Chapter 13
Citizen Panels on Climate Targets: Analyzing Dropout in Long-Term (e-)Collaboration Processes

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Abstract The e2democracy project studied citizen panels collaborating with local governments to achieve local climate targets in seven regions in three countries over a period of up to 2 years. Compared to many other participation projects, this is a very long time period and the project examined not only "words" but also intended changes of behavior. It was therefore a big challenge to maintain the citizens' participation and to minimize panel dropout. The aim of this chapter is to investigate the extent of dropout during the processes and to understand the reasons behind it. In fact, there were two kinds of dropout. Of 1159 registered panelists at all seven sites, 36% withdrew before entering any data for the CO_{2e}-monitoring process, a central component of the panels' activities (dropout 1). A further 27% dropped out during the subsequent period of up to 2 years (dropout 2), many of them as early as in the first 2–4 months. A survey was undertaken to determine the factors that led to the decision to drop out. The most common reasons were that participation cost too much time and that data collection and entry were not trivial but quite complex tasks. To some extent, the usability of the monitoring instruments employed also caused difficulties. Another critical constant was that many dropouts did not see any possibility of further improving their carbon footprint. Less common reasons were that panelists who dropped out expected no or only relatively low effects on climate protection, did not experience energy savings or were not ready to change their lifestyles.

13.1 Introduction

The European research project e2democracy (e2d) addresses the comparative evaluation of a consultative and collaborative type of (e-)participation in local climate governance (see Chap. 7). Among other things, it studied a set of similar forms of citizen panels set up by local authorities in Austria, Germany, and Spain aimed at contributing to climate protection. These panels were part of collective initiatives targeting a 2% reduction in greenhouse gas emissions per year and providing mea-

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surable indicators of the impact of the participation exercise. A key activity of the participants was the continuous monitoring of their consumption behavior over up to 2 years so that they could receive feedback information on their personal carbon footprints, that is, CO_2 equivalents (CO_{2e}). Based on this feedback, together with information on how CO_{2e} could be reduced in everyday life combined with various opportunities for exchanging experiences with other panelists and experts, the intention was to enable participants to change their behavior towards more climate-friendly and sustainable lifestyles. This chapter aims at analyzing the dropout from the seven citizen panels collaborating on CO_{2e} reduction with local governments in the period between 2010 and 2012. Their locations comprise the Bregenz and Mariazell regions (Austria), Bremen, Bremerhaven and Wennigsen (Germany), and Pamplona and Saragossa (Spain).

A quantitative indicator of successful participation is the outreach, that is, the number of participants and/or contributions in relation to the size of the target population (see Chap. 2). An additional success criterion is the continuity of participation over time or in other words the minimization of the number of people leaving the panels, an indicator known as the dropout rate, or, in research on panel studies, panel attrition or panel mortality (see Chap. 6). Panel sizes varied between 48 and 398 citizens at the time of registration for the project, between 35 and 290 citizens when the baseline data for continuous monitoring was entered and between 21 and 181 citizens in the final measurement round.

In social science and marketing research, panel attrition is a well-known phenomenon of longitudinal studies in which the unit of investigation is followed at specified intervals over a long period, often many years. Panel studies requiring individuals to provide information at multiple points in time often suffer from a high degree of cumulative nonresponse over time (panel attrition). Recent literature reviews show an attrition rate between 2 and 50 % for studies with annual data collection (Lee 2003; Frankel and Hillygus 2013). Hence, for the e2d cases, considering the special demands of the participation design outlined above, dropout rates of above 50 % were to be expected. However, in some panels in this project, the ratio turned out to be lower and in others much higher for the same kind of collaborative exercise. The design of the e2d project allows for some comparative analysis of the reasons for a greater or smaller dropout rate.

What was rather unexpected was the high number of so called “sleepers,” that is, participants who had registered but never really started their collaboration (dropout 1). It may well be that the reasons for the rate of sleepers (dropout in a wider sense) and for the dropouts among those who started CO_{2e} monitoring but discontinued later (dropout 2) depend on different factors. For example, for panelists who had registered but never tried the monitoring tools, their perceived ease of use can only be a factor for dropout 2 but not for dropout 1.

Personal as well as situational factors are also relevant for many other behavioral phenomena. Research on panel attrition assumes that a personal relationship between the interviewer and the respondent improves response rates and prevents dropout (Meltzer et al. 2012). Obviously, personal relationships are difficult to achieve in Internet-based environments; hence, offline facilities—preferably with

face-to-face contact—are better suited (Lee 2003, p. 8). It is conducive to continuous panel participation for the interviewer or panel organizers to be the same persons in all waves or over the whole time period, so that some kind of trustworthiness can be established between organizers and panelists (Meltzer et al. 2012). In this regard, the implementation by the organizers of extensive tracking procedures and appropriate survey designs can also count as success factors for low attrition rates.

Another aspect concerns the availability of incentives for the willingness to provide information. Even though the scale of the impact of monetary incentives is difficult to determine, it proved to be relevant, for example, in The National Longitudinal Survey of Youth in the USA (Lee 2003). In particular, monetary rewards may trigger action that would not occur otherwise. "Monetary rewards may serve as an extrinsic motivator to conserve energy" (Abrahamse et al. 2005, p. 280).

If panelists relocate or their personal situation changes, it is particularly difficult for organizers to maintain contact with them. In such cases, continued participation makes less sense for panelists or is of no use for the organizers. Besides, socioeconomic aspects play a key role in attrition studies. "[A]ttrition probabilities are greater at high and low income levels for male-headed households and lowest at the middle of the income distribution" (Lee 2003, p. 16). However, as the survey design of e2d was focused on the impact assessment of various forms of civic engagement, it does not allow for a deeper socioeconomic analysis of the sample of the e2d panels.

In what follows, we first introduce major theoretical arguments before presenting empirical findings based on a dropout survey in the e2d project. All the panelists that dropped out during the panel periods were asked to answer a standardized dropout questionnaire consisting of up to 38 questions. Of the 730 dropouts since registration with the citizen panels, 17% replied to the survey by answering all the questions. Of the total respondents, 94% were registered as onliners, that is, they took part in the panel activities via electronic media. Only 6% of respondents were offliners, that is, they used traditional channels like personal contact, telephone, or mail to participate. As shown in Chap. 15, the mode of communication had a strong impact on the dropout rates. For onliners, the rate was much higher than for offliners (75 vs. 29%). However, in light of the big differences in the response rate to the dropout survey, the 6% of offliners that responded to the questionnaire does not allow for a sound comparative analysis of the different influencing factors. For this reason, the empirical analysis is limited to the dropout among onliners. The regional distribution of the overall dropout from registration to final measurement and the response to the dropout survey are presented in Table 13.1.

As will be explained later on, even though the dropout rate varies between the seven panels, the average dropout of 63% between registration with the citizen panel and delivering data for the final measurement is quite high.

