



INSTITUTE OF  
TECHNOLOGY  
ASSESSMENT

## Fostering responsible action on the consumer side:

a role for local citizen panels  
in energy transition strategies?

PACITA 2015: 2nd European TA Conference  
“The next horizon of technology assessment”  
Berlin, 25-27 February 2015

## Introduction

- Integrated energy and climate change strategy (“20-20-20 targets”)
- Transition also depends on cooperation on the demand side
- Multiple public engagement strategies practiced
- Project *e2democracy*: completed own research project
  - local community initiatives
  - long-term impact monitoring

# Typology of climate change engagement activities

(based on Whitmarsh et al. 2011, p. 276)

Aim of activity	Format	Strategy	Variants
Awareness raising at public level	(a) Top-down (b) Bottom-up	Information provision and education	At-a-distance, various media
Behaviour change plus awareness raising	(a) Top-down (b) Hybrid (c) Bottom-up	Information, education interactive involvement, data collection, monitoring, measurement & feedback	a) At-a-distance b, c) Involvement with groups, long-term effects
Public involvement in climate change policy and decision making	Mainly top-down, some grassroots initiatives	Consultation, dialogue, deliberation	Citizens and stakeholders, multiple methods

## Completed empirical research project

### „e2democracy“: **E**nvironmental **E**lectronic **D**emocracy

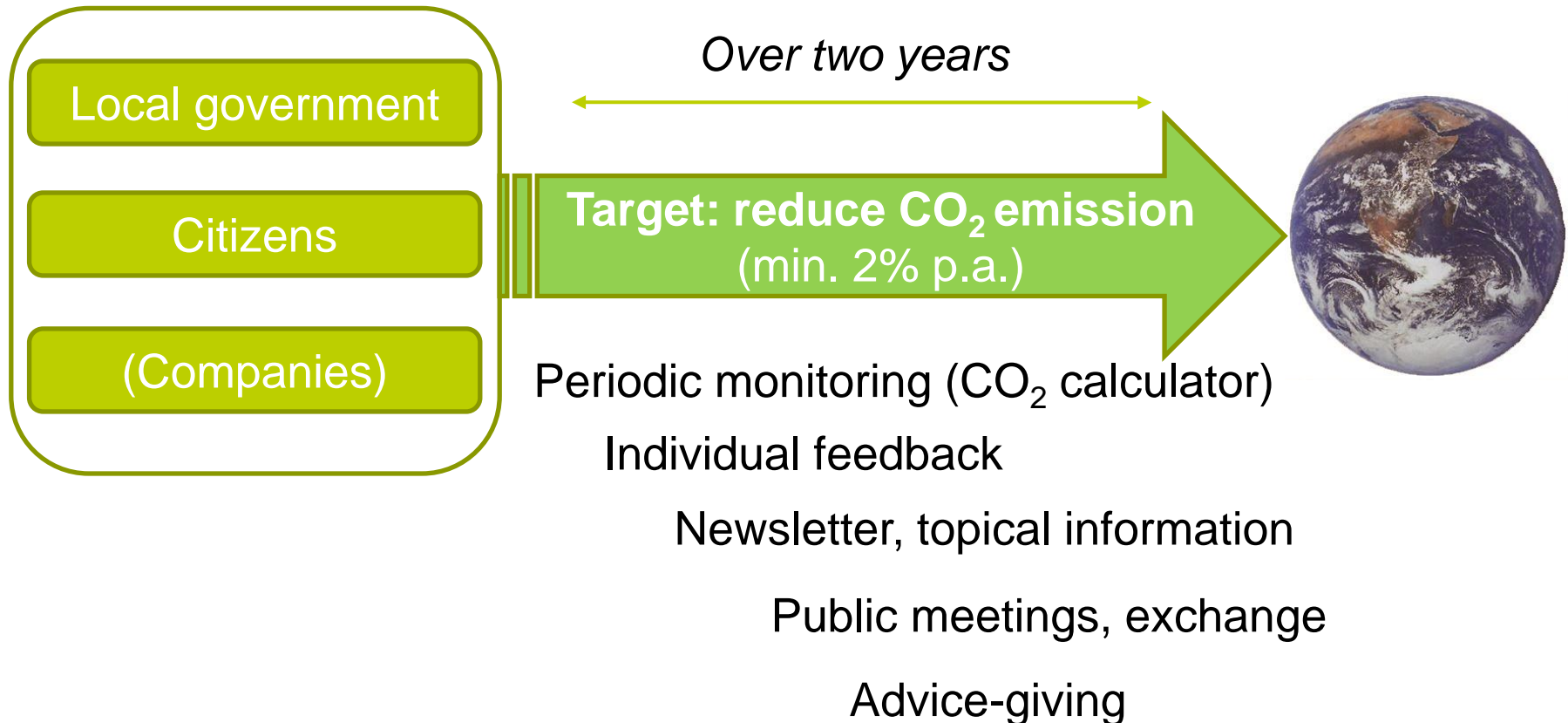
- (E-)participation of citizen panels in local climate protection
- European collaborative project ([www.e2democracy.eu](http://www.e2democracy.eu))
- Sponsored via ESF programme by national grants, Austrian Science Fund (FWF): I 169-G16
- Seven rather similar participation processes studied (2010-13)
  - Germany: Bremen, Bremerhaven, Wennigsen
  - Austria: Bregenz, Mariazell region
  - Spain: Saragossa, Pamplona

