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DUST | Democratising jUst Sustainability Transitions

Deliverable 1.1: Theoretical and conceptual framework

DUST: Work Package 1, Task 1.1

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Abbreviation list

Term	Description
CoR	Committee of the Regions
DG REGIO	Directorate-General for Regional and Urban Policy
D	Deliverable
DPP	Digital participatory platforms
EC	European Commission
EEAB	External Expert Advisory Board
ERDF	European Regional Development Fund
ESF	European Social Fund
EU	European Union
IT	Information technology
JTF	Just Transition Fund
JTM	Just Transition Mechanism
KoM	Kick-off meeting
LEC	Least-engaged Communities
MLG	Multi-level governance
NGO	Non-Governmental Organisations
RFFL	Regional Futures Literacy Lab
SAB	Stakeholder Advisory Board
SDG	Sustainable Development Goals
SME	Small and medium-sized business
STEP	Stakeholder Engagement and Participation
TJTP	Territorial Just Transition Plan
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
WP	Work package

Executive summary

This deliverable is the result of Task 1.1 Theoretical and conceptual framework within the DUST Work package 1 Theory and methods. The document presents a comprehensive framework for research in and across the individual work packages of the DUST project. Guided by the concept of 'active subsidiarity,' the DUST project aims at an increased understanding of the participation of the politically least-engaged communities in the deliberative governance of place-based approaches to just sustainability transitions. Key concepts underlying this core objective stem from the fields of public policy, the democracy studies, and spatial planning and design. In conjunction they establish the DUST project's interdisciplinary focus area within the wider field of citizen participation. More detailed objectives of the project are addressed in different dimensions of the DUST research. In its analytical dimension research will identify factors that enhance or hinder participation. In its evaluative dimension research will result in an index for assessing participation. In its instrumental dimension, research will test instruments for enhancing participation in democratic life at scale. In its communicative dimension research will increase our understanding of how narratives help or hinder participation and how affective two-way communication can support the emergence and dissemination of unheard story lines. The document presents theories and concepts that underpin and guide research in these dimensions.

This Deliverable 1.1 complements Deliverable 1.2, which concerns the methodological framework of the project. It is important to note that both documents are living documents, designed to evolve throughout the course of the project. Knowledge presented here will be further developed in the Tasks 2.1, 3.1, 4.1, 5.1 and 6.1 which prepare research in individual work packages. A final iteration of the documents will form part of D1.3 Synthesis research report.

1. Introduction

This Deliverable 1.1 Theoretical and conceptual framework presents the results of the DUST project's Task 1.1. Building on a cross-disciplinary review of scientific literature from the fields of public policy, the democracy studies, spatial planning and spatial design, the task was to deliver an up-to-date comprehensive framework guiding the DUST project's further research. It is important to note that the document complements the Deliverable 1.2 Methodological framework, which explains how the different methods of the DUST research combine and synergise. Both deliverables are living documents, designed to evolve and adapt throughout the course of the project. Each DUST work package (WP) has its own starting phase, dedicated to an in-depth elaboration of the concepts and methods that will be used in conducting the WP. As new insights are gained and research progresses, the documents D1.1 and D1.2 will be updated. Eventually, updates will culminate in the project's final Deliverable 1.3 Synthesis research report.

D1.1 has been accomplished during a process of collaborative theory formation (Schwartz-Shea and Yanow, 2012, Bendassolli, 2013, Corbin and Strauss, 1990), which knew several rounds. A first preparatory round made use of the theoretical notions and concepts that were gathered during the writing of the DUST project proposal. The result of the round was a draft table of content structuring mentioned theories and concepts, and a template for the collection of further input from the DUST partners in WP1. During a second round of theory formation partners conducted an intuitive scanning of literature concerning used theories and concepts. The resulting first draft of D1.1 included notions that allowed for a more detailed positioning of the DUST research in different disciplinary domains. A third round of theory formation drew on the depth of the partners' disciplinary knowledge. Via a systematic literature review, the round led to a more detailed definition of concepts and categories that will be used for conducting the research. Some of these results formed the base for interactive dialogues with other DUST partners and members of the DUST Stakeholder Advisory Board (SAB) and External Expert Advisory Board (EEAB) during the DUST Kick-off meeting on 17 and 18 April 2023 (Figure 1). Input acquired during dialogues and a final round of review by the DUST partners in WP1 led to the last version of D1.1, which is presented here.