The analysis of the reasons for dropout is based on the answers of the 126 panelists who answered the dropout questionnaire. As Table 13.1 shows, most respondents came from Bremen and Wennigsen (53.2%), and thus the analysis has a strong bias to answers coming from these two German panels.

Table 13.1 Regional distribution of overall dropout[a] and dropout survey sample

Region	Dropout	Dropout rate	Respondents to dropout survey	
	N	%	*n*	%
Bregenz	43	67.2	16	12.7
Mariazell	40	64.5	13	10.3
Bremen	153	71.8	27	21.4
Bremerhaven	19	39.6	4	3.2
Wennigsen	71	62.3	40	31.8
Pamplona	187	71.9	18	14.3
Saragossa	217	54.5	8	6.4
Total	730	63.0	126	100.0

[a] Dropout stands for total dropout since registration with citizen panels

13.2 Theoretical Background

Understanding and explaining human action is a key subject of classical psychology, social psychology, and (micro-)sociology. It is most common to explain individual and group-related behavior as an interplay of personal and situational factors. This applies also to environmental behavior, which is the focus of the e2d project. When trying to explain the choice of media channel in Chap. 15, we employed a similar framework focusing on characteristics of the person on the one hand and characteristics of the task and the tools employed on the other. In the context of online participation, our basic assumption is that the motivation to participate and to engage continuously evolves due to person-related factors and that the tools and task-related aspects may impose certain barriers. There are many factors likely to influence the individual's environmental behavior and his willingness to participate in a climate panel. Depending on the individual's characteristics, desires and attitudes, the factors are of greater or less weight. The "integrated action model" developed by Rost et al. (2001) and Martens (1999) consolidates the main factors that may cause citizens to leave the panel in a unified explanatory framework. Even if no action model can predict pro-climate behavior, there are approaches that try to consider a wider set of behavior determinants and to relate them to each other, as outlined below. The integrated action model describes the complexity of environment-relevant decision mechanisms and provides an overview of different factors influencing behavior. It is divided into three phases preceding action: (1) the *motivation phase* leading to the development of an action motive (registration with a citizen panel), (2) the *action choice phase* leading to the development of action intent (actively taking part in the panel), and (3) the *volition phase* leading to concretization and finally inducing action (change of habits). The integrated action model provides an orientation for the analysis of the reasons for dropout. It can be considered as "a kind of stage model" (Rost et al. 2001, p. 13). Each stage or phase is influenced by several mental evaluation processes (Hunecke 2002, p. 16) that determine whether to continue participating or to drop out.

13.2.1 Sociodemographic Aspects of Dropout in e2d

The sociodemographic composition of the citizen panels is an indicator for the representativeness of the research findings. Both the regular panel surveys and the dropout survey gathered basic sociodemographic data: gender, age, education, employment situation, and whether the panelists have children or not. As shown by various surveys, there are population groups that are more climate-protection conscious than others. In environmental issues, these are clearly those who enjoyed a higher education. Managers, white-collar workers, and the self-employed are also more likely to consider climate change as particularly important. In addition, people with a politically left orientation classify climate change as an important problem more often than others. These fundamental relationships can be observed in all European countries (Kuckartz 2011, p. 129; European Commission 2009) and—as can be seen later on—do not differ among the three e2d countries.

13.2.2 Psychological and Social Aspects of Dropout in e2d

Not everybody is equally willing to engage politically and to participate in consultation or collaborative exercises. The literature on political participation refers either to resources (time, money, and skills) or to socioeconomic status as being the most important influencing factors. These factors may explain the size and the sociodemographic composition of the panels, but not so much the different dropout rates. Thaler and Sunstein (2008), analyzing a similar environmental monitoring project using theories from social psychology, identified one reason for participating in panels as being the basic human need to compare oneself with one's neighbors or other reference groups and to adhere to the norm. For this reason, the values and attitudes of individuals and their willingness to overcome everyday routines are important aspects in the decision on whether to continue participation over time or to leave the project.

Values and Attitudes

Addressing attitudes and values in order to reinforce pro-environmental and modify antienvironmental dispositions is seen as the key to changing individual behavior. Information campaigns and interventions that focus on persuading and encouraging consumers play a great role. However, climate change is a problem of society and the individual's perception is influenced by societal (medial and political) discourses. This means "individuals determine their everyday actions […] on the basis of the assessments and expectations of their social environment as well as social institutions and their rules" (translated from Baumgartner 2004, p. 47). Hence, individual behavior can only be understood if it is considered together with social and economic context conditions. This implies that climate-friendly or harming behavior is not only guided by our own choice but also by our relationships with others around us, by what others say and do, by power relationships, and the specific social

order in relevant contexts. Citizens who are characterized by values and attitudes in favor of the environment and whose living context encourages pro-environmental action are more likely to continue to participate in their panel than citizens who are not. Thaler and Sunstein (2008) argue that in order to direct people's behavior, an appropriate "choice architecture" has to be provided that anticipates the context in which people make their decisions. Accordingly, the panel organization also needs to consider such choice architectures that prevent panelists from dropping out. Thus, ultimately, the actual challenge is to transfer the pro-environmental attitudes of registered panelists into active participation that prevents them from dropping out and finally leads to pro-climate activities.

Participation-Related Effort

Diekmann and Preisendörfer (1992) developed the so-called *Low-Cost Hypothesis* to explain the lack of consistency between attitude and behavior. Correspondingly, pro-environmental behavior often takes place if the renunciation or the efforts required are low enough. Costs are understood not only as financial burdens but also the time to be spent, the inconveniences, and the acceptance of confusing or difficult situations. For example, fields of action that involve low-cost situations are shopping for ecologically produced goods and waste sorting, while energy or transport behavior (choice of transport means) are assigned to the "high-cost" category (Diekmann and Preisendörfer 1992; Baumgartner 2004). Participation as a panelist in e2d with detailed bimonthly reporting duties also implies various kinds of effort. To keep a record of one's car trips or to reconstruct trips done by public and private transport in the previous 2 months may already be a high-cost situation. Gathering various meter data in one's home and relating it to one's own ways of behavior could even be more difficult. The low-cost hypothesis thus does not explain environmental behavior by attitudes and psychological patterns but by cost-benefit models, which can be assigned to the *Rational Choice Theory* (RCT). In RCT, individual actors are considered as rational deciders who try to maximize their benefit when they have to choose between different action alternatives. With regard to environmental action, the explanation approach of RCT is often combined with so-called *Expectancy-Value Models* (EVMs; Liebe and Preisendöerfer 2011, p. 223; Baumgartner 2004, p. 46) that strongly correspond with the EVM by Zeithaml et al. (2000) described below. Actors weigh up alternatives, multiply the value of a desired event with the likelihood that a certain action will cause this result; then they consider the costs this action involves (Busch 2011). Even if the usability and applicability of RCT for explaining environment-friendly behavior is the subject of critical discussion (Littig 1995, pp. 35 f.; Liebe and Preisendöerfer 2011, pp. 227 f.), when combined with other perspectives, it can be of some value.

