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EXECUTIVE SUMMARY

This document serves as an overview for the recommendations to optimize energy-efficiency intervention and information campaigns for energy communities and collective energy actions in the framework of DECIDE and beyond.

For this purpose, first a general overview of potential tools for information and intervention campaigns within engagement and communication strategies is given. This serves as a "toolbox" to give the broadest possible impression of potential tools. In addition, specific recommendations for optimizing intervention and information campaigns, tailored to the respective pilots in DECIDE, are provided in the second part. In both overviews, a strong focus is placed on the social science perspective: Underlying models and principles are thus introduced to ensure the acceptance and success of the interventions presented. The presented Deliverable is strongly connected to D1.5 ('Guidelines to optimize energy-efficiency information campaigns and citizen participation for collective action and energy communities with practical views and methods'), which mainly serves to derive, describe and scientifically evaluate the tools for optimizing energy-efficiency information campaigns and citizen participation. Both deliverables are built upon the definitions provided in D1.1 ('Guidelines for characterization, segmentation, and group dynamics of collective energy actions') and extend the findings from it.

This deliverable is intended as a living document. Recommendations and conclusions will be tailored and refined as the DECIDE project progresses.

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Overview on possible interventions

Depending on the objective of a communication strategy, different methods are suitable for optimized energy-efficiency information-campaigns and intervention. The following table provides a broad overview on possible tools of communication, information and intervention campaigns, considering the different action phases and their communication methods as identified in D1.1 and D1.5, also taking into account the psychological benefits drawn from the respective tools. The phases used within this overview are referring to the integration of the action phases (as identified in D1.1) with different communication methods, building on the experiences from different projects, integrating the BRIDGE approach of Involve – Engage – Evolve (BRIDGE, 2018) with a previous preparation of communication and engagement as described in greater detail in D1.5. It clusters different interventional and informational instruments that can be used for citizen participation and engagement in the context of energy communities along **their level of involvement**. This involvement level approach is used to structure the overview for the scope of possible forms of intervention and information tools. As depicted in D1.5, a four-step-involvement approach is suggested, based on former research and projects, which proposes a gradually rising way of involvement level. In addition, the underlying theoretical concepts, principles and models are mentioned, which should underlie the intervention methods in order to ensure a meaningful implementation of these from a social science point of view. Thus, the toolbox should not only serve to form a basis for deciding WHICH possible tools can be used, but also HOW they should be implemented and which OBJECTIVE these tools aim for from a social psychology point of view. This offers a holistic approach that can be used in different phases of a project.

SYNTHESIS WITH D1.5

The tools and the underlying models and theoretical concepts are described in detail in D1.5 (*“Guidelines to optimize energy-efficiency information campaigns and citizen participation for collective action and energy communities with practical views and methods, based on first year research”*), Section 2: (*“Tools of communication from a social science perspective”*). In addition to the theoretical basis, a scientific evaluation is also carried out here, which enables an assessment of the effectiveness of the respective tools on the basis of the models mentioned here as well as further studies and results reports. For more details, we therefore recommend reading D1.5 accompanying D1.6.

Overview on possible interventions

Social science perspective

Level of interactivity and involvement	Intervention	Phase	Best practices	Why? Intended effects.	How? Elements to include.	Sources	
Low	Inform	Flyers / Postcards	Prepare, Involve	Helping with informing and answering questions (e.g. on rights/obligations or financial questions), making the project available to a broader public, recommended to clearly differ from advertising leaflets -> idea: invite & convince	Foster social identities and draw on existing identities	Integrity, benevolence and competence Model: Integrity = the adherence to a set of sound principles Benevolence = sincere concern for customers' interests and the motivation to do good for them Competence = the ability to realize promises (Mayer, Davis & Schoorman, 1995);	S3C Consortium Report (2014); Report (2014); Community Energy Guide (Friends of the Earth, REScoop.eu, Energy Cities); Merlon Report on stakeholder engagement (2019), Mayer, Davis & Schoorman (1995), Fishbach et al. (2006)
		Newsletter	Involve, Engage	Can be used either for information or as follow-up on activities, information giving, maintaining participation, supports staying in dialogue	Build community trust, establish a narrative with collective goals	Reduction of rebounds through Goalsetting / Subgoaling (Fishbach et al., 2006): Focus on superordinate goal & divide into smaller subordinate goals and steps to reduce starting problems	
		Promotional Video	Involve, Evolve	Way of promoting the project within a broader network, meant to be designed short, catchy and highly effective and can be shown in multiple ways at events, workshops, conferences, policy conferences and through social media (can be part of the Media Campaign)	Support collective emotions, establish narrative with collective goals	Use local themes: Most motivating narratives, with social and community-related aspects being other appropriate narratives (Poppen, 2015; Rogers et al., 2008);	MUSE Grids Stateholder Engagement plan (2018); S3C Consortium Report (2014); Community Energy Guide (Friends of the Earth, REScoop.eu, Energy Cities); Poppen (2015); Rogers et al. (2008); Radtke (2014)
		Media Campaign	Involve, Engage, Evolve	Recommended to first use local media, e.g. the website, local radio and TV and then switch to online media, social media can help to raise enthusiasms to scale projects up, relying on project experiences and success stories	Support collective emotions, establish narrative with collective goals	Use Ecological narratives: Powerful motivator for actual involvement (Radtke, 2014).	
		Collective efficacy information	Involve, Engage, Evolve	Framing information in a collective rather than in an individual way; demonstrate the impact a certain behavior can have when executed collectively	Support collective emotion, foster a sense of collective efficacy	Can support a sense of efficacy and the subjective perception of being able to execute an effective action as a group (Fritsche et al., 2018); -> Collective decisions can help when the sense of efficacy for one's own actions is low: Collective actions that are perceived as effective can act as a substitute (Stollberg et al., 2015)	Fritsche et al. (2018); Stollberg et al. (2015)
		Communication for trust	Involve	Share transparent, realistic and concrete information through e.g. openly sharing prior results; difficulties or impact that has been created	Build community trust	Integrity, benevolence and competence Model: Integrity = the adherence to a set of sound principles Benevolence = sincere concern for customers' interests and the motivation to do good for them Competence = the ability to realize promises (Mayer, Davis & Schoorman, 1995);	Mayer, Davis & Schoorman (1995)
		Comparative Feedback Information (Social norm intervention)	Engage, Evolve	Giving feedback on specific behavior (e.g. performance in energy consumption) of individual households relative to behavior of others (e.g. neighbours etc.) can lead to behavior change towards social norm	Create a sense of collective efficacy, establish a social norm	Comparative feedback: Feelings of competition, social comparison, or social pressure -> especially when relevant others as a reference group (Abrahamse et al., 2015); Descriptive norms (i.e. observing the behaviour of others) & injunctive norms (i.e. what somebody thinks is expected by others) = driving forces for energy related pro-environmental behaviour (ECHOES, 2019)	Abrahamse et al. (2005); ECHOES reports (2019)
		Energy Feedback (through Webdashboard etc.)	Engage, Evolve	Energy Feedback can be delivered e.g. through ever-present displays that showed energy use and traffic light systems that feeds back energy demand, Real-time (vs. more stable statistical) information yielded more reactions in best practices; It has to be taken into account that although the concept of feedback is rather low in involvement, informing the respective stakeholders, the process of implementing smart tools to allow for energy feedback often requires a much more interactive, involved process	Foster a sense of (collective) efficacy	Direct feedback encourages consumers to make more efficient use of energy (Faruqi et al., 2010); Higher frequency of feedback supports effectiveness (Abrahamse et al., 2015)	S3C Consortium Report (2014); Faruqi et al. (2010); Abrahamse et al. (2015)