This deliverable is structured in five main parts. Chapter 2, following this introductory Chapter 1, presents a summary of the problem definition and research aim of the DUST project. Chapter 3 positions the DUST research in academic debate by presenting definitions of key concepts, explaining how concepts in conjunction constitute DUST's focus areas and central subject of research. Chapter 4 explains how theories and concepts constitute the analytical frameworks that guide investigations in dimensions of the DUST research. Chapter 5 gives a brief impression of the state of the art and previews next steps in the development of the research. The document also includes a series of boxes, which present additional information that supports a more general understanding of the research.

Figure 1 Interactive dialogues during the DUST KoM



2. Problem statement and research aim

2.1. Problem statement

In the context of eroding democratic institutions and increasing discontent within marginalised communities and structurally weak regions, the European Union (EU) – in collaboration with national, regional, and local governments - seeks to bring its policies closer to citizens (Barca et al., 2012). Citizens are increasingly involved in place-based approaches (European Commission, 2020b) to reduce socio-economic and territorial disparities and develop innovative interventions for just sustainability transitions as part of the EU Cohesion policy and other EU, national and local responses. Place-based approaches recognize that the relative costs and benefits of transitions - who pays for what and how these decisions are made - have political, economic, and social consequences with a clear territorial dimension. By involving citizens in deliberation and co-creation of these approaches, the EU-led governance arrangements seek to empower citizens to increase their ownership of policies and rebuild their trust in democratic institutions.

A 'place-based' perspective requires policymakers to support procedural, recognitional, and distributional justice in the move towards more sustainable modes of production and consumption in a climate neutral, circular economy (European Commission, 2020a). However, establishing and embedding this perspective in the deliberative governance of just sustainability transitions is challenging. The large-scale transition efforts that national-level government institutions pursue are usually highly technocratic. To meet time pressures and circumvent political difficulties, they often neglect deliberation on the social and spatial implications of transition interventions at local levels (OECD, 2020). In bypassing local channels of deliberative democracy, national policies can be abstract and distant from the communities and citizens that are most affected (Corti & Núñez Ferrer, 2021). The landscape of transition policies comprises numerous economic, social, and environmental measures with highly different scopes and objectives. In combination, these measures often create contradictory 'top down' and 'bottom up' implementation dynamics, competing agendas, confused expectations, and fragmented engagement 'on the ground' (Harden et al., 2015). These complexities tend to further undermine a clear articulation between deliberative and representative institutions of democracy and increase the perception of limited space for meaningful participation in transition policy decisions (Ryfe, 2005).

In particular, the participation of vulnerable communities and structurally marginalised societal groups in deliberation and the co-creation of place-based policies for sustainability transitions faces many barriers. Transitions are experienced differently across and within regions reliant on carbon-intensive sectors or fossil fuel extraction but have consistently significant impacts on these groups (OECD, 2021). Phasing-out industries usually have older, low-skilled, and male-dominated workforces. Women are often over-represented in supportive roles to these diminishing sectors, e.g., lower-paid service work and unpaid care work. There is low participation by women and ethnic groups in the new science-, technology-, and engineering sectors that are expected to emerge as transition outcomes (Fry et al., 2021). Young people are often directly affected by transition policies as economic restructuring is regularly accompanied by high youth unemployment in regions and out-migration. Despite being disproportionally

affected, these groups are the least politically engaged. Citizen participation in policy responses to crises usually maps against the distribution of social capital across regions, with areas that host richer and better educated groups seeing more activity (Felici, 2020). The complex deliberative governance practices further disempower the least-engaged communities as they raise scepticism about tacit policy outcomes, impede awareness of engagement opportunities, and accelerate a lack of organisation, and capacity. In addition, divisive climate-change-sceptic political discourses and narratives that spread via digital and traditional media often fuel discontent and disillusionment with democracy rather than enabling participation in democratic life at scale.