Involvement of Time Budgets and Other Competing Preferences

"Time is money" is an old proverb that is also of importance in the course of societal developments. A volunteer survey in Germany in 2009 showed that a good

ability to plan one's leisure time has a positive influence on the willingness to take on a voluntary function (Gensicke and Geiss 2010, p. 297). Once the work in question is established and integrated in everyday life, it seems to have a good chance of "surviving"—as opposed to activities that unbalance the familiar time management. On the other hand, Kuckartz and Rheingans-Heintze pointed out "that with the process of individualization, motives such as 'self-fulfillment' and 'having fun' as well as an interest in short-term self-organized projects have come to the fore. […] Thus an issue-specific involvement in temporary projects in the sense of problem focus is increasingly being preferred: identifiable issues, manageable subjects and fields of action in the immediate living environment" (translated from Kuckartz and Rheingans-Heintze 2006, p. 173). Moreover, other life preferences also play a key role and compete with environmental protection objectives. An example is the interest in getting to know foreign cultures that in turn results in travelling and implies an increase in carbon emissions. Another is the need for comfortable living in a building with several rooms, which—even when built to the highest ecological standards—means consuming more square meters and energy than an average citizen. But there are also short-term needs. For example, the wish to supply one's guest with strawberries in winter may be stronger in the short term than the wish to purchase regional food only.

Living Conditions and Incentives

The context we live in sets the framework conditions for the extent to which we are able to change our lifestyles. A person who lives in a rented apartment has fewer opportunities to save or change facilities than the owner of a house. A further factor or problem is the direct accessibility of meters in a house. One of the essential hypotheses underlying this research project is that feedback mechanisms have an impact on energy savings. However, feedback is only possible if users are able to get hold of their consumption data. Particularly in apartment houses, meters can be behind heavy doors in the basement to which only the caretaker has the key. Another example is the traffic infrastructure available in a city. Urban areas, particularly big cities, generally provide a better organized public transportation system with a higher service quality than a rural community. Saragossa and Bremen with their frequent tram services obviously offer better opportunities for changing mobility behavior than the rural sites of Mariazell and Wennigsen, and also Pamplona, Bregenz, and Bremerhaven. For the latter three, although they have adequate bus services, the mobility available and the operating frequency turned out to be less attractive. It is clear that changing from an individual motorized traffic mode to public transport is much easier in areas with good public transportation systems. Hence, it is obvious that limited opportunities for a sensible participation in the citizen panels and for changing behavior encourage dropout tendencies among the panelists.

Another aspect concerns the provision of incentives or rewards for taking part in a local initiative and research study. Rewards may encourage the motivation to take part and to stay on board over a longer time period. In the Austrian and German panels, participants earned bonus points for every monitoring period filed and survey questionnaire answered. Participants in Germany could change these points

into energy-saving facilities of different values; in Austria, they received modest financial compensation. Moreover, panelists in Germany took part in a lottery with a number of valuable prizes like bicycles or a green energy contract. No such incentives could be offered to panelists in Spain.

13.2.3 Tool-Related Aspects of Dropout in e2d

A special factor in e-participation is the usability of the e-tools employed. In their three-layer framework, Macintosh and Whyte (2008) propose three levels of criteria or views for evaluating e-participation. The first layer is usability and concerns the socio-technical or tool perspective. It considers the extent to which the tools used directly affect the outcomes and help to achieve the objectives of an e-participation project. Referring to the almost classical model of program or project evaluation developed within the Organisation for Economic Co-operation and Development (OECD), Kubicek (2010) emphasizes the importance of tool navigation and organization, efficiency and flexibility, or error recovery (see also Chap. 2). In order to explain dropout, we consider usability in terms of ergonomic, human–computer interaction (HCI) criteria but open it up to a broader approach of technology acceptance. From the wide range of concepts, we consider the two most relevant, the *Technology Acceptance Model* (TAM) by Davis (1989) and the *Expected Value Model* (EVM) by Zeithaml et al. (2000).

As mentioned above, registrants that never opened the CO_{2e} calculator and that did not enter the baseline measurement did not drop out because of a perceived lack of ease of use of the tools as they had not tried them (dropout 1). But the system design features and technology acceptance in general plays a key role in type 2 dropout group. Those panelists gathered experience with the tools. Depending on their individual online services maturity level, some might have more or less difficulty with the monitoring tools. Hence, the design of the usability and usefulness of the online participation service can be used to achieve a higher acceptance or use and finally to minimize dropout.

Technology Acceptance Model

The TAM is a model for studying user acceptance of (new) information systems and is based on the *Theory of Reasoned Action* by Fishbein and Ajzen (1975). Based on an information system, TAM describes the causal relationships from the system design features to the actual system use (see Fig. 13.1).

According to the model, the system design features exert a direct influence on the *perceived ease of use* as well as on the *perceived usefulness* of the information system (Davis 1989, 319 ff.). Perceived usefulness is defined as the degree to which a person accepts that the information system facilitates the task to be performed or improved (p. 320). Perceived ease of use, however, refers to the degree to which

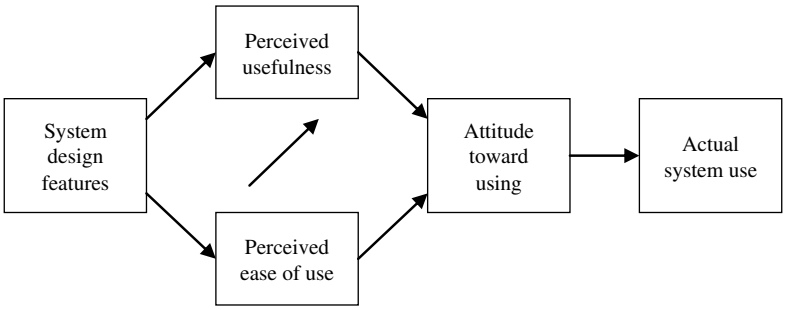

Fig. 13.1 Technology acceptance model. (Own illustration based on Davis 1993, p. 476)

a person assumes that he can use a particular system effortlessly. Through the perceived ease of use and usefulness, the system features exert an indirect influence on an individual's attitude to the use of the system and the resulting actual usage. It is interesting that in Davis' practice tests, usefulness showed a significantly higher correlation with the user's behavior than the ease of use. This means that users' (re-) use of the system is determined to a far greater extent by its added value for users than by its use-friendly design (Davis 1989, 1993).