Overview on possible interventions

Social science perspective

Level of interactivity and involvement	Intervention	Phase	Best practices	Why? Intended effects.	How? Elements to include.	Sources	
Medium low	Consult	Semi-Structured interviews	Prepare, Involve	Helps with identification of target groups, finding out more about user needs and objectives, should be structured and considered along the framework of qualitative research, using e.g. the interview guidelines (see e.g. Turner, 2010).	Find out more about motivations and barriers, get feedback	Possibility to get information on the same themes and areas from each interviewee, still enable a certain degree of free speech and adaptability (Turner, 2010)	SCENT; Turner, 2010
		Surveys	All phases	Can be used variety , e.g. for feedback or getting to know better the target group and their motivations/barriers (personae creation), also convenient get feedback on a specific topic	Find out more about motivations and barriers, get feedback	COM-B Model of Behaviour: 1. Psychological or physical ability to enact the behaviour (capabilities) 2. Physical and social environment enabling the behaviour (opportunities) 3. Motivations activating or inhibiting the behaviour	OurPower, ECOISM Toolbox;
		Information sessions	All phases	Inform about the project itself and to explain the cooperative model, participants should be informed about the current work of the project, e.g. new tariffs, gaps and delays in the project realization, possibility to ask questions and gain broader audience	Foster a sense of collective efficacy, create clear collective goals, get feedback	Collective efficacy through the possibility of giving feedback Concrete goal setting: goal prioritisation and Clarification of trade-offs and conflicts;	S3C Consortium Report (2014); Community Energy Guide (Friends of the Earth, REScoop.eu, Energy Cities); ECOISM Toolbox; Thibaut & Walker (1975); Lind & Tyler; (1988); Carbon Co-op & URBED report (2015); Heiskanen et al. (2013)
		Site visits	Involve, Engage	Can help understand and foster new / maintaining participation: People show to be often more interested once they could see activity and that the way that improvements have been integrated	Foster a sense of collective efficacy, establish clear collective goals	Procedural Justice Theory: People focus on how decisions are made, as well as the decisions themselves, in making justice/fairness evaluations -> The procedure used to reach a decision can have profound effects on fairness judgments (e.g. Thibaut & Walker, 1975; Lind & Tyler, 1988)	
		Citizen hearings / Committee	Involve, Engage, Evolve	Offer a dialogue about citizen's opinion, give a possibility for answering questions	Build community trust, establish a narrative with collective goals, get feedback	Trust through personal relations, informal interaction often creates a chance for a rich exchange of information (including non-verbal information) and enables the feeling of familiarity and trust (Heiskanen et al., 2013); visualization of progress through existing successes on the sites	