## Focus on 4 issues:

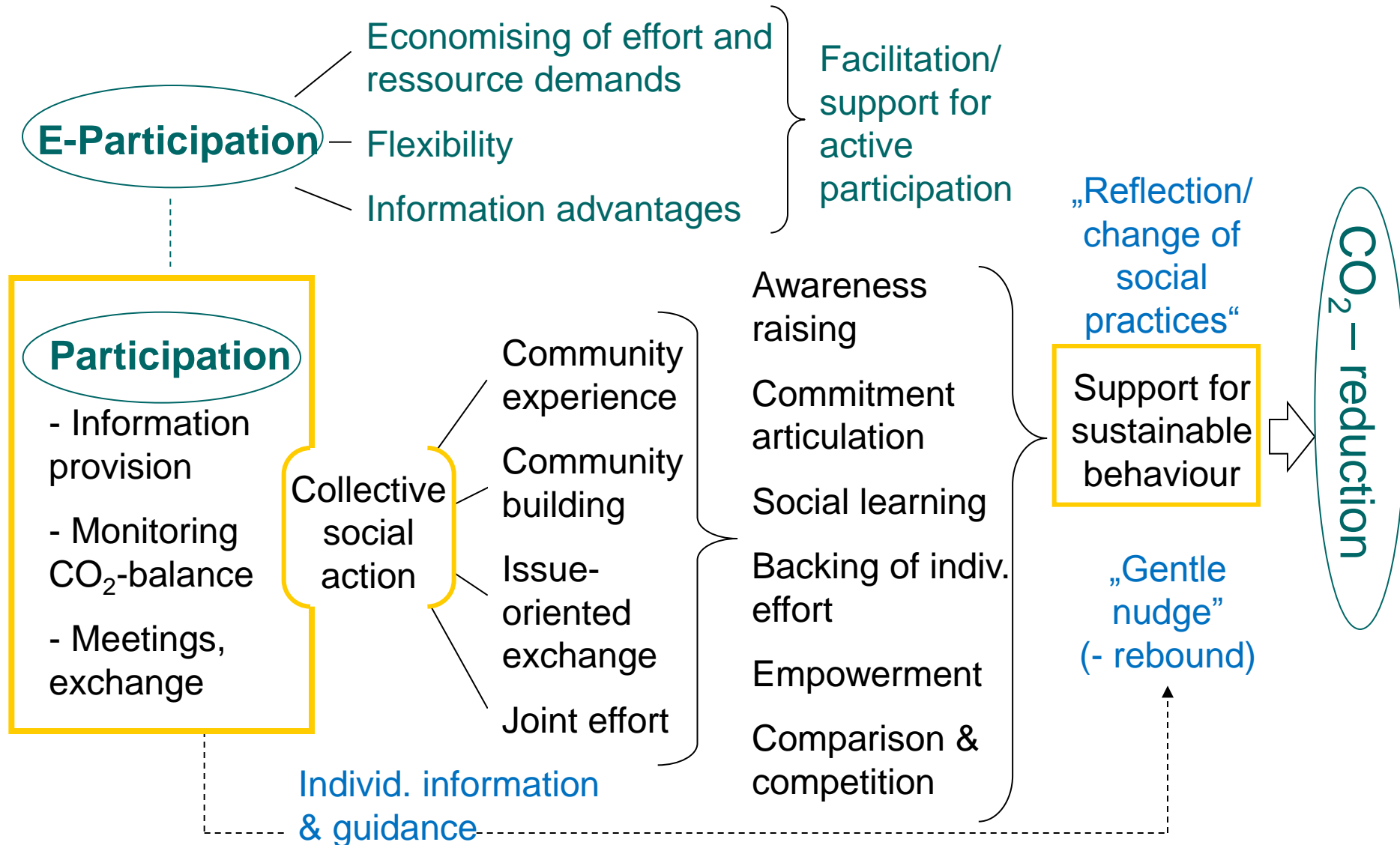
- 1. Selection of effective participation format**