2.2. Research aim

If sustainability transition policies and plans are to succeed, they must address territorial specifics, and mobilise commitment from communities that are the most vulnerable in the face of the transitional challenge. Otherwise, they risk the perception of creating 'winners' and 'losers,' eroding trust in governance, increasing resistance to change, and exacerbating polarization and social unrest (European Commission, 2022). Against this background, the DUST project seeks to improve our understanding of how territorial responses to just sustainability transitions can be democratised to maximise citizen participation and increase trust in democratic governance. Our main aim is to develop a more sophisticated and innovative understanding of how policy processes and instruments can help anticipate, plan, and implement just sustainability transitions at regional and local scales in different institutional contexts, and undertake active, inclusive participation of citizens and communities, particularly structurally marginalised parts of society.

Box 1 The principle of 'active subsidiarity' as a normative guideline

"This transition has to be locally-owned and everyone must be involved" (Marc Lemaître, Director-General, Directorate-General for Regional and Urban Policy, in European Commission, 2021b, p. 1).

The DUST project uses the principle of 'active subsidiarity' as a normative framework of its research into the participation of least-engaged communities in the deliberative governance of place-based approaches to just sustainability transitions. The principle of subsidiarity implies a certain degree of local or regional autonomy and self-rule for local levels of government for the purpose of responsive, flexible, innovative, heterogeneous, and robust governance, to provide a counterweight against the claims (and overreach) of higher levels of government, and to increase citizens' interest in public affairs and ownership of public policies. The principle of 'active subsidiarity' emerged in response to criticism on the sparse use of the subsidiarity principle in EU policymaking and the observation of citizens' discontent about and ignorance of the EU's added value (Moodie, Salenius, & Wøien Meijer, 2022; Pazos-Vidal, 2019; Wanzenböck & Frenken, 2020). Attaching the term 'active' to the subsidiarity principle emphasizes a Europe closer to citizens and a better justification of EU decisions considering capacity and competences at national, regional, and local levels (CoR, 2018).

The detailed objectives behind the active subsidiarity principle (see Table 1) are suited to argue for the lowest appropriate spatial scale for achieving strategic policy objectives in place-based approaches, to justify the delegation of roles and responsibilities to local authorities, and to underpin the constitution of knowledge in local networks. The objectives behind the principle can also be used to motivate local discretion, and experimental democracy, and to promote communication, dialogue, and deliberation in multi-level governance settings (MLG). Moodie, Salenius, & Wøien Meijer (2022, p. 1) argue that these objectives, in conjunction, turn the concept of 'active subsidiarity' into a defining framework for bottom-up and place-based territorial governance and policymaking. However, how the principle can be used to truly bring policymaking closer to citizens remains a challenging question (OECD, 2022a). EU's regional policy deliberation is traditionally dominated by usual-stakeholder-suspects at the EU and national levels, with limited citizen engagement. As noted by Hooghe & Marks (2016), regional governance is social. The largely technical and functional mechanisms that are used to justify governance draw on policy efficiency rationales only and usually over-emphasise economic performance at the expense of distributional, procedural, and restorative justice. If there are opportunities for the representation of communities' interests in deliberations, these are often captured by well-established organisations.

DUST investigates citizen participation in the deliberative governance of place-based policy approaches to just sustainability transitions. Against the above sketched background, the project seeks to use the active subsidiarity principle beyond its usual interpretation. By considering the politically least-engaged communities, it is the project's ambition to make unheard voices heard in a multi-level policy context, and to support communities in deliberating about their concerns in strategically selected policy arenas. The project will use the principle of 'active subsidiarity' also as one that supports an alternative understanding of governance; one that emphasises the participation of communities in self-governing at the local level, and that considers sociality, identity, and social justice as important rationales for governing.