Overview on possible interventions

Social science perspective

Level of interactivity and involvement	Intervention	Phase	Best practices	Why? Intended effects.	How? Elements to include.	Sources	
Medium high	Include	Consensus Workshop	Engage, Evolve	A consensus workshop can be used as a decision making tool or as a way to receive feedback: It allows the knowledge and imagination of all participants to be used and should serve to a fair decision reflecting opinions and views of a larger group	Support active participation, build community trust, get feedback, group norms	SIMPEA; Four basic social identity processes: - social identity processes - in-group identification - in-group norms and goals - collective efficacy (Fritsche et al., 2018)	ECOISM Toolbox; Fritsche et al. (2018); Gangale et al. (2013)
		Engagement-Event / Drop-in-event	Prepare, Involve	Event for the start / broad outreach of the project to be easily accessible for all kind of groups. Idea for preparation: Use what is already there: E.g. in one "best practice" members of the local community were encouraged to share stories and memories of the area: Allowing the project and the community each to understand each other	Create a sense of collective efficacy, build community trust and collective emotion, establish a narrative with clear collective goals	--> Make progress visible, goal prioritisation, clarify trade-offs and conflicts, Trust as a pre-requisite for cooperation is relevant for the establishment of dialogues and discussions and promotes further active involvement (Gangale et al., 2013)	
		Focus Groups	Involve, Engage	8 to 15 persons are taking part in a discussion on a predetermined topic, which can serve as an implementation scoping exercise or to assess the different needs within a community with reference to a specific project, Focus Groups are considered especially useful when relatively little is known about a specific topic.	Support active participation, create a sense of trust, establish clear collective goals	Procedural Justice Theory: People focus on how decisions are made, as well as the decisions themselves, in making justice/fairness evaluations -> The procedure used to reach a decision can have profound effects on fairness judgments (e.g. Thibaut & Walker, 1975; Lind & Tyler, 1988)	ECOISM Toolbox; Thibaut & Walker (1975); Lind & Tyler (1988)
		Serious Gaming	Involve, Engage	Serious gaming consists of letting the participants play a game chosen by the organiser. Some serious games simulate real-life events and/or processes, thus providing the user with a problem-solving training environment.	Maintain commitment and enthusiasm, build community trust, foster a sense of collective efficacy	These games serve as tools for acquiring knowledge on a topic chose, breaking up complex systems into manageable pieces of information	Neset et al. (2020); Barkley et al. (2014)
		Hackathon	Involve, Engage, Evolve	Solve some particular challenge / clear question in a friendly and fairly competition -- recommended to establish an organizational committee and sponsoring partners if applicable--> Hackathons usually require a large space, similar to the preparation of an exhibition space; the environment should be comprehensive of a space for the gathering of small working groups; should be led by a concrete stakeholder, should provide a variety of different tasks for people with a variety of skills	Maintain commitment and enthusiasm, foster a sense of collective efficacy, strengthen community spirit, establish clear collective goals a	The collective striving for a solution as a joint action can support a sense of efficacy and the subjective perception of being able to execute an effective action as a group (Fritsche et al., 2018); Collective decisions can help when the sense of efficacy for one's own actions is low: Collective actions that are perceived as effective can act as a substitute (Stollberg et al., 2015)	Biovoices Tools; https://hackathon.guide
		Commiment Pledge	Involve, Engage	A public commitment can be done by local authorities or the involved citizens, for example through an announcement in the local newspaper. This might lead to attention and the creation of social norms	Establish a narrative with clear collective goals, build community trust, Create social norms and commitment	Public commitment creates the sense of a social norm, i.e. an injunctive social norm; Goalsetting: clarification of goals, focus on superordinate/collective goal for commitment (Fishbach et al., 2006)	Abrahamse et al. (2005); Fishbach et al., (2006)

Overview on possible interventions

Social science perspective

Level of interactivity and involvement	Intervention	Phase	Best practices	Why? Intended effects.	How? Elements to include.	Sources	
High	Collaborate	Community Mapping	Prepare, Involve	Using Maps and Photographs to illustrate how people view their area, which improvements / ideas can be generated, discussions fostered to help people explore issues / identify areas of conflict	Foster collective emotion, build community trust, establish shared narratives	Leaving interaction, knowledge exchange or consensus decisions to citizens can support a sense of efficacy and the subjective perception of being able to execute an effective action (Fritsche et al., 2018);	Community Planning Toolkit (Community Places; 2012); Community Energy Guide (Friends of the Earth, REScoop.eu, Energy Cities); Integrid customer engagement strategies (2018); COMETS report (2019); Fritsche et al. (2019); Stollberg et al. (2015)
		Town Meetings	Involve, Engage, Evolve	Local groups can organise town meetings: explaining and spreading of business and social models to other interested citizens	Foster a sense of self efficacy, develop collective goals, build community trust	Collective decisions can help when the sense of efficacy for one's own actions is low: Collective actions that are perceived as effective can act as a substitute (Stollberg et al., 2015)	
		Workgroups / Forum	Involve, Engage, Evolve	Workgroups can be composed by members and directors to work on issues together, fostering maintained dialogue and learning together	Maintain commitment and enthusiasm, build community trust, foster a sense of collective efficacy		
		Home visits	Involve, Engage	Have shown to be preferred by elderly participants	Create personal relations and community trust, get feedback	Trust through personal relations, informal interaction often creates a chance for a rich exchange of information (including non-verbal information) and enables the feeling of familiarity and trust (Heiskanen et al., 2013); visualization of progress through existing successes on the sites	S3C Consortium Report (2014); Community Energy Guide (Friends of the Earth, REScoop.eu, Energy Cities); Carbon Co-op & URBED report (2015); Heiskanen et al. (2013)
		Interactive Webportals / Networks	All phases	Networks are helpful to foster interactions between community members, Way to connect the digital neighbourhood with the physical neighbourhood and strengthen neighbour-to-neighbour interactions, giving energy feedback, allow for comparison between similar households, gamification elements and group-tailored energy saving tips, provision of a knowledge base and the opportunity to interact with and learn from each other	Create a sense of collective efficacy, build community trust and collective emotion, establish a narrative with clear collective goals	Build a sense of community spirit on the network, enable Descriptive norms (i.e. observing the behaviour of others), allow for social identity processes and in-group identification through building on already existing groups	Som Energia (as an example of ReScoop; Community Energy Guide (Friends of the Earth, REScoop.eu, Energy Cities), Integrid customer engagement strategies (2018); COMETS report (2019)
		Participatory Community workshops	All phases	Recommended to be customized to phases and participants of the project, e.g. helping to identify milestones and actions, considering the legal form, economic and governance models, best practice to including different actors to discuss specific topics, different formats are possible: Examples reach from open space to world cafes or breakout groups (means: smaller groups discussing on topics in separate areas, followed by the groups report back to the large meeting)		Procedural Justice Theory: People focus on how decisions are made, as well as the decisions themselves, in making justice/fairness evaluations -> The procedure used to reach a decision can have profound effects on fairness judgments (e.g. Thibaut & Walker, 1975; Lind & Tyler, 1988);	Merlon Report on stakeholder engagement (2019); MUSE Grids report (2018); ECOISM Toolbox (EUKI project, 2020), Thibaut & Walker (1975); Lind & Tyler (1988); Fritsche et al. (2018)
		Co-creation and mutual learning events	Engage, Evolve	Co-creation and mutual learning events are events that involve stakeholders from the wider community (academia; private sector; policy makers and citizens) in which approximately 40 people participate. Each participant needs to have something to contribute to the discussion. Participation should be on a voluntary basis; therefore, topics discussed should be relevant for all groups and should provide a common ground for improvement.	Foster a sense of self efficacy, develop collective goals, build community trust	Mutual learning events aim at framing the challenges that affect communities at different levels (economical, environmental, societal); --> Identify subjects and topics relevant for all stakeholders;--> and creating a narrative able to showcase opportunities and share solutions.	Biovoices Tools: https://www.biovoices-platform.eu/login
		Micro-utopias	Involve, Engage	Micro-utopias are temporary manifestations of an ideal civic culture where participants test an aspirational political concept, process or social interaction. The idea of micro-utopias was firstly enshrined by John Wood. In his book, Design for Micro-Utopias, John Wood suggests a network of micro-utopian projects that would build momentum around a topic	Maintain commitment and enthusiasm, build community trust, foster a sense of collective efficacy	According to Stephen Duncombe, small-scale utopian projects should strive to: inspire others by demonstrating another world is possible; critique the existing dynamics of our current society; generate new ideas for models for organizing society; generate new ideas for models for organizing society; orient toward a shared direction; motivate other toward collective and collaborative action	Duncombe & Lambert (2017)