## Evaluating seven citizen panels in AT, DE, ES

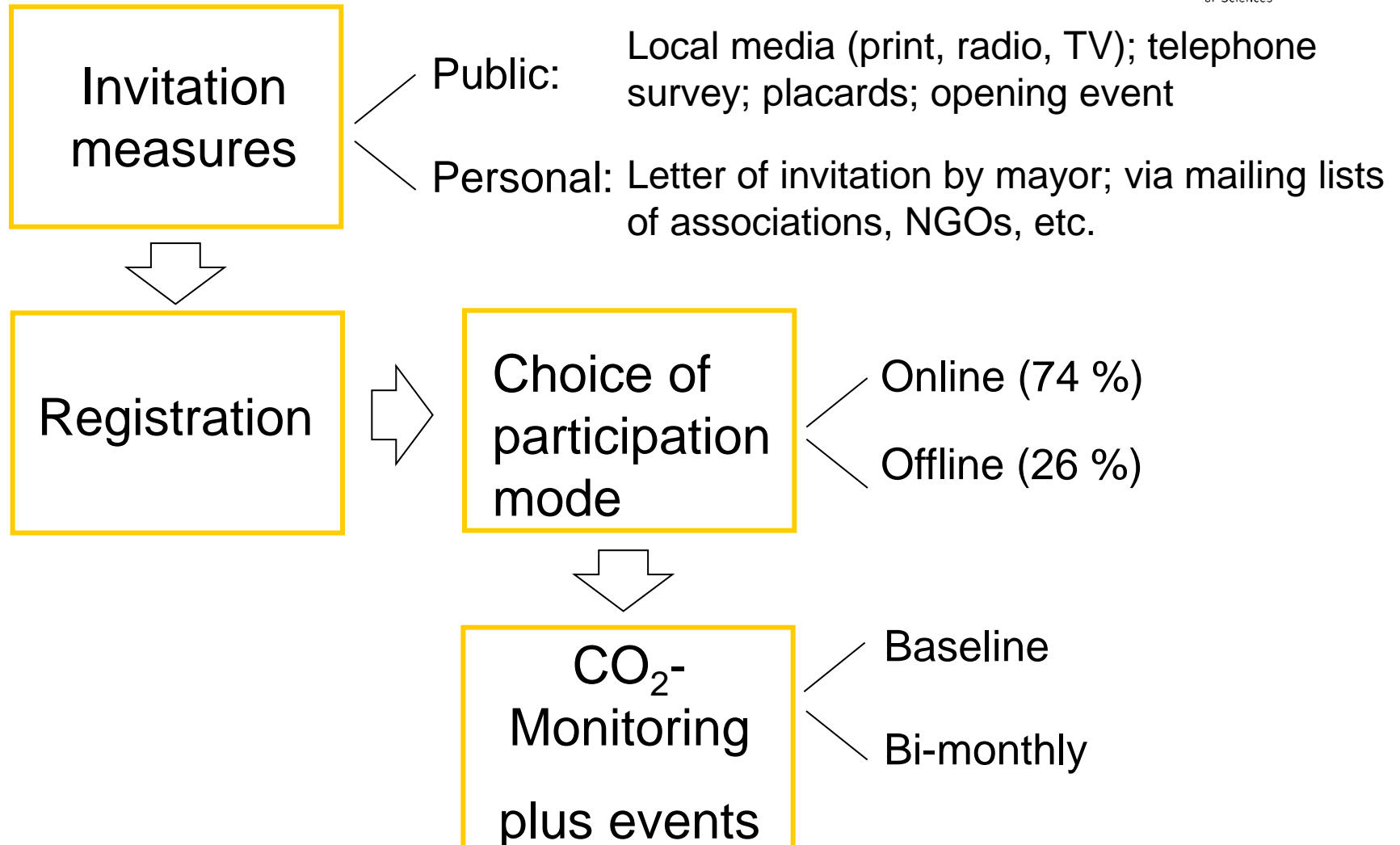
Joint initiative



# Hypotheses on participation effects



# The route to participation





## **2. Reaching the target population**

## Participation rates – higher in small communities

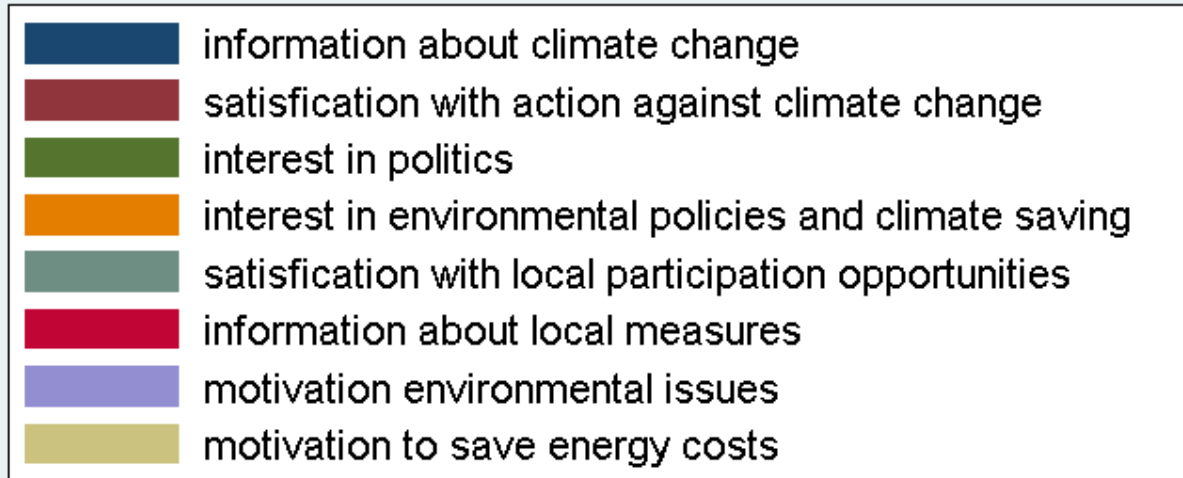
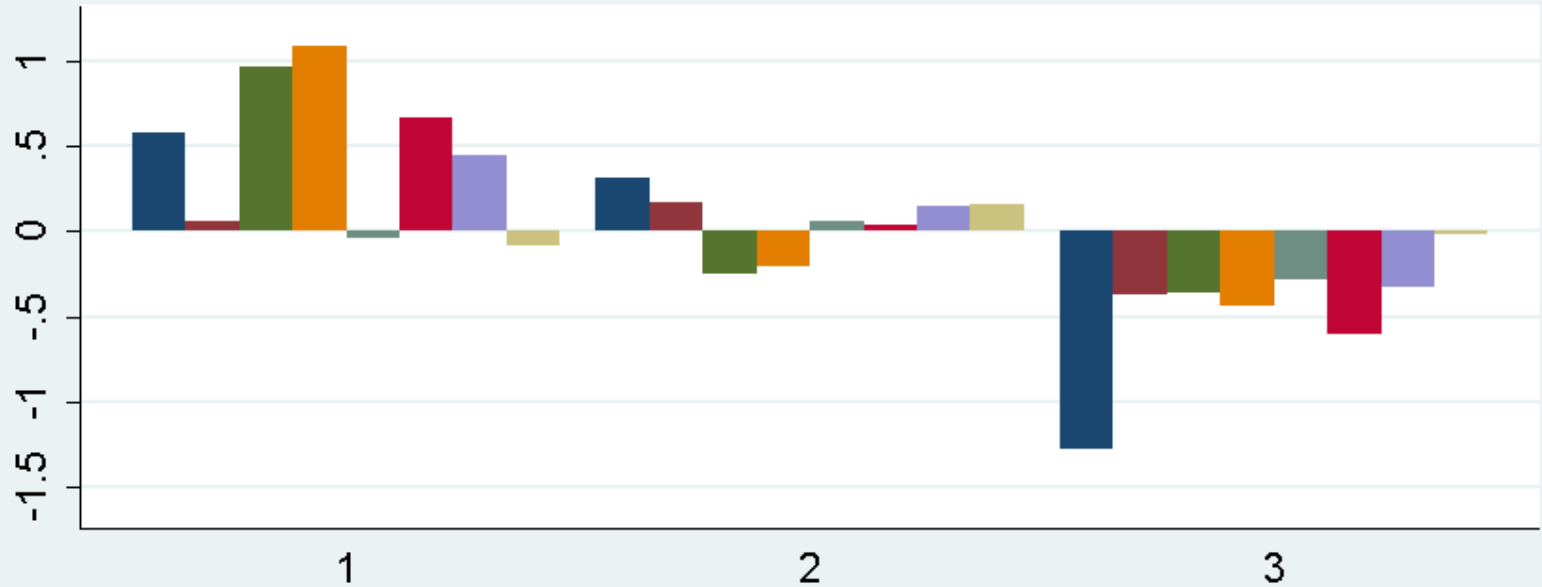
	Bre- genz	Maria- zell reg.	Bre- men	Bremer haven	Wennig- sen	Pam- plona	Sara- gossa
Status	Town	Region	City- state	City	Town	City	City
Popu- lation	29.849	4.690	547.340	113.366	14.099	197.935	674.725
Participa- tion rate	0.21 %	1.32 %	0.04 %	0.04 %	0.81 %	0.13 %	0.06 %

## Size of citizen panels in seven locations over time

City/Region	Registration	Baseline measurement	Final measurement	Drop-out
	N	N	N	%
Bregenz	64	40	21	67.2
Mariazell	62	38	22	64.5
Bremen	213	136	60	71.8
Bremerhaven	48	35	29	39.6
Wennigsen	114	78	43	62.3
Pamplona	260	121	73	71.9
Saragossa	398	290	181	54.5
<b>Total</b>	<b>1,159</b>	<b>738</b>	<b>429</b>	<b>63.0</b>