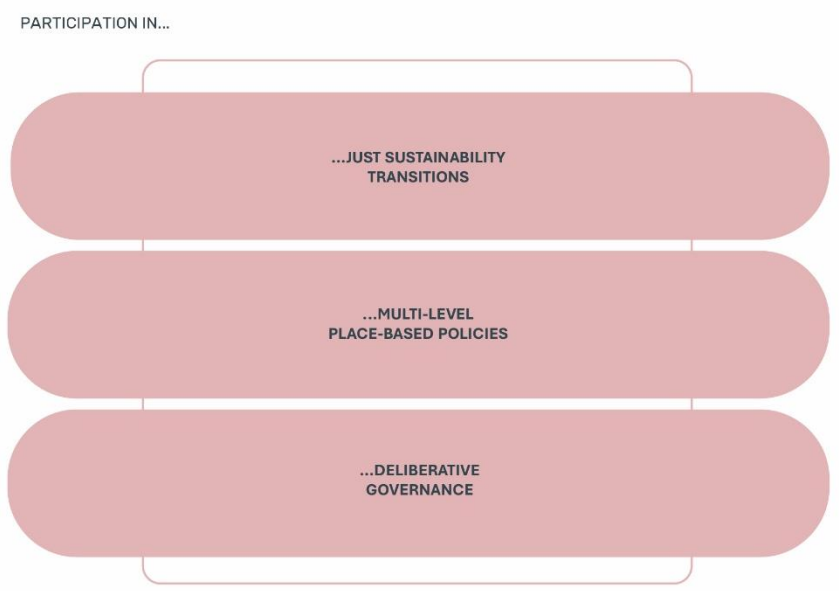
Table 1 Objectives of the active subsidiarity principle

Active subsidiarity is…	
Multi-level governance	A dynamic process of jointly exercised competences at various levels of governance;
A Europe closer to citizens	Aiding local and regional authorities to increase their capacity for communication with citizens across the EU;
	Encouraging a subsidiarity culture in EU policymaking involving all levels of governance, notably at the level as close as possible to the citizens;
	Highlighting the importance of regional and local authorities in creating frameworks for interacting closely with citizens, businesses, social partners, and civil society on a territorial basis;
Place-based approach	Aiding local and regional authorities to increase their capacity for effective policymaking;
	Ensuring that impact assessments systematically assess territorial impact when it is likely to be significant for local and regional authorities;
	Integrating local and regional knowledge, ideas, and interests at all stages of the multi-level policymaking processes;
	Recognising that local and regional authorities are the level of governance closest to citizens, with the best understanding of territorial opportunities and threats;
Deliberative democracy	Applying the active subsidiarity principle to strengthen transparency, inclusiveness and reinforce the democratic legitimacy of the EU;
	A decentralized political dialogue between authorities at local, regional, national, and EU levels.
Source: (Moodie, Salenius, & Wøien Meijer, 2022)	

3. Positioning the DUST research

Drawing on two rounds of literature research – an intuitive scanning and systematic review of scholarly writing - as well as the interactive dialogues, which were led during the DUST KoM, this chapter positions the DUST research in scientific debate. The most central concept in DUST is 'citizen participation.' The chapter begins with defining this concept in outline (for definitions of additional key terms, see Box 2). Within the wider field of citizen participation research, DUST focuses on participation in the deliberative governance of multi-level place-based approaches to (just) sustainability transitions (Figure 2). The following sections introduce these key concepts and summarize the specific benefits, barriers, and challenges to participation, which occur in the chosen focus areas. DUST focuses on the participation of least-engaged communities. The last section of this chapter presents a detailed argument for why this focus matters, who the communities are, and which factors influence their engagement.