Overview on optimized energy-efficiency interventions for Pilots

Based on the developed overview on tools and interventions for different stakeholder involvement levels, this section aims to provide tailored communication guidelines and intervention suggestions for the pilots within DECIDE. The table summarizes communication, intervention, and participation concepts and ideas for each pilot within DEICDE, also classifying them along their level of involvement and the communication phases approach. The suggested interventions can be clustered along whether they (a) were already implemented within the DECIDE project, marked green (b) are in the process of being implemented, marked yellow, or (c) are recommended for future implementation, marked orange. The decision on priority of the selected actions and thus the time frame of implementation, which determined the current status of these interventions, is based on the requirements of the pilots and their respective status of readiness. The time frame of implementation of interventions is discussed in consultation with the pilots, based on their current information and communication needs. All proposed activities were either developed together with and/or will be evolved through collaboration with the respective pilot partner and through experiences made during the project. In order to ensure a sensible and, from a social science perspective, successful implementation, the underlying concepts the proposed interventions are again listed and a "behavior science checklist" is provided. The responsible persons within the pilot sites can use this checklist as a guideline for a responsible implementation of the interventions. In addition, the underlying concepts mentioned are explained, if necessary.

SYNTHESIS WITH D1.5

The recommendations are again further described in detail in D1.5 (*“Guidelines to optimize energy-efficiency information campaigns and citizen participation for collective action and energy communities with practical views and methods, based on first year research”*), Section 4: (*“DECIDE PILOTS – Previous campaigns & Recommended tailored communication guidelines and interventions”*). The proposed recommendations are also based on previous information and communication campaigns described by the pilots, also offering a complementary material to the here provided table overview.

Overview on intervention guidelines for energy communities and collective actions - within DECIDE Pilots

DECIDE-specific community engagement and communication tools and interventions

Pilot site	Pilot site objective within DECIDE	Target stakeholders	Suggested Interventions	Level of Involvement	Phase	Underlying concepts / models of behavioral science	Behavior Science Checklist	Definitions and explanations (if necessary)
HERON	<p>1. Offer real-time provision of energy consumption and production feedback through web accessible portals for participating end consumers/prosumers, including the roll-out of a digital platform.</p> <p>2. Develop new financing schemes and tools for promoting major RES installations that will be gradually paid off and belong to the EC members, including the potential to co-own and share a major off-site PV installation of 500kW.</p> <p>3. Compile and offer detailed information on potential effective RES-based savings to participating end users and enable communication between group members.</p> <p>--> the target initial client portfolio for participation in our DECIDE pilot includes 200 electricity consumers with real-time power meters for consumption & 15 electricity prosumers with real-time power meters for consumption and production from own RES assets (net metering).</p>	Customers as direct stakeholders; municipalities as framesetting stakeholders; no existing local energy community	<p>Survey on smart heating tech</p> <p>Communication channels: - mail - newsletter - internal communication</p>	Consult	Involve	UTAUT2 + COM-B	Consider motivation and barriers; Examine possible incentives; Integrate technology related items	UTAUT2: Model to explain intention to use of technologies, proposing influencing factors of i.a. Performance Expectancy, Effort Expectancy, Social Influence and Price Value for intention to use a technology COM-B: Describing Behavior through capabilities (psychological or physical ability to enact the behaviour), Opportunities (physical and social environment enabling the behaviour) and motivation (reflective and automatic mechanisms that activate or inhibit behaviour)
			<p>Energy Vision Game 'live' version as game survey</p> <p>Communication channels: - personal invitations</p>	Consult	Involve, Engage	Com-B, gamification	Visual design to understand the relevance of different elements (actors, technologies, motives, forms of organisation and ways of life), can be used as basis for further discussions and alignment of visions	
			<p>Moderated forum discussion on web platform</p> <p>Communication channels: - website - newsletter</p>	Include	Involve, Engage	COM-B	Foster interactions between community members; Give an opportunity to interact with and learn from each other easily through low-threshold contact possibilities; Foster concrete goalsetting	
			<p>Progress-bars/ push information</p>	Inform	Engage	Collective efficacy	Monthly efficacy update, Visualization of overall goal; Visualisation of progress towards overall goal	

