Sophia Becker, Saskia Hirtz, Meike Ortmanns

Exploring public actors' beliefs about behavioural change for the mobility transition and their expectations for transdisciplinary collaborations

GAIA 35/S1 (2026): 245–253. https://doi.org/10.14512/gaia.35.S1.4

Supplementary Material

https://doi.org/10.14512/gaia.35.S1.4.suppl

Appendix A: List of interview partners 2

Appendix B: Interview guideline 3

Appendix C: Coding guideline 5

Appendix D: Code-matrix for beliefs about mobility interventions and policies 7

Contact:

Prof. Dr. Sophia Becker (corresponding author) | https://orcid.org/0000-0003-3893-5840 | Chair for Sustainable Mobility and Transdisciplinary Research Methods at Technische Universität Berlin | Berlin | DE and Research Institute for Sustainability at GFZ | Potsdam | DE | sophia.becker@tu-berlin.de

Saskia Hirtz, MSc | Research Assistant at the Chair for Sustainable Mobility and Transdisciplinary Research Methods at Technische Universität Berlin | Berlin | DE | s.hirtz@tu-berlin.de

Meike Ortmanns, MA | University of Applied Sciences Potsdam | Potsdam | DE | meike.ortmanns@fh-potsdam.de

© 2026 by the authors; licensee oekom. This Open Access article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

Appendix A

List of interview partners

Interview no.	**Stakeholder group**	**Management level**	**Location**
01_M_P_B	Politics	Municipality	Berlin
02_M_P_B	Politics	Federal state	Berlin
03_M_P_B	Politics	Federal state	Berlin
04_M_P_B	Politics	Federal state	Berlin
05_M_V_B	Administration	Federal state	Berlin
06_M_V_B	Administration	Municipality	Berlin
07_M_V_B	Administration	Municipality	Berlin
08_M_P_BB	Politics	Federal state	Brandenburg
09_M_P_BB	Politics	Federal state	Brandenburg
10_M_P_BB	Politics	Municipality	Brandenburg
11_M_V_BB	Administration	Municipality	Brandenburg
12_M_V_BB	Administration	Municipality	Brandenburg
13_M_V_BB	Administration	Municipality	Brandenburg

Appendix B

Interview guideline

Introduction

1. The 'transport transition', what does that mean to you?

Assessment of the transport transition on the subnational level and backcasting

2. How would you assess the current political measures taken by the state of Berlin (or Brandenburg) in the transport sector – particularly with regard to climate neutrality?

3. Imagine it is the year 2035, 13 years from now, and nothing of note has changed compared to now. CO_2 emissions are still high and the transport transition is considered a failure.
   If that happens, what will have been the cause?

4. Where do the biggest levers and opportunities lie in the coming years for making transport in Berlin (or Brandenburg) climate-neutral?

Reflection on one's own role and behavior change

5. What would you say is *your* scope for action in your current position?

6. Can you give me a specific example of where you have brought about a change towards the transport transition or climate-neutral mobility?
   - What made it particularly successful and why?
   - What was particularly difficult and why?

7. Which document sets out the goals and measures that guide your work on climate mitigation and adaptation? (answer not used in this study)

8. How can people be motivated to change their mobility behaviour so that it becomes more climate-friendly?

Public debate and participation

9. Are there any public participation formats in relation to local climate policy decision-making processes? (answer not used in this study)

10. How would you describe the public debate on the transport transition in Berlin (or Brandenburg)?

Stakeholders and cooperation with scientists

11. Which stakeholders/institutions do you currently see as supporters or allies?

12. Who would you need as key allies to advance the transport transition more effectively?

13. In what areas could you use support from the academic community over the next few years?

Conclusion

14. Is there anything I haven't asked about that you would like to share with us?

Appendix C

Coding guideline

Blue color and strikethrough text = our changes to the original categories by Michie et al. (2011)