Expected Value Model

In their EVM, Zeithaml et al. (2000) view the use of online services from another point of view, identifying the discrepancies (gaps) that may exist in the interplay of online services, providers, and users (see Fig. 13.2). The key features that determine the success or failure of online services are in the provision of genuine service quality on the Internet. The assumptions made in the EVM can also be applied to online facilities in e2d. This is because the relationships in terms of usability and usefulness of online participation services between organizers/providers and users are identical or similar, both sides sharing the same goal, including the use of a particular service. The EVM concept is based on four discrepancies (gaps) which may exist with respect to the mutual expectations of service suppliers and users. The discrepancies are mainly organizational in nature and relate to the design of the Internet service, the marketing of services and the service performance itself. Examples of the relationships between organizers, online participation service, and citizens, and the discrepancies between them are shown in Fig. 13.2.

The electronic service quality (e-SQ) perceived by the citizen determines whether the citizen makes use of the service or not. Perceived e-SQ according to the model is composed of the expected service and the experienced service. In the upper half of the figure, the e-SQ is evaluated by users. The evaluation will lead to the use, reuse, or refusal of the service. The lower half shows the simplified sequence of steps that organizers can apply to create and market their (e-)participation service. Zeithaml et al. (2000) assume that the smaller the gaps in expectations between organizers and users, the greater the e-SQ of the offer and the greater the likelihood that use is made of what is provided.

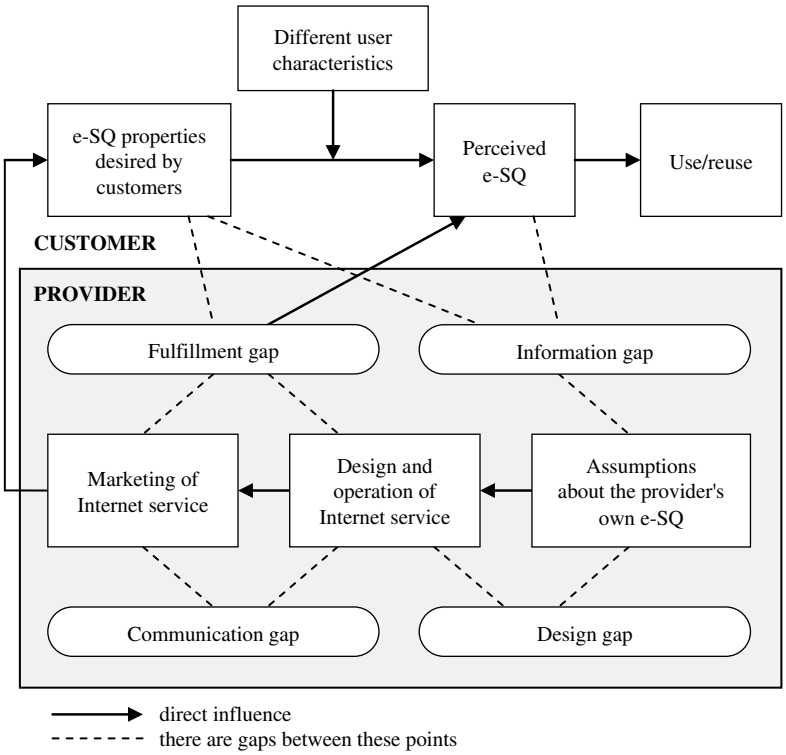

Fig. 13.2 Model for the understanding and improvement of e-service quality (e-SQ). (Illustration by the author, adapted from Zeithaml et al. 2000, p. 28)

13.3 Dropout Analysis in Citizen Panels on Climate Protection

13.3.1 Number of Participants Over Time

Table 13.2 presents the number of participants over time from registration to final measurement. Important points in time were the number of panelists filing the baseline measurement, the first periodic (bimonthly) measurement, the measurement after 1 year (seventh periodic measurement) and the number who took part in every bimonthly monitoring.

Dropout 1 marks the dropout of citizens who have registered and withdrawn before the baseline measurement had to be filed; dropout 2 marks the dropout between baseline measurement and final measurement. Obviously, the dropout reasons of the first group cannot refer to the impact of the tool assessment and the impact of the panels as they left before the actual panel activities started.

Even though the overall number of 1159 registered panelists seems rather high, the variation of panel sizes among the seven sites is considerable. In absolute

Table 13.2 Number of panelists and dropout rates over time

Panel	Registered	Baseline measurement	Dropout 1	1st periodic measurement	7th periodic measurement	Final periodic measurement	All measurements	Dropout 2
	n	*n*	%	*n*	*n*	*n*	*n*	%
Bregenz								
Onliner	46	23	50.0	15	14	9	9	30.4
Offliner	18	17	5.5	17	13	12	12	27.8
Total	64	40	37.5	32	27	21	21	29.7
Mariazell								
Onliner	42	25	40.5	14	12	11	10	33.3
Offliner	20	13	35.0	13	11	11	11	10.0
Total	62	38	38.7	27	23	22	21	25.8
Austria	126	78	38.1	59	50	43	42	27.8
Bremen								
Onliner	181	114	37.0	69	45	40	36	40.9
Offliner	32	22	31.3	21	19	20	13	6.3
Total	213	136	36.2	90	64	60	49	35.7
Bremerhaven								
Onliner	32	21	34.4	18	16	16	16	15.6
Offliner	16	14	12.5	14	12	13	13	6.3
Total	48	35	27.1	32	28	29	29	12.5
Wennigsen								
Onliner	92	60	34.8	49	–	26	23	37.0
Offliner	22	18	18.2	18	–	17	15	4.5
Total	114	78	31.6	67	–	43	38	30.7
Germany	375	249	33.6	189	92	132	116	31.2
Pamplona								
Onliner	186	67	64.0	59	32	26	26	22.0
Offliner	74	54	27.0	52	48	47	47	9.5
Total	260	121	53.5	111	80	73	73	18.5
Saragossa								
Onliner	278	182	34.5	152	112	88	86	33.8
Offliner	120	108	10.0	103	97	93	93	12.5
Total	398	290	27.1	255	209	181	179	27.4
Spain	658	411	37.5	366	289	254	252	23.9
Total e2d	1159	738	36.3	614	431	429	410	26.7

figures, at the outset, the participation in the Spanish panels was the highest with 260 in Pamplona and 398 in Saragossa. By contrast, the lowest number of panelists registered in the German city of Bremerhaven (48) and the two Austrian regions of Mariazell (62) and Bregenz (64). However, the participation rate relative to the local population size turned out to be highest in the smallest regions (see Chap. 7). The dropout before the actual measurement started was already high (36% on average).

The loss of participants was highest in the Pamplona panel, where about half left before the baseline measurement. The panel attrition rate between baseline and final measurement (dropout 2) was limited to a further 27% of the panelists who had originally registered, which corresponds reasonably to the levels found for panel studies in the literature cited above.