Legend
successfully implemented
in preparation / discussion
future proposal

Overview on intervention guidelines for energy communities and collective actions - within DECIDE Pilots

DECIDE-specific community engagement and communication tools and interventions

Pilot site	Pilot site objective within DECIDE	Target stakeholders	Suggested Interventions	Level of Involvement	Phase	Underlying concepts / models of behavioral science	Behavior Science Checklist	Definitions and explanantions (if necessary)
THERMOVAULT	Create a compelling customer journey for installation of ThermoVault technology for individuals: -- Optimization of communication (materials, clearer value proposition) that will lead to shorter lead time and increased sales. -- Desired reporting on system performance, making sure customers are happy and they understand value created to them (some desired reporting on €/kWh/CO2 savings / Other metrics/forms of engagement) -- Foster trust in tenants	Thermovault cumstomers	Communication materials - flyers/postcards/newsletter	Inform	Involve, Engage	Integrity, benevolence and competence model, awareness building, reduction of rebounds	Framing and Visualization of overall goal; Possibilities of interaction/contact; Approach identity and motivation; Establish a coherent narrative & use narratives already existing in community	Competence refers to the ability to realize promises, which develops when the organization holds adequate knowledge, expertise, skills, leadership, and other characteristics in related domains; benevolence is a sincere concern for customers' interests and the motivation to do good for them; and Integrity is the adherence to a set of sound principles
			Social norm intervention communication channels: - appointment letter	Inform	Involve	Comparative feedback, establishment of social norms, attention / awareness raising	Integrate a social norm through descriptive norms of neighbourhood, use a matching reference group, use real data for trust, transparency and integrity	
			Collective efficacy information & trust (intervention) communication channels: - appointment letter	Inform	Involve	Integrity, benevolence and competence model, collective efficacy, SIMPEA	Frame the goal behavior collectively, establish a community narrative, demonstrate collective efficacy through impact on goals; demonstrate transparency to foster trust	SIMPEA: Four basic social identity processes: emotions and motivations originating from or resulting in social identity processes, in-group identification, in-group norms and goals and collective efficacy.
			Video Content for explanation communication channels: - flyers, letters - personal contact	Inform	Involve	Communication for trust, collective narratives	Use only pictures / very easy explanations to counteract illiteracy and complexity, Support collective emotions, establish narrative with collective goals,	

Legend

successfully implemented
in preparation / discussion
future proposal

Overview on intervention guidelines for energy communities and collective actions - within DECIDE Pilots

DECIDE-specific community engagement and communication tools and interventions

Pilot site	Pilot site objective within DECIDE	Target stakeholders	Suggested Interventions	Level of Involvement	Phase	Underlying concepts / models of behavioral science	Behavior Science Checklist	Definitions and explanations (if necessary)
DOMX	1. Increase number of end customers through collaboration with local maintenance companies 2. Realize gas and cost savings of end customers through improved heating efficiency 3. Increase gas and cost savings collectively by providing a feedbacking app to customers and incentivize through gamification and information 4. Understand customer behaviour 5. Provide advanced analytics to suppliers 6. Consumer profiling and classification 7. For consumers: - experience the advantages of smartly connecting with their heating - reduce their energy costs achieved through improved heating efficiency - gain additional revenues from participating in DR services	No existing community, rather a collective action as the decision to invest into DomX equipment should be done per building	Survey on Smart tech Communication channels: - mail - newsletter	Consult	Involve	UTAUT2 + COM-B	Ask for motivation and barriers; Examine possible incentives; Integrate technology related items	UTAUT2: Model to explain intention to use of technologies, proposing influencing factors of i.a. Performance Expectancy, Effort Expectancy, Social Influence and Price Value for intention to use a technology COM-B: Describing Behavior through capabilities (psychological or physical ability to enact the behaviour), Opportunities (physical and social environment enabling the behaviour) and motivation (reflective and automatic mechanisms that activate or inhibit behaviour)
			Communication materials - adapted to insights from survey on smart tech flyers/postcards/newsletter	Inform	Involve, Engage	Integrity, benevolence and competence model; awareness building, reduction of rebounds	Framing and Visualization of overall goal; Allow for interaction, ease the barrier to entry; Approach identity and motivation Establish a coherent narrative	Competence refers to the ability to realize promises, which develops when the organization holds adequate knowledge, expertise, skills, leadership, and other characteristics in related domains; benevolence is a sincere concern for customers' interests and the motivation to do good for them; and integrity is the adherence to a set of sound principles
			Rebound information session Communication channels: - mail - flyer - social media - personal invitations	Include	Engage	Reduction of rebounds, Subgoalng	Explain Rebound effects; Devide the overall superordinate goal into smaller subordinate goals and steps to reduce starting problems; Keep up a superordinate goal commitment focus / framing	Microeconomic Rebound effects: 1. Direct Rebound Effect - increased energy efficiency and associated cost reduction for a product/service result in its increased consumption 2. Indirect Rebound Effect – savings from energy efficiency cost reductions enable more income to be spent on other products and services that are energyconsuming
Legend	successfully implemented in preparation / discussion future proposal							

Overview on intervention guidelines for energy communities and collective actions - within DECIDE Pilots