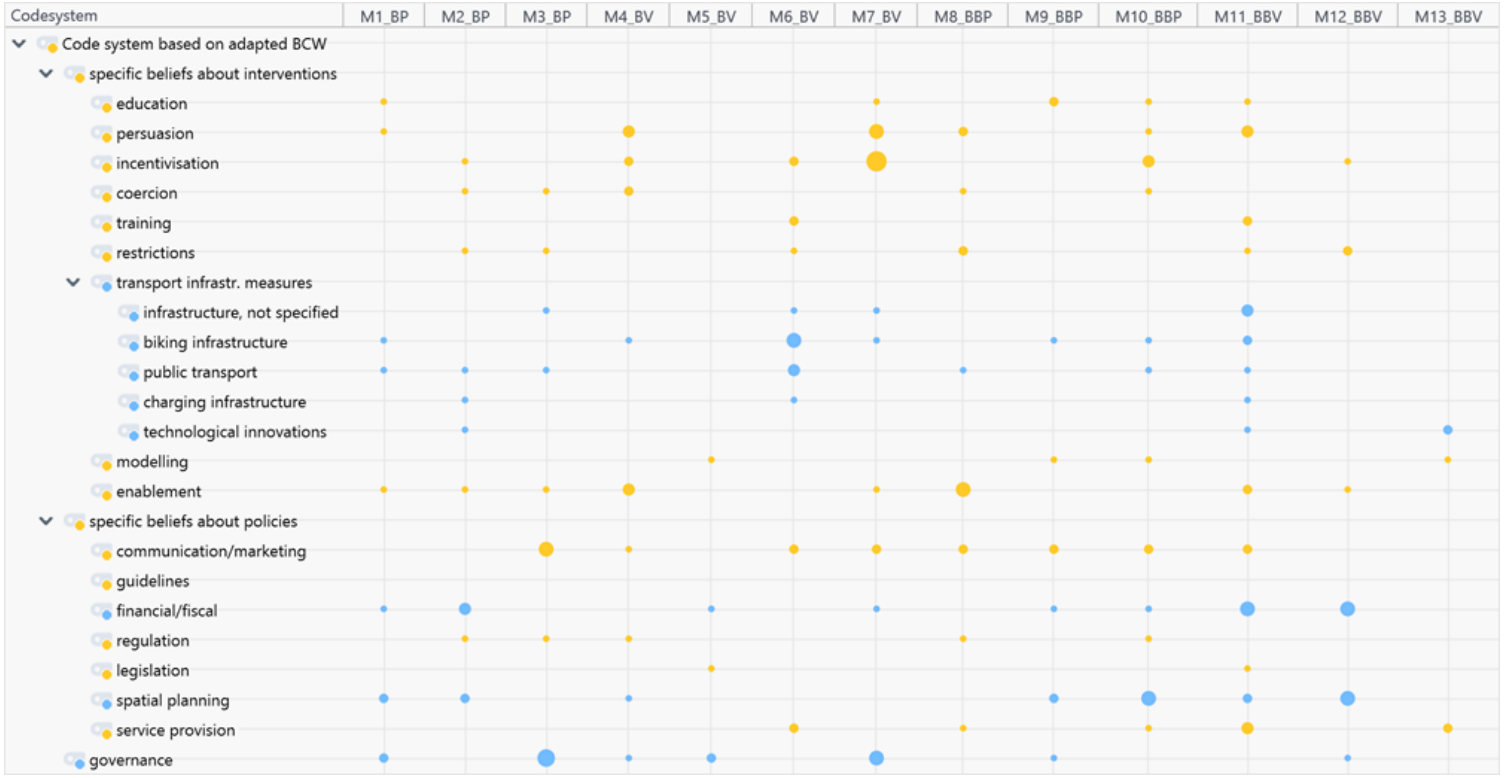
Core beliefs about sources of behaviour	**Definition, based on Michie et al., 2011, p. 4**
Capability	Capability is defined as the individual's psychological and physical capacity to engage in the activity concerned. It includes having the necessary knowledge and skills.
Opportunity	Opportunity is defined as all the factors that lie outside the individual that make the behaviour possible or prompt it.
Motivation	Motivation is defined as all those brain processes that energize and direct behaviour, not just goals and conscious decision-making. It includes habitual processes, emotional responding, as well as analytical decision-making.
Specific beliefs about interventions	**Definition, based on Michie et al., 2011, Table 1, p. 7**
Education	Increasing knowledge or understanding about climate protection and/or sustainable mobility
Persuasion	Using communication to induce positive or negative feelings or stimulate action
Incentivisation	Creating expectation of reward
Coercion	Creating expectation of punishment or cost
Training	Imparting skills
Restriction	Using rules to reduce the opportunity to engage in the target behaviour (or to increase the target behaviour by reducing the opportunity to engage in competing behaviours)

Transport infrastructure ~~Environmental restructuring~~	~~Changing the physical or social context~~ Expansion or improvement of transport infrastructure, including technological improvements Subcategories: • general infrastructure, not specified • biking infrastructure • public transit • charging infrastructure • technological innovations
Modelling	Providing an example for people to aspire to or imitate
Enablement	Increasing means/reducing barriers to increase capability or opportunity
Specific beliefs about policies	**Definition, based on Michie et al., 2011, Table 1, p. 7**
Communication/ marketing	Using print, electronic, telephonic or broadcast media
Guidelines	Creating documents that recommend or mandate practice. This includes all changes to service provision
Financial and fiscal	Using the tax system and other financial measures to reduce or increase the financial cost
Regulation	Establishing rules or principles of behaviour or practice
Legislation	Making or changing laws
~~Environmental/social~~ Spatial planning	~~Designing and/or controlling the physical or social environment~~ Guiding principles and comprehensive visions for urban and regional development, e. g. density in cities, settlement structure
Service provision	Delivering a service
Governance	Principles of good governance and implementation processes, e.g. combining push and pull measures, participatory design, actor coordination

Becker, S., S. Hirtz, M. Ortmanns. 2026. Exploring public actors' beliefs about behavioural change for the mobility transition and their expectations for transdisciplinary collaborations. *GAIA* 35/S1: 245–253. https://doi.org/10.14512/gaia.35.S1.4.suppl

Appendix D*:*

Code-matrix for beliefs about mobility interventions and policies. Sample size is 13 interviews. Yellow codes are identical categories to the Behaviour Change Wheel (BCW); blue codes are adapted or new (sub)categories. Bigger dots indicate more codings of a category, ranging from 1 to 6 codings per interview and category. (MAXQDA 24 output)



Interpretation:

Although quantitative interpretation is not our primary concern here, quantitative trends in the code matrix show that almost all of the BCW's interventions and policies are mentioned by at least one respondent in our sample, and often by several. Only *guidelines* are not mentioned by any of the respondents. Furthermore, it is apparent that many respondents are familiar with a wide range of measures to change mobility behaviour. The responses related partly to the policy level and partly to the intervention level of the BCW.