The Bremerhaven panel shows a dropout 2 rate of only 12.5% and, except for the Bremen panel with about 36%, all others are around 30% or below. However, it was rather obvious from the beginning, that a public participation activity requiring fairly long-term participation and input combined with requests for lifestyle changes would not be that popular among the general public. Further analyses on the mode of participation showed that the dropout 2 rate was especially high among onliners (32.2%), about eight times higher than among the offliners (3.9%). In line with this, the share of offliners in total dropout, that is, between registration and final measurement, in the seven panels during the 2 years is comparably low at 12.2%; in other words, almost 88% of the panelists that dropped out were onliners. This shows that the mode of communication has a strong influence on dropout. As discussed in more detail in Chap. 15, it was mainly the binding force of social relations and social control that resulted from the organization of regular CO_{2e} monitoring and feedback for offliners (with support staff calling the panelists via telephone bimonthly) that lowered the dropout among this group.

13.3.2 Sociodemographic Composition of Panels and Dropout

The pure overall figures alone are not meaningful enough. The representativeness by sociodemographic aspects is also of significance. As was to be expected and as has been the experience of similar projects in the environmental domain (see Chaps. 3 and 9), panelists have an above-average interest in and commitment to environmental topics, particularly with regard to climate change mitigation. Participants tend to be older than the general population (52% over 51 years) and on average are well educated (49% with university degree). For the dropout analysis, it is of interest to see which group has a higher dropout rate.

Table 13.3 shows the correlation matrix for age, parenthood, education, and occupation.

The negative correlation for age indicates that citizens over 50 years old are less represented among dropouts in all panels, that is, it was mainly the younger participants who withdrew from their panels. The results are particularly significant in Wennigsen and Bremen as well as among all the participants. It seems that other, competing preferences gained the upper hand among the younger population. More interesting are the percentages of dropouts who have children. In almost every panel, the share of dropouts who have children is smaller than for panelists without children. This is indicated by the negative correlation that is particularly significant in Bregenz as well as among all seven panels taken together. It could be interpreted

Table 13.3 Correlation between dropout and sociodemographic status variables

Region	*n*	Dropout by age	Dropout by parenthood	Dropout by education	Dropout by employment
Bregenz	27	−0.37	−0.61*	−0.10	0.06
Mariazell	23	−0.217	−0.21	−0.10	0.07
Bremen	89	−0.29*	−0.16	0.06	0.15
Bremerhaven	29	−0.03	0.07	−0.21	0.22
Wennigsen	50	−0.59**	−0.12	0.14	0.26
Pamplona	80	−0.21	0.073	0.08	0.15
Saragossa	206	−0.13	−0.049	0.18*	0.14
Total	504	−0.24**	−0.12**	0.13**	0.15**

Phi coefficient for Fisher's Exact Test of Independence
*$p < 0.05$; **$p < 0.01$
Dummy variables; dropout: 1 = dropped out; age: 1 = 51 and older; parenthood: 1 = has children; education: 1 = university degree; employment: 1 = in employment

as an indication that citizens who are parents tend to show a higher level of social responsibility towards subsequent generations than nonparents, as was one of the hypotheses in e2d. However, this finding has to be taken with caution as no significant differences were found in the levels of CO_{2e} reductions achieved between the two groups.

On the other hand, education played a role, as shown by the significant positive correlation between dropout and level of education among the total, that is, more academics left the panel than participants with compulsory or secondary schooling. With respect to the deviation in Bregenz, Mariazell, and Bremerhaven, the number of panelists included in the analyses is rather small. However, the lower the number of cases, the higher the effect on the level of significance. Certainly, these methodological constraints influence the correlation results for all four sociodemographic variables. Hence, a consideration of the total results for the panelists from all seven panels permits a more valid interpretation. Finally, employment status proved to be another interesting factor for dropout. The significant positive correlation in the total sample indicates that the panelists' employment status has an impact on their dropout decision. Participants who work regularly more often left the project than those who are retired, do not work, or are still studying. As a tendency, this observation could be made across all seven panels. From this result it seems that participation in the panel proved to be too costly for some participants. Panelists who are already retired and hence who have more time seem to be in a better position to balance their daily duties and their private lives including their participation in the panel.

In the following section, we present the findings on the reasons given for dropping out. The sociodemographic composition is not considered any further in this analysis, but an interpretation of the results should take into account the fact that more younger participants, more participants without children, more academics, and more participants who are employed left the project.

Table 13.4 Ranking of dropout reasons

		Applies to a great or very great extent (%)
1	The amount of time needed was too high	66.7
2	Gathering the required data was too complicated	61.1
3	I saw no more scope for improving my CO_{2e} balance	38.9
4	The climate initiative reached too few participants	30.2
5	Local administration and politicians have not contributed enough to the climate initiative	30.2
6	Local companies have not contributed enough to CO_{2e} reduction	23.8
7	I felt a lack of opportunities for an exchange with other participants	20.6
8	The project is of no value for climate protection	20.6
9	I was not ready to really change my lifestyle	19.1
10	The project does not generate energy cost savings	18.3
11	I was concerned about data protection	11.9
12	Information supplied for saving energy and CO_{2e} was insufficient	11.9
13	I felt a lack of rewards to compensate for the time dedicated	4.8

Multiple response, $n = 126$

13.4 Findings on Reasons for Dropping out

Although the dropout rate experienced in this project is in line with expectable panel attrition, the high rate of participation willingness expressed in representative telephone surveys at the beginning had promised a different course. For this reason, the standardized survey of all dropouts was intended to gather information on the reasons why these people left the panels before time. The main reasons given by the 126 respondents were analyzed in the light of the usability of the instruments used in the participation process (see Sect. 13.2.3) and the usefulness of the panel participation for citizens in general. In the latter case, the focus was on the above-mentioned determinants of behavior change from a sociological, environmental–psychological, and economical point of view (see Sect. 13.2.2). Table 13.4 provides an overview of dropout reasons.

In summary, the main dropout reasons according to the dropout survey were the limited time budgets that the citizens had for a reasonable involvement in the panel and the complicated data collection. Both reasons are interrelated as data collection required time. Depending on the individual conditions of the home and the number of household members that had to be considered when calculating consumption data, this can be a demanding, time-consuming task. The reasons are discussed in detail in the following section.