DECIDE-specific community engagement and communication tools and interventions

Pilot site	Pilot site objective within DECIDE	Target stakeholders	Suggested Interventions	Level of Involvement	Phase	Underlying concepts / models of behavioral science	Behavior Science Checklist	Definitions and explanations (if necessary)
BAD HINDELANG	1. Develop long-term action plan for the "Hindelanger Klettersteig to 100% RES" (HKS100), i.e. 100% RE supply for electricity, heat and transport from local resources 2. Prove technical feasibility for a local renewable energy supply -> showcase key technologies in Bad Hindelang 3. Clearly expressed will of local society to contribute to HKS100% 4. Improved organisational structures to prepare implementation of HKS100% 5. Develop longterm development plan "Hindelanger Klettersteig to 100% RES" 6. Establish advanced cooperative structures	Hindelang community	A game survey for a successful emergence of a self-sufficient Bad Hindelang in perspective of the participants Communication channels: - personal invitations	Consult	Prepare, Involve	Gamification	Visual design to understand the relevance of different elements (actors, technologies, motives, forms of organisation and ways of life)	Gamification as the application of elements typical for a game in a scientific context to find out more about e.g. underlying motivations / beliefs etc.
			Key-Stakeholder workshop Communication channels: - personal invitations	Collaborate	Involve, Engage	Goal-setting; in-group norms; COM-B	Include different actors to discuss specific topics; Framing of overall goal; Establish new norms and reach agreement on collective goals; Be transparent on possibilities of involvement	
			Official commitment (targeted at local authorities) Communication channels: - personal invitations	Collaborate	Engage, Evolve	Narrative-creation; public commitment; collective emotions	Integrate concrete requirements and call for actions; create a collective narrative and frame the overall goal; foster official support	
			Interviews for local heating network Communication channels: - personal home visits	Consult, Collaborate	Involve, Engage	COM-B, community trust	Ask for motivators and barriers, try to create a sense of urgency and collective efficacy, involve existing narratives, foster commitment	
			Engagement workshop [e.g. for local heating network] Communication channels: - flyers/postcards - newsletter / local newspaper - personal invitations	Involve, Inform, Consult	Involve, Engage	Narrative-creation; goal-setting; public commitment; collective emotions	Participatory organization; Approach identity and motivation; Establish a coherent narrative; Involve existing narratives from community; Display and visualization of overall goal & subgoals of project in general	
			Collaborative interactive webportal via for example WeChange platform; Discord Channels; Dedicated App Communication channels: - website - mails - social media - newsletter / local newspaper	Collaborate	Engage, Evolve	Collective efficacy, comparative feedback, Social Identity: SIMPEA	Foster interactions between community members; Integrate possible gamification elements; Provide a knowledge base and the opportunity to interact with each other easily through low-threshold contact possibilities; Establish a coherent narrative & use narratives already existing in community	SIMPEA: Four basic social identity processes: emotions and motivations originating from or resulting in social identity processes, in-group identification, in-group norms and goals and collective efficacy.

Legend	successfully implemented
	in preparation / discussion
	future proposal

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OURPOWER	1. Increase number of customers, both end users and prosumers.: Increase of the number of customers selling electricity through contracts made via the OurPower website; Increase of the number of customers buying electricity through contracts made via the OurPower website 2. Find new users for platform via regional partners 3. Understanding the main motivations of potential participants to join the OurPower community 4. Focus: Citizen Energy Community with regional sections (referred to as "Matrjoschka", also known as cells or nested systems) 5. Expand over all Austria and Prepare expansion throughout Europe 6. Citizen empowerment: let citizens become active	Existing network of prosumers and consumers	Joint development of new and collective narratives Include	Prepare	Collective efficacy, social identity: SIMPEA, clear collective goals	Involve existing narratives from community & use local themes: Most motivating narratives, with social and community-related aspects being other appropriate narratives; Communicate realistic and transparent goals		
			A post card experiment targeted at prosumers as electricity sellers to understand their basic motivations of joining OurPower Inform, Include	Involve	Awareness, COM-B	Assess identity and motivation; Examine possible incentives to join; Superordinate goal framing; Allow for interaction, ease the barrier to entry; Enable a good understanding of concepts through information		
			Engagement events with existing and potential new members Inform, Consult, Include	Involve, Engage	Collective efficacy, social identity: SIMPEA, clear collective goals	Participatory organization; Approach identity and motivation; Establish a coherent narrative; Involve existing narratives from community; Display and visualization of overall goal & subgoals of project in general		
			Interactive survey & feedback system Consult	Involve, Engage	Com-B, gamification	Ask for motivators and barriers, try to create a gamified and simple approach, establish a better understanding of stakeholders, demonstrate the realized 'contribution' through survey participation		
			A game survey targeted at the OurPower scenario Consult	Involve, Engage	UTAUT2, Gamification, trust building, goal setting, COM-B	Visual design to understand the relevance of different elements (actors, technologies or physical ability to enact the behaviour), Opportunities (physical and social environment enabling the behaviour) and motivation (reflective and automatic mechanisms that activate or inhibit behaviour) Gamification as the application of elements typical for a game in a scientific context to find out more about a technology	UTAUT2: Model to explain intention to use or technologies, proposing influencing factors of i.a. Performance Expectancy, Effort Expectancy, Social Influence and Price Value for intention to use a technology COM-B: Describing Behavior through capabilities (psychological or physical ability to enact the behaviour), Opportunities (physical and social environment enabling the behaviour) and motivation (reflective and automatic mechanisms that activate or inhibit behaviour) Gamification as the application of elements typical for a game in a scientific context to find out more about a technology	
			A post card experiment targeted at electricity buyers to understand their basic motivations of joining OurPower Inform, Include	Involve	Awareness, COM-B	Assess identity and motivation; Examine possible incentives to join; Superordinate goal framing; Allow for interaction, ease the barrier to entry; Enable a good understanding of concepts through information		
	Support via interactive webportal for example WeChange, Discord channel, dedicated forum integrated in the website Collaborate	Engage, Evolve	Collective efficacy, comparative feedback, Social identity: SIMPEA	Foster interactions between community members; Integrate possible gamification elements; Provide a knowledge base and the opportunity to interact with each other easily through low-threshold contact possibilities; Establish a coherent narrative & use narratives already existing in community	SIMPEA: Four basic social identity processes: emotions and motivations originating from or resulting in social identity processes, in-group identification, in-group norms and goals and collective efficacy.			