# Panel profiles (cluster analysis)

Environmentalists (28%)   Sensitised (51%)   Less interested (21%)



## Distribution of panelists across three basic clusters

	Environmentalists		Sensitized mainstream		Less informed		Total	
	N	%	N	%	N	%	N	%
<b>Bregenz</b>	11	73.3	4	26.7	0	0.0	15	100
<b>Mariazell reg.</b>	8	50.0	5	31.3	3	18.8	16	100
<b>Bremen</b>	22	34.9	26	41.3	15	23.8	63	100
<b>Bremerhaven</b>	10	41.7	11	45.8	3	12.5	24	100
<b>Wennigsen</b>	19	59.4	12	37.5	1	3.1	32	100
<b>Pamplona</b>	10	19.6	31	60.8	10	19.6	51	100
<b>Saragossa</b>	16	11.0	87	60.0	42	29.0	145	100
<b>Total</b>	96	27.8	176	50.9	74	21.4	346	100

Source: first panel survey; cluster analysis

### **3. Achieving sustained commitment and impact**

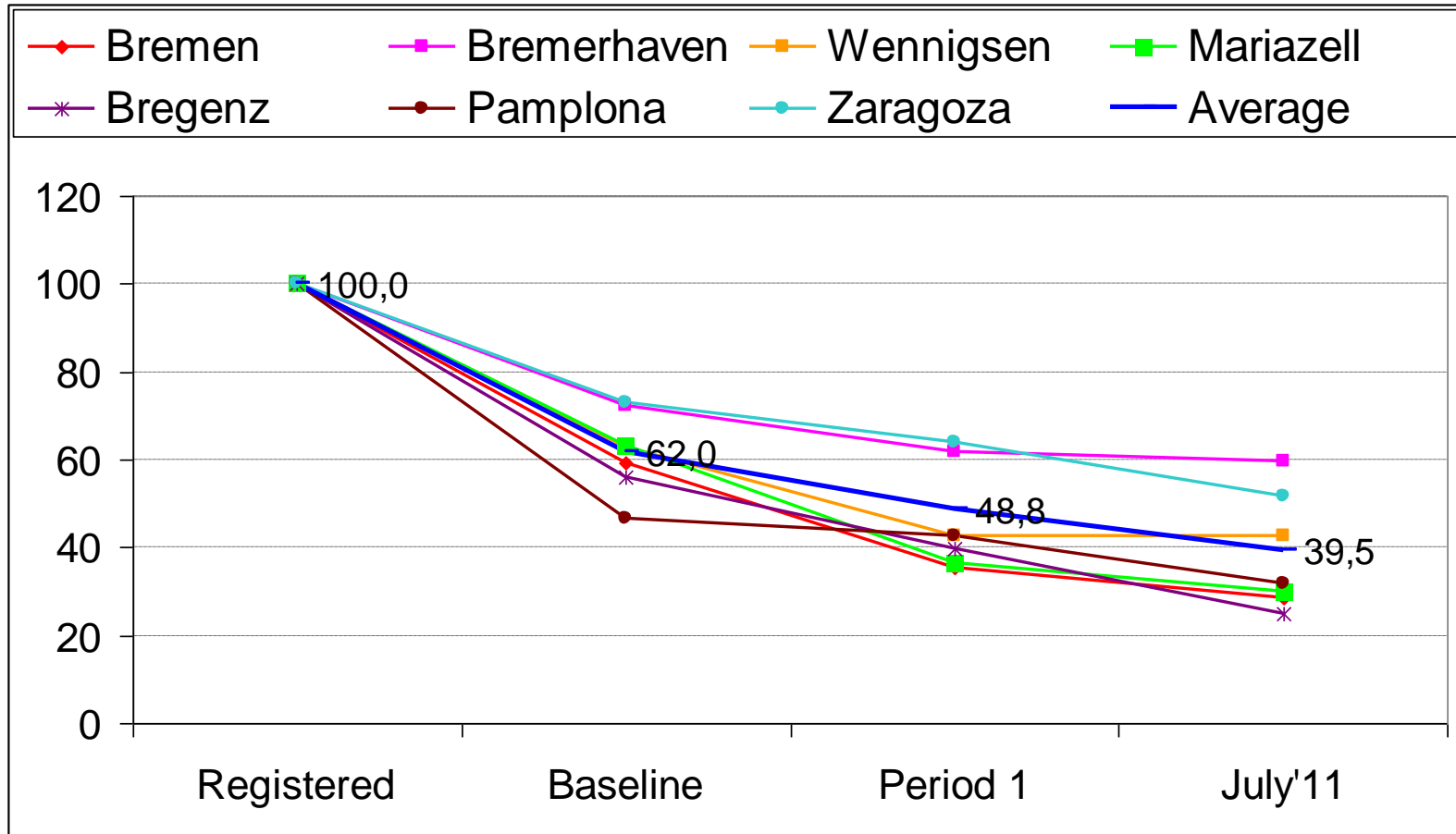
## Facing the attitude-action gap

*Question: a) Are you as a citizen of your hometown prepared to save a certain amount of CO<sub>2</sub> and to document it by anonymously providing your data on electricity and natural gas consumption?*