13.4.1 Psychological and Social Aspects

Values and Attitudes

The representative telephone surveys in the seven regions revealed that *climate change* is among the top concerns of citizens. Moreover, approximately 92 % of the

panelists believe that climate change is very worrying. These findings are in line with the European mood that has been ranking climate change as a main threat for years (European Commission 2011, 2009, 2014). However, people nowadays are confronted with several global-to-local problems. And it is not necessary to be a climate change skeptic to rate other (global or national) problems higher than climate change. Hence, individual concerns and preferences may change during the citizen panel period. Citizens may have registered because of their pro-environmental attitude and their general will to support climate protection behavior. But when activities are to start and individual involvement is needed, it is often not the right time, other interests are more important, or the expenditure is too high at that particular point in time or life. In particular, the time budgets available and competing preferences play a key role in this conscious or unconscious decision, as do the efforts needed to engage. The decision to register and to drop out before actual activities start is strongly influenced by the general question of preferences at a particular point in time. One third of all registrants (one half in Pamplona) seem to struggle with their preferences at a certain point in time. As the majority of dropouts were somewhat anonymous onliners less subject to social control (as was the case for offliners—see above and Chap. 15), they did not have to justify their decision to others. The situation is different when dropout 2 is considered. After the first round of individual data entry for the calculation of CO_{2e} footprints, there had already been sufficient contact between organizers and panelists and between the panelists to enable an initial community building, and the panelists had mastered the functionalities of the monitoring tools. Community building and the efforts needed for regular gatherings and the provision of data, as well as the individual (non-)affinity to (online) monitoring instruments, certainly became more relevant for dropout 2. As will be shown later, there were no significant differences in general values and attitudes towards climate protection among the population in the seven regions.

Participation-Related Effort

Participation in a citizen panel in e2d could be classified as a high-cost activity that requires a high level of motivation or interest in climate protection. The majority of citizens seem to have avoided such a high-cost situation. About 36 % of those who entered the arena by registration with the project had already withdrawn before the actual measurement started or after they had made acquaintance with the CO_{2e} calculator (dropout 1). About 11 % more left between baseline measurement and first periodic measurement (2 months later). Ultimately, about 53 % of the citizens originally registered overcame this high-cost burden, at least until the first periodic (bimonthly) measurement (see Table 13.2). A particularly high cost was the data measurement that required access to consumption meters. But not all participants had direct access to their meters, or they shared their meters with other people living in the same house. This aspect, however, was not considered in the conceptualization of the panels. The panelists affected were given hints on how to get access to their meters and how to calculate or estimate their consumption data instead. How-

ever, this work-around required additional efforts by the panelists and led to a further increase in the high-cost situation. Thus, about 61 % of the respondents named gathering required data as one of their reasons for dropping out (dropout rank 2). Except for the Saragossa panel with 25 %, in all other six panels, this problem was mentioned by 60 % and more.

However, the participation in the panel as such could also already be perceived as a high-cost situation. According to the uses and gratification theory, individuals weigh up the pros and cons of their efforts. The saving of energy costs was communicated to citizens as a main argument for registering with the project. In many cases, this argument proved to be a more important reason for participation than the reduction in CO_{2e} and climate protection. If savings could not be achieved, the expected reward for the efforts invested failed to materialize. Thus, panel participation could develop into a high-cost activity that individuals were not ready to take on. However, only about 18 % of dropouts did not achieve the expected energy savings and mentioned this as an argument for leaving the project (rank 10). This result is also underpinned by the finding that 75 % of the respondents perceived the project as being of high or very high value for climate protection and only about 21 % judged the project as of little or no value (rank 8). The concordance of respondents who mentioned both reasons is about 65 %. Significant differences among the seven regions were not observed in this regard; in general the pattern of dropout reasons reported was very similar. Most of the dropouts withdrew at a time where actual savings could not be clearly observed. It is expected to take at least 1 year for a valuable insight into the development and dependencies of one's CO_{2e} balance to be gained. Hence, it seems that reasons ranked eighth and tenth emanate more from emotional-intuitive assessments than from actual measurable results.

Besides these general prerequisites for pro-environmental behavior, values and attitudes are particularly represented by dropout reason numbers 3 and 9. A considerable portion (39 %) said they did not see any possibilities for further improving their individual carbon balance (rank 3). In this case, the assessment varied considerably among the seven panels, from 0 % in Saragossa and 7.7 % in Mariazell to 55 % in Wennigsen and even 100 % in Bremerhaven. Of all respondents, 19 % confessed to be unwilling to change their lifestyle (rank 9). No significant differences among the seven panels were observed. But interestingly, three fourths of those 19 % also saw no scope for further CO_{2e} reductions in their daily activities. This leads to two findings, firstly, the majority did not leave their panel because they did not see any chance for improvements, and secondly, from the view of the dropouts, CO_{2e} reductions only seem to be achievable through a simultaneous impairment of one's own lifestyle. The first finding may be taken as a good sign, with withdrawal being based on reasons other than a perceived lack of the individual's own saving potential. The second finding, that CO_{2e} savings could only be achieved through fundamental lifestyle changes, exposes a lack of information since this is actually not the case. Thus, local politicians and administration must do more to better inform and engage with citizens about the purpose, achievements, and priorities of climate protection. From an objective point of view, every citizen of a European country has a potential to reduce his/her greenhouse gas emissions. It is a question of how far they would

go to achieve further savings. *How far* does not mean that people have to abstain completely from any consumption or seriously restrict their living conditions. It is rather the degree to which panelists have to leave their comfort zone. Considering the various lifestyles of today, it can be assumed that a person sees no further scope for improving his or her individual CO_{2e} balance while maintaining the established daily routines and avoiding a scrutiny of the self-imposed living conditions. There are alternatives for almost any behavior. Change is a free choice. The associated reasons ranked third and ninth in Table 13.3 are closely interrelated. Presumably the 19% of respondents who answered that they were not willing to change their lifestyle were more honest than the roughly 39% that did not see any opportunity for making further reductions of their individual balance.

Involvement of Time Budgets and Other Competing Preferences

Competing interests formulated by panelists vary considerably. There is not only "competition" between the most crucial challenges facing the world today, but also competition between an individual's different interests. There is also only limited leisure time. Why not play with the children, pursue sport, or watch TV instead of investing time and energy in a participation project? Although not a direct subject of the dropout survey, there is evidence from additional interviews taken with all dropouts from Wennigsen and from various responses of dropouts from other panels in e2d that competing interests quite often led to the drop out of panelists. This is underpinned by the actual time budgets available for involvement in the citizen panel. Exactly two third of the dropouts reported that the amount of time required was too high. According to the survey, this is the highest ranked reason for dropping out. Considering the panels with the lowest (Bremerhaven) and highest total dropout rate (Pamplona), it is interesting that the available time budget was mentioned most frequently by respondents of both of these panels (100 and 77.8%). The share of respondents of other panels who gave this response ranges from 25 (Saragossa) to 72.5% (Wennigsen). Hence, the best and least performing panels regarding dropout both gave the involvement time budget required as being the most crucial dropout reason.

Living Conditions and Incentives

Living conditions include the context in which people live and its related implications. One aspect is the climate with its influence on the demand for heating energy and electricity, which is different in the southern regions in Spain and the more northern regions in Austria and Germany. Certainly, opportunities for behavior change are different, and some lie outside the influence of the individual panelist. Other examples include whether participants live in their own house and have the opportunity to make pro-climate changes (e.g., renovation of the home in energy terms or changing the heating energy type), or if they live in a region with a sound

public infrastructure that allows for a change of individual traffic mode. The effects of living conditions are closely related to the low-cost hypothesis and have already been described above.