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TREA	<p>1. Introduce benefits of installation of energy monitoring equipment and monitoring solution for apartment associations: Hook apartment associations with our offer for advice, monitoring equipment and monitoring solution.</p> <p>3. With selected apartment associations: Go forward with discussions, support and advising to help them into and through the reconstruction process, starting from helping with technical conditions to monitoring energy consumption and indoor air quality results and finding inconsistencies. Introduce benefits and support to selected apartment associations with reconstruction (ideally deep renovation) processes, including the addition of PV panels</p> <p>3. Suggestions to improve community energy policy</p> <p>4. Practices and experiences from pilot outlined in a comprehensible manner and with the right tools are scalable for multiple buildings in Annelinn, Tartu and Estonia</p> <p>5. Concrete Goals (2023):</p> <ul style="list-style-type: none"> - 1000 consumers ~ 8-12 apartment associations full actions or partly - 4 GWh energy savings (approx. 50% per building) - 150 kWp PV panels with 10 MWh of production 	TREA Community	<p>Joint development of new and collective narratives (also as Input for Workshop)</p>	Include	Prepare	Collective efficacy, social identity; SIMPEA, clear collective goals	Involve existing narratives from community & use local themes. Most motivating narratives, with social and community-related aspects being other appropriate narratives; Communicate realistic and transparent goals	
			<p>Regulation workshop with Ministry and different energy actors</p> <p>Communication channels:</p> <ul style="list-style-type: none"> - mails - personal invitation 	Include	Involve, Evolve	Collective efficacy, clear collective goals	Establish exchange on regulation and thus strengthen the sense of collective efficacy, bundle knowledge and expertise	
			<p>Participatory Community workshops and seminars: Introduction to community energy and solar production seminar in and with City of Tartu</p> <p>Communication channels:</p> <ul style="list-style-type: none"> - mails - personal invitation - social media - newsletter / local newspaper 	Collaborate	Involve, Engage	Community trust; collective emotion; social norms; narrative building	Include different actors; Offer a participatory approach of organization and implementation; Framing of overall goal; Be transparent on possibilities of involvement; Assess motivations and identities	
			<p>Survey on Energy monitoring</p> <p>Communication channels:</p> <ul style="list-style-type: none"> - mails - social media - flyers / postcards 	Consult	Engage, Evolve	COM-B; community trust; UTAUT	Ask for motivation and barriers; Examine possible incentives Integrate technology related items	
			<p>Rebound information session</p> <p>Communication channels:</p> <ul style="list-style-type: none"> - mail - flyer - social media - personal invitations 	Include	Engage	Reduction of rebounds, Subgoaling	Explain Rebound effects; Divide the overall superordinate goal into smaller subordinate goals and steps to reduce starting problems; Keep up a superordinate goal commitment focus / framing	Microeconomic Rebound effects: 1. Direct Rebound Effect - increased energy efficiency and associated cost reduction for a product/service result in its increased consumption 2. Indirect Rebound Effect – savings from energy efficiency cost reductions enable more income to be spent on other products and services that are energyconsuming

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ENBRO	1. Combine services (e.g. Therm, DomX) for pilots 2. Set-up a collective solar project (for financial reasons, collective self-consumption) 3. Educate, involve stakeholders, communication for trust 4. Work with: Aster, Fluctus, cross-linked communities	ENBRO customers	Consultation for communication for trust principles	Inform	Prepare			
			Implementation of Communication for trust Communication channels: - flyer/postcard - social media - letters / mails	Inform	Involve	Integrity, benevolence and competence model	Communicate realistic and transparent goals, focussing on the possibilities to interact actually given; Enable a good understanding of concepts through education and information	Competence refers to the ability to realize promises, which develops when the organization holds adequate knowledge, expertise, skills, leadership, and other characteristics in related domains; benevolence is a sincere concern for customers' interests and the motivation to do good for them; and integrity is the adherence to a set of sound principles
			Webdahsboard / communication platform for energy monitoring & feedback	Inform	Involve, Engage	Goal-setting, gamification, social norms	Include: Monthly efficacy update, Visualization of overall goal; Visualisation of progress towards overall goal, Visualization of collective goals; Gamification elements; display of comparative feedback and behavior recommendations	Gamification as the application of elements typical for a game in a scientific context to find out more about e.g. underlying motivations / beliefs etc. Social norms as energy monitoring of own households vs. other comparable households of the community
			Key-Stakeholder workshop Communication channels: - mail - newsletter - social media	Collaborate	Involve, Engage	Goal-setting; in-group norms; COM-B	Include different actors to discuss specific topics; Framing of overall goal; Establish new norms and reach agreement on collective goals; Be transparent on possibilities of involvement	
Legend	successfully implemented							
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ETHICS