*Question: b) Would you be prepared to do so, if government and business would also have to prove their CO<sub>2</sub> reduction?*

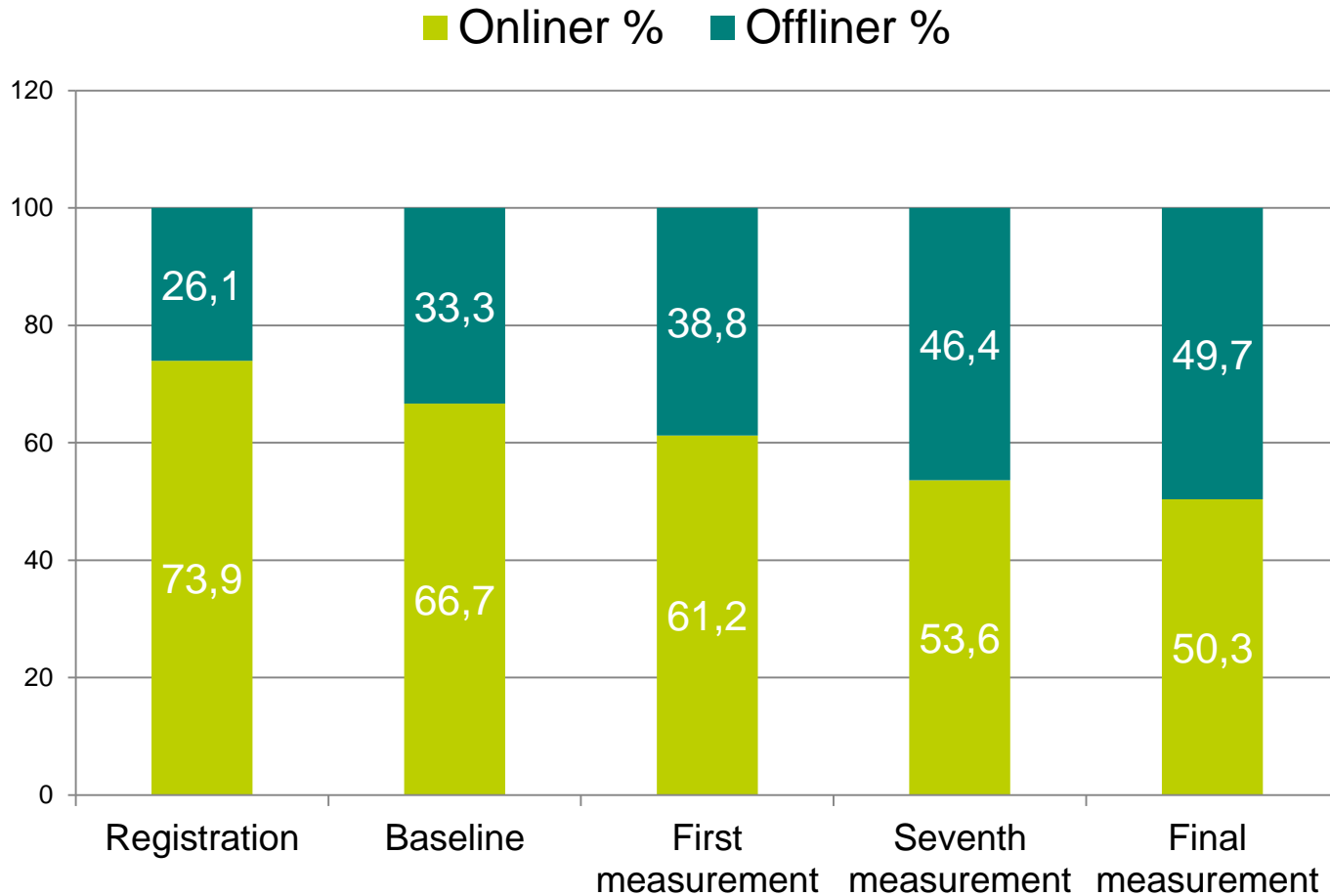
	<b>N</b>	<b>Yes</b>	<b>Yes if ...</b>	<b>Don't know</b>	<b>No Reply</b>
<b>Bremen</b>	811	58.2%	72.0%	10.0%	
<b>Bremerhaven</b>	809	61.4%	77.9%	9.0%	
<b>Wennigsen</b>	926	56.3%	68.9%	5.0%	
<b>Bregenz</b>	510	67.0%	76.0%		6.0%
<b>Mariazellerland</b>	502	65.0%	78.0%		6.0%
<b>Pamplona</b>	800	73.9%	89.4%		8.0%
<b>Saragossa</b>	800	81.6%	92.0%		5.8%