Ranks 4–7 in Table 13.3 concern the team spirit of panelists and the coproduction type of participation of all three major local stakeholder groups. Both interrelated aspects seem to be of less importance for the decision to continue or discontinue participation in the seven panels. However, consideration must be given to the fact that no major group activities in addition to the meetings at the start, at mid-term and at the end were planned in the Spanish panels due to a different project organization. Moreover, an online platform that allowed for exchange was not established and maintained appropriately at all locations. Considering that only a certain percentage of the panelists regularly attended the panel-specific exchange and discussion meetings (online and offline) in the Austrian and German panels, opportunities for obtaining information about the achievements of other partners and for a common exchange do not seem to have had as high a relevance as expected. Even though this was a central element supporting the improvement of an individual's CO_{2e} balance (see Chap. 10), from the survey results it seems that the participation process tended to be perceived as an individual rather than a group activity by the dropouts.

The remaining three dropout reasons assessed as being of minor importance in 11th–13th position concern the panel organization: trust in data protection, provision of CO_{2e} relevant information and provision of incentives. The low rankings, however, do not necessarily mean that data protection and the quality of information provision were not important values for users. Rather, this could be an indication that the panels provided valuable information packages for citizens and imparted a sense of data security for panelists. With regard to incentives (dropout rank 13), participants were not eager to receive material incentives for their participation. For more than 95 %, the offering of incentives was of minor relevance for their participation. In all seven panels, participation was seen more as a matter of course to support the greater good without receiving any material compensation.

13.4.2 Technology Acceptance

e2d researchers have been working for years on issues around the ease of use and usefulness of online services in various projects, for example, Modinis (Kubicek and Cimander 2007), Demo-net (Tambouris et al. 2007), Backoffice (Millard et al. 2004), and Bonsai (Cimander and Taimanova 2004). Even though many efforts have been made in e2d to improve the ease of use of the CO_{2e} calculator and to amend it with brief and concise guiding information, the overall assessment of the greenhouse gas calculator by the research team was only medium. In particular, the log-in functionalities generated error messages from time to time, and entering the baseline measurement required users who were sophisticated with respect to the use of the Internet and who understood the facilities in their own homes.

Table 13.5 Assessment of ease of use of the CO_{2e} calculator

	The input mask of the CO_{2e} calculator makes data entry…				In comparison to similar applications you have used, using the CO_{2e} calculator is…			
	Loyal panelists		Dropouts		Loyal panelists		Dropouts	
	n	% (∑)	*n*	% (∑)	*n*	% (∑)	*n*	% (∑)
…very easy to rather easy	183	86.3	47	54.7	167	85.7	40	46.5
…rather difficult to difficult	29	13.7	34	39.5	28	14.4	42	48.8
Don't know	0	0.0	5	5.8	0	0.0	4	4.7
Total	212	100.0	86	100.0	195	100.0	86	100.0

In the dropout survey, the ease of use of the CO_{2e} calculators was not stated by dropouts as a single reason that supported their decision to leave their panel. This is why usability as such is not mentioned as a dropout reason in Table 13.4. Instead, several questions had to be answered to assess the online tool. A total of 72% of responding onliners who had dropped out had used the CO_{2e} calculator at least once; the rest had not and thus could not answer questions on usability. Two examples of answers received concerning usability are presented in Table 13.5. Moreover, answers are compared to those of the loyal panelists that did not dropout.

The survey results seem to prove the moderate expert assessment above: 39.5% had difficulties with the calculator input mask and 48.8% of respondents assessed the use of the CO_{2e} calculator as rather difficult to difficult. Moreover, the comparison with the assessments by the loyal panelists clearly shows that the latter struggled significantly less with the usability of the CO_{2e} calculator. Almost twice as many panelists who participated over the full period assessed usability as very easy to rather easy. As detailed in Chap. 8, the Austrian and German panels shared the same calculator, but the Spanish panels used a technically different one with different usability aspects. Further questions revealed that 44.2% had problems transferring meter data from their individual project web space to the calculator site and that 58.1% struggled with the calculator questions' accuracy of fit with the individual's actual living conditions.[1] However, the calculator could not be adapted to all individual cases. The consequences were inaccurate CO_{2e} balances of some panelists and thus frustration. Moreover, changes like relocating or leaving the city affected comparability with the previous balance, and thus balances lost their information value over time and led to participants leaving the project. As was to be expected, these findings do not correspond to the assessment of the roughly 220 onliners who stayed in the project for up to 2 years and who answered the regular panel survey questions. More than 80% of them assessed usability as good or rather good and did not discover major usability problems (see Chap. 9). In accordance with the TAM arguments, the usability of the tools influences the decision whether to use the tool;

[1] For example, exact consumption figures for heating energy could not be collected on a bimonthly basis, changing numbers of people living in the household could not be considered as well as the extension of one's home; data concerning dogs or other pets could not be entered into the tool.

that is, whether it is perceived as being useful or not for the individual. Some of the more obvious aspects defining the usefulness of the CO_{2e} calculator are the reduction in energy costs, getting to know one's carbon balance or meeting like-minded people. However, the direct correlation between the ease of use of the calculator and perceived usefulness could not be assessed for the group of dropouts: the majority of these had already left their panel before energy savings could have been noticed, meaningful carbon balances drawn up or lively discussions established. However, even if not possible from the assessment of the group of dropouts, from the final panel surveys, we can deduce a correlation between the ease of use of the monitoring tool and its usefulness: Between 70 and 80% of the loyal participants in the Austro-German panels perceived a reduction in energy-saving costs. About four fifths across all loyal panelists regarded the regular information on the development of their carbon balance as being important. From the individual ecological impact assessment (see Chap. 11), we know that panelists that did not perceive a feeling of group formation yielded less good results. So finally, as loyal panelists assessed these aspects positively and developed rather well while most dropouts could not perceive any of the aforementioned effects, there might well be a direct link between the ease of use and usefulness of the monitoring tool.

Another aspect concerns the provision of climate protection and behavior-relevant supporting information. This included regular newsletters with tips and tricks, invitations to local meetings, excursions, and other relevant activities in the hometown. Around 80% of dropouts assessed the information supplied during the panels as sufficient and thus not a reason for leaving the panel (rank 12).