ETHICS DOCUMENTATION DECIDE						
Checklist for DELIVERABLES/MILESTONES on ethical issues						
Introduction	<p>The basis of DECIDE's scientific approach is the conformity of its work with ethical principles. These include respect for human beings and human dignity, the fair distribution of the benefits and burden of research, the rights and interests of research participants, and the need to ensure the free and informed consent of participants (including vulnerable groups such as children). Whenever research approaches or interventions are pursued within DECIDE that involve people or have an impact on people and their environment (e.g. interviews, workshops, ...), they must be examined for their ethical implications.</p> <p>The aim of this checklist is to review DECIDE's scientific products (deliverables and milestones) from an ethical point of view, but above all to enable a quick ethical review during the planning and development of these outputs.</p>					

Remark	<i>In parallel to the ethics check, DECIDE data management guidelines are developed which will include: Guidelines/descriptions for procedures for data collection, storage, protection, retention, transfer, destruction or re-use. Description of the security measures that will be implemented to prevent unauthorised access to personal data or the equipment used for processing, methods of storage and exchange (LAN, cloud, etc.) Description of the anonymisation/ pseudonymisation techniques that will be implemented or explanation on why the research data will not be anonymised/ pseudonymised Detailed information on the informed consent procedures in regard to data processing</i>					
SUBJECT	ISSUES	Tick the box			Remarks	Sources of verification
		Y	N	n/a	n/a – does not apply	
Research ethics general						
	Do you confirm having handled research subjects with respect and care, and in accordance with legal and ethical provisions (to your best knowledge)?	x			self-assessment	
	Do you confirm having taken account of research relevant differences in age, gender, culture, religion, ethnic origin and social class (if this applies)?			x	If Y, to be mentioned in Deliverable report	Deliverable report
	Do you confirm having considered potential research related harms and risks?			x	If any, to be mentioned in Deliverable Summary	Deliverable report
	Are there any unethical ways (e.g. to stigmatise, discriminate against, harass or intimidate people) in which the methods or knowledge produced could be used?		x		If Y, what did you do to prevent this?	deliverable report

Stakeholder rights, interests and dignity						
	Has the role of your local research partners/stakeholders clearly been defined and communicated ?			x		Deliverable report; (consent forms); information leaflet
	Do local stakeholder groups/partners involved in your research have their own ethical guidelines/boards? If so, did they approve your research?			x	If any, written approval	(written approval)
	Have you been evaluating/analyzing their programs and services? If so, will they be given a copy of your findings?			x		copy sent to partners/stakeholders
	Are there any potentially negative, unintended consequences of the research cooperation with local partners for local people?			x	If any, to be mentioned in Deliverable report including ways to avoid this	Deliverable report
	Could the research have induced psychological stress or anxiety or cause negative consequences beyond the risks encountered in normal life?			x	If any, to be mentioned in Deliverable report including ways to avoid this	Deliverable report
	Has there been the possibility that the involvement of stakeholders created a situation where they felt real or perceived coercion to participate in your research? If yes, how did you manage/prevent this situation?			x	If any, to be mentioned in Deliverable report including ways to avoid this	Deliverable report
	Have the following European fundamental rights been observed: The rights of the child; Equality between women and men; Integration of persons with disabilities?			x		Conformity to European fundamental rights
Research design/Methodology						
	Has the research design been sensitive to the particular needs and perspectives of targeted stakeholder groups?			x		Methodology description in Deliverable Report
	Does the methodology clearly describe how data have been collected and analysed during the work?			x		Methodology and data management description in Deliverable Report
	Did research involve the sharing of data or confidential information beyond the initial consents given?			x		Consent forms; amendments to consent forms; Deliverable report

	Are people other than direct research participants likely to be directly impacted by the research?			x	if Y, discuss in Deliverable report	Deliverable report
	Did you make arrangements to preserve confidentiality for participants or those potentially affected?			x	Please explain the mechanisms in place to ensure the confidentiality of private information,	DECIDE Data management guidelines; (information sheets);
	Has the methodology addressed ways in which sensitive information, data or sources will be handled? (e.g. personal data, data protection, tracking of people)			x		Methodology and data management description in Deliverable Report
	Have participants been asked to give informed consent in writing and have they been provided with information about the research?			x		Information sheet and consent form
	Have the research approach/aims been discussed with stakeholders involved?			x		Deliverable report
	Has information (written and verbal) about the research been provided in an appropriate form and language for potential participants?			x		Information sheet
	Did you offer any incentives (other than reasonable expenses and compensation for time) to research participants?			x	If yes, what could be the potential ethical issues arising from this?	methodology description in Deliverable report
Data management/protection	Have personal data been processed in any way (e.g. collected, shared, stored,...)?		x			Copy of questionnaire/online questionnaire url; Deliverable report methodology part; reference to DECIDE Data management guidelines; (Indication of own Data documentation systems of DECIDE partners if any)
	Have personal data been anonymized oder pseudonymized before processing?			x	Description of data processing (collection, management, storage) in deliverable . Describe how you anonymized/pseudonymized the personal data.	Deliverable report; reference to DECIDE Data management guidelines; (Indication of own Data documentation systems of DECIDE partners if any)

	Did you practise tracking or observation or profiling of participants ?		x		In the deliverable, provide explanation how the data subjects have been informed of the existence of the profiling, its possible consequences and how their fundamental rights have been safeguarded	Informed consent of participants; Deliverable report
	Did the research involve the collection of photographic or video materials?		x		Describe the purposes: if to be used in any outputs (publication, dissemination, etc.)Or to be made publicly available (e.g. in social media, magazine articles)?	Informed consent of participants with specific permission of photographic or video recording; Specific permission in case of further use (e.g. publications, social media); Deliverable report; In case of use in social media: social media statement etc must include the researcher/supervisor contact details and a statement that the study has received relevant ethical approvals

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