## Participation rates over time (up to month 16)



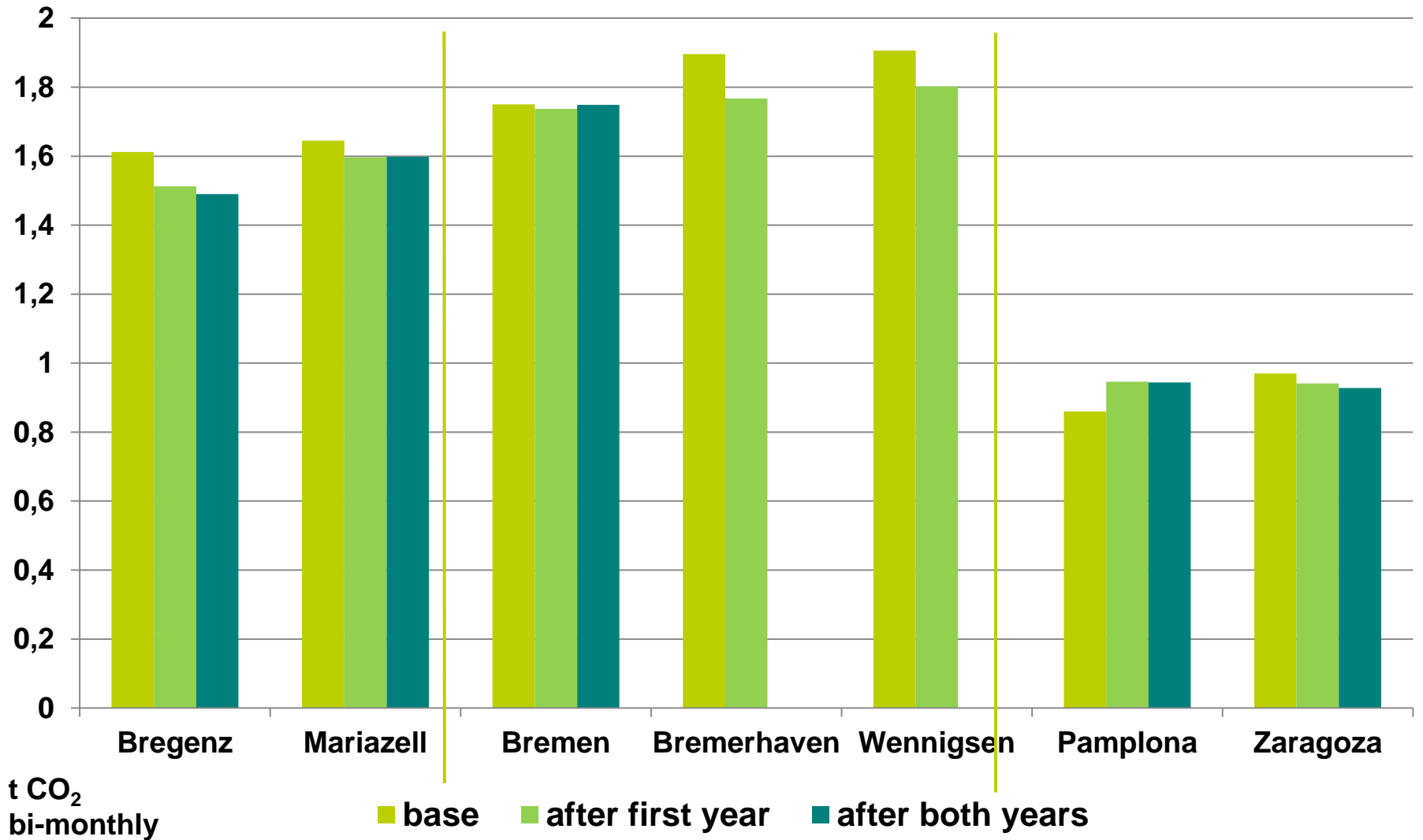


# Online and offline participants over time

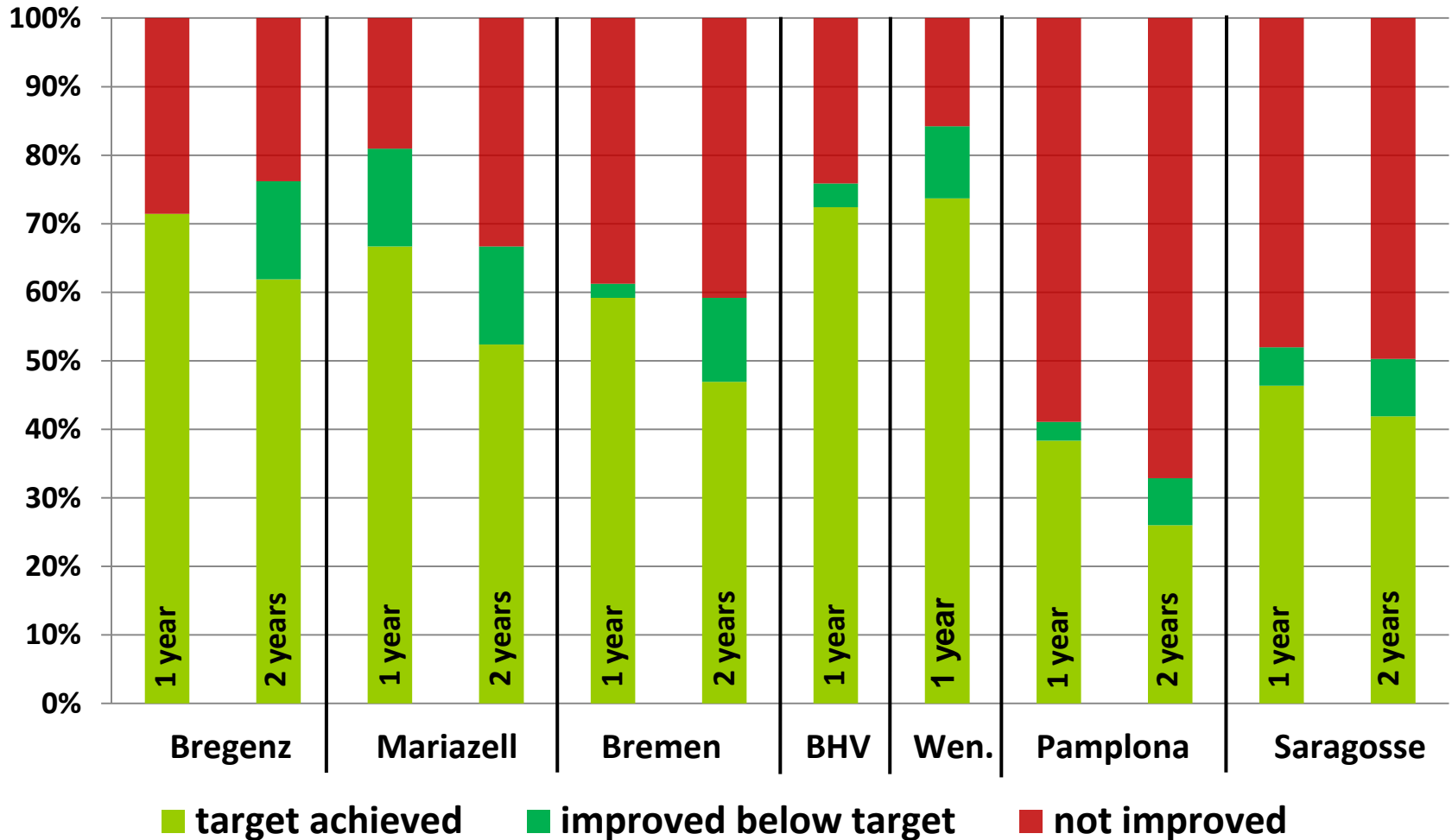


## **4. Evidence of tangible impacts**

# CO<sub>2</sub> reductions achieved at collective level (means)



# Target achievement at individual level (2% reduction p.a.)



## Correlation between behavior change index and information effects

Country	N	Learning	Relevance	Guidance	Comparison
Austria	34-36	-0.02	0.32	0.25	0.25
Germany	102-103	0.24*	0.34**	0.29**	0.14
Spain	151-156	0.18*	0.09	0.08	0.17*

*Rho* Spearman's rank correlation coefficients \*  $p < 0.05$  \*\*  $p < 0.01$

Source: second survey of citizen panels

## Correlation between community effects and behavior change index

	N	Barriers removed	Efforts strengthened	Further community activities
<b>Austria</b>	31-39	0.20	0.42*	0.31
<b>Germany</b>	102-120	0.31**	0.12	0.21*
<b>Spain</b>	152-168	0.35**	0.14	0.06

*Rho* Spearman's rank correlation coefficients \*  $p < 0.05$  \*\*  $p < 0.01$

Source: second and third survey of citizen panels

## Conclusions

- Local community approach is a promising route to fostering responsible action and climate protection on the consumer side
- Advantageous combined participation format
  - citizen groups; open, inclusive invitation; interactive involvement
  - choice of media; CO<sub>2</sub> feedback, exchange, guidance, support
  - adequate length, not overburdening demands
- Major challenges:
  - wider reach into target population, multiple strategies
  - ascertaining impacts, sustaining pro-climate behaviour
  - influencing social practices and policies
  - deepening participation (engaging in local policies, supporting measures)

# Thank you for your attention!

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