In accordance with the EVM by Zeithaml et al. (2000), we see in particular an *information* and *design gap* between the perceptions of the providers and organizers with regard to the calculator functionalities and the actual needs of an average panelist (see Sect. 13.2.2). Generally speaking, the design of the CO_{2e} calculator was quite ambitious both with regard to specific functionalities that in fact were not seen as being easy to use by all, and with regard to the overall calculation of CO_{2e} levels based on multiple components. Moreover, the understanding, responsiveness and the efficiency of the system design features seem to have been perceived differently by the providers and panelists. Another discrepancy appeared in the form of the *communication* and *fulfillment gaps*. The local organizers of the citizen panels—sometimes for lack of detailed knowledge of the actual capacity of the balancing and monitoring instrument—announced a comprehensive CO_{2e} balancing service to their citizens that, however, ultimately could not deliver all that was promised.

13.5 Conclusions

Outreach is a crucial criterion for the success of participation exercises. However, it is not only the size of the panels that is important in collaborative processes, but also their continuity over time is relevant, that is, a low level of dropout and panel attrition. In the e2d project, total dropout rates per citizen panel ranging between

40 and 72% had to be dealt with: type 1 dropout (i.e., before baseline measurement) between 27% (Bremerhaven) and 54% (Pamplona), plus type 2 dropout (i.e., after baseline measurement) between 12% (Bremerhaven) and 36% (Bremen). To explain the dropout and the differences between the seven panels, two main theoretical strands have been presented in this chapter: the social and psychological patterns that shape the values and attitudes that keep the citizens participating in their panel or lead them to drop out, and on the other hand the requirements set by the tools used in the participation processes—here mainly the CO_{2e} calculator. Although the perceived ease of use is an important factor for keeping people using a certain service, about half of dropouts reported having difficulties in one way or another with the usability of the CO_{2e} calculator. By contrast, only about 15% of the loyal panelists reported such or similar problems. Hence, a lack of perceived ease of use is responsible at least for those dropouts whose affinity to and experience with online tools is low and where individual support is lacking. Supporting functionalities for onliners, however, were limited. It was part of the e2d project design that onliners should participate and obtain relevant information and support entirely by electronic means; no offline support was foreseen for this group. Austro-German panels received online support through an online helpdesk and an online forum. For organizational reasons, such facilities could not be provided for users in the Spanish panels. As presented above, this is to be seen as one major reason for the higher dropout rate in the Pamplona panel.

A shortage of time in combination with the complexity of gathering and entering consumption data into the calculation tool were named as the fundamental dropout reasons throughout all seven panels. These findings, however, are not surprising since from the beginning a narrow path had to be followed to design a monitoring tool that on the one hand was suitable for covering most relevant greenhouse gas emission elements of an individual's daily life and that at the same time did not overburden its users. As there were only limited possibilities for adapting the usability of the available CO_{2e} calculator, and because a meaningful CO_{2e} balancing is only feasible if a certain set of consumption and behavior data is available, a high dropout rate was to be assumed.

However, people bear difficulties if the expected gratification is high enough. For this reason, the most important dropout reasons are to be sought in the psychological and social sphere. In this regard, the hypothesis of Thaler and Sunstein (2008) that adherence to social norms and competition may trigger behavioral changes has only proven to be partially valid in e2d. In contrast to the experiments described by Thaler and Sunstein, participation in e2d lasted much longer and demanded the reflection of the individual's own lifestyle. Moreover, it required the adjustment of the personal lifestyle to climate-compatible behavior, which represents a challenge to long-established patterns and a confrontation with barriers. This means feedback information alone could not be a sufficient enabling factor. Even highly concerned people lose interest over time. Although it is clear that individual achievements can only be measured by comparing the same months for different years, many people do not have the patience and discipline to persevere. Disappointment at a single flight damaging the balance of achievements in other areas for a whole year

contributes to giving up. Therefore, feedback alone will not contribute significantly to lasting energy savings and CO_{2e} reduction. Instead, it has to be embedded in complementary measures supporting pro-climate behavior change.

For example, arrangements can aim at fostering sociability, conformity, recognition, or social control. They build the foundation for people's behavior and attitudes to influence the behavior of other actors. Community building may support the strengthening of pro-climate social norms, as was the aim in e2d, but results showed mixed success. The organizers of the Austrian and German panels had offered more meeting and exchange opportunities to their participants than was the case among the Spanish panels. Onliners in the Austro-German panels were also regularly invited to the face-to-face meetings. In Spain, due to the specific recruiting model in Saragossa, using a group of volunteers already established at the time of the EXPO activities in 2008, the initial situation and chance for community building was better in Saragossa than in Pamplona. In addition, the existing infrastructure, such as the spread of public transport and the supply of regional and organic food is of considerable importance. Here, the bigger cities with a better infrastructure like Saragossa and Bremen offer better conditions for change and hence less reasons for dropping out.

Another major aspect concerns the services and facilities around the monitoring tool offered to citizens. As the survey showed, users in all seven panels were very satisfied with the general information and communication facilities and with questions of data security. More important reasons for dropping out were the lack of wider participation and support by other citizens, businesses, and finally the organizing public authority. Thus, better participation rates can in the future only be achieved by increased marketing of the possibility to participate with better support by public authorities and better integration of businesses. The citizen panels started as a joint effort by all groups in society but ended up with a strong focus on the achievements of the citizens only. Moreover, to attract panelists, further investments in the ease of use of the calculator tool and in the provision of assistance to panelists adapted to their individual needs need to be undertaken. The latter, however, could be perceived as an intrusion into private life and, overall, is perhaps not affordable by public authorities.

Alongside the usability of the monitoring tool and its ease of use for the citizen panels, there is another more decisive factor that has an impact on the question whether the possibility to participate is used or not. In accordance with TAM and EVM, too, it is the perceived usefulness of the online service. Tools characterized by high usability may encourage their use, but do not imply it. Thus, particular focus needed to be put on the additional value of the participation for citizens. The citizen panels offered various advantages to their participants: be it financial benefits as a result of energy savings, broad and free of charge energy consultancy services, discussion and exchange facilities with experts and other panelists, or modest material incentives as compensation for data gathering. However, participation in climate protection is different to other, relatively common participation fields like voting, public budgeting, or urban planning. It concerns questions of individual lifestyles, and people react very sensitively when their social and environment-related

conscience is concerned. With regard to the protection of the environment, it is not unusual for individual aspirations to differ from real action, which in turn causes inner psychological difficulties. People try to avoid such mental inconsistencies and tend to balance them. This could be either by adapting their behavior or their desires or by simply ignoring the difference. In the latter two cases, withdrawing from a citizen panel on climate protection with reporting duties regularly confirming this difference would be a first logical consequence. Hence, it is no wonder that the reason for dropout with the third most votes concerns the participant's ability and will to contribute to climate protection. Overall, the self-evaluation of dropouts revealed that 38.9 % have already exhausted all their saving options and see no further improvements of their individual balances; this is remarkable. It is to be hoped that the practical reasons (e.g., those ranked 1 and 2 in Table 13.4) will be mitigated in future participation processes by more suitable instruments and arrangements; the last-mentioned reason calls for an emphasis on explanation, education, and persuasion.

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