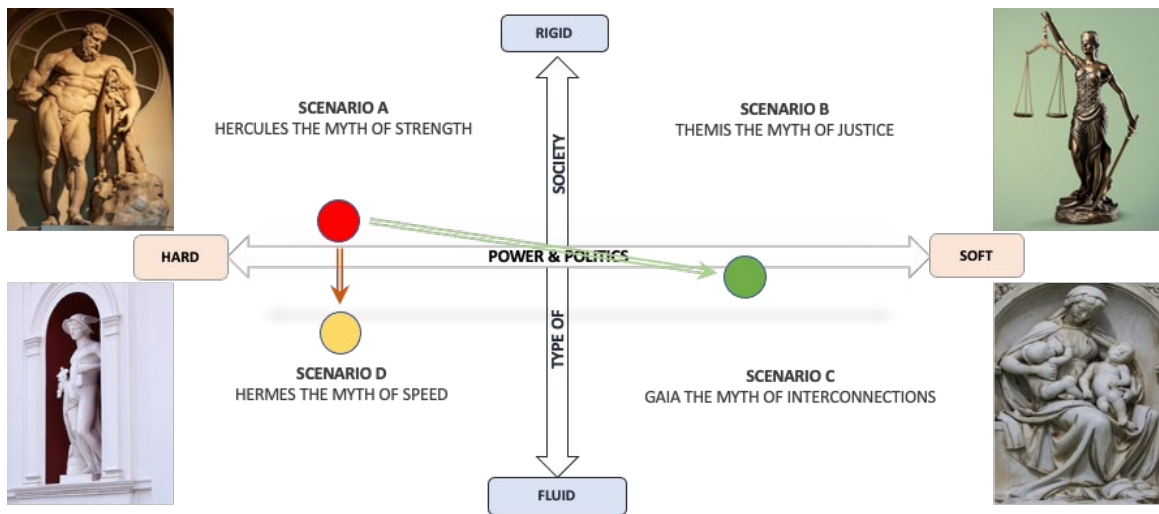
Improving **hospitality and conviviality** are, on passenger's transport systems, as important goals as reliability and efficiency. The transport systems, together with public spaces, and facilities, will provide potential opportunities to people with different cultural origins and backgrounds, income-levels and interests, to be together. From individual transport, to communitarian mobility.

Sustainable accessibility could translate into more **proximity**. Proximity is one factor to accessibility. Traditional accessibility measures (i.e. minutes) are correlated with safety and security. From moving more, alone and faraway, to move less, together and closer. Minimum level of service to all groups and places.

5.3. Transition to the Vision

If we look back at the four scenarios, we can clearly see that our current paradigm would be similar in many aspects to Hercules. The future evolution, if we continue to "do nothing" in the sense of following the same lines of the past and the present, is likely to move closer to Hermes. However, preferences and desires of the participants in our research show a clear determination towards switching to the other side of the *power and politics* axis. This translates into a Vision that is placed halfway through Themis and Gaia with a slight inclination to the latter.





● Current paradigm ● Probable "do nothing" paradigm ● Ideal paradigm

FIGURE 8: TRANSITIONS

6. WAY FORWARD

The vision presented in this report is the second step towards to drafting of the REBALANCE Manifesto for a new mobility culture. It follows the critical identification of the main elements of the current model, and feeds into the elaboration of a possible pathway (the Roadmap) towards a new paradigm, which will be addressed in WP5.

ANNEX I. SURVEY RESULTS

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