Figure 2 Focus areas of the DUST research



3.1. Establishing the DUST research field: citizen participation

The term citizen participation refers to the involvement of citizens in policymaking and service delivery. The concept has been defined in numerous ways, with different scholars emphasising various aspects of participation. According to Arnstein (1969), citizen participation is about the redistribution of power, enabling excluded citizens to be included in decision-making. Roberts (2004) describes citizen participation as the process of sharing power between society and government in making decisions related to the community. Callahan (2007) defines citizen participation as the interaction between citizens and public administrators, while OECD (2022b) provides for the broadest definition by noting that the concept 'citizen participation' includes all the ways stakeholders (including citizens and interested and/or affected parties) can be involved in all phases of service design and delivery. While there are various definitions of citizen participation, they all emphasize its direct impact on policy formulation and implementation, with the focus on direct participation, where citizens are actively engaged in decision-making, rather than indirect participation, where citizens elect others to represent them.

Citizen involvement in policymaking has instrumental, normative, and transformative benefits (Moodie, Salenius, & Kull, 2022). Instrumental benefits refer to citizens providing information, ideas, and knowledge to improve policy outputs. Normative benefits promote inclusiveness and equality in policymaking, while transformative benefits focus on promoting learning and awareness. Related to these benefits are at least four (at times overlapping) purposes of citizen involvement, including (1) knowledge processing, (2) efficiency and effectiveness of policymaking, (3) empowerment and capacity building, and (4) enhancing legitimacy and democracy (Moodie, Salenius, & Kull, 2022). Authors who have engaged in a comprehensive conceptualisation of citizen participation, note that more detailed benefits come to the foreground when different forms of participation are observed, or when distinct perspectives on participation are employed. Seen from an administrative perspective, the benefits of participation lie, for instance, in the resolution of conflict, and the building of trust (Callahan, 2007). Benefits of participation seen from a practitioner's perspective include solutions that fit local problems and conditions (Bryson et al., 2013). Voorberg et al. (2015) studied the benefits of participation in co-creation and co-production processes. The authors highlight social innovation as an outcome of participation in this context. Beierle (2005), who has investigated citizen participation in environmental decision-making, identifies – next to general purposes of citizen participation – benefits that matter for decisions in this context, such as education on the social impact of environmental policy measures, a shift in public values, and the risk of conflict that can occur in the realm of environmental policies. Bickerstaff & Walker (2005) distinguish benefits of direct participation from benefits of participation in public deliberation. According to the authors, potential positive outcomes of direct citizen participation are developmental, educative, therapeutic, and integrative, while deliberative methods seek to overcome communicative barriers and aim for a certain redistribution of power and an equalizing of the resources and ability of different parties to speak.

It is important to note that the outcomes of participatory processes in policymaking can be severely underwhelming (Denwood et al., 2023) and that also negative outcomes can arise from citizen participation. Adverse effects of participation include reliance on knowledge intermediaries, disempowerment, reduced sense of agency, new capacities used for negative purposes, tokenistic or captured forms of participation, lack of accountability and

representation in networks, denial of state services and resources, social, economic, and political reprisals, reinforcement of social hierarchies and exclusion, and increased horizontal conflict and violence (Gaventa & Barrett, 2012; Roberts, 2004). There are various dilemmas of citizen participation, including the challenge of scale, the inclusion of excluded or oppressed groups, the risk associated with participation, the difficulty of competing with professionals in terms of knowledge and expertise, the time constraint, and the tension between direct participation and the common good in terms of research gaps. Bussu et al. (2022) discuss the challenges of managing the tensions between different demands of lay citizens, civil society organizations, political parties, and public officials, and how participatory innovations can connect with both political institutions and broader civil society. The authors suggest that participatory behaviour and attitudes are as important as methods and procedures for participation. Sustainably embedding participatory approaches requires building coalitions that bridge across organizational and activist cultures, continuous political work, changes to decision-making practices, investment in capacity building, incentives for innovation and experimentation, and leadership (Escobar, 2011). In terms of research into participation: There has been a disproportionate focus on innovative processes and methods in citizen participation, with little attention to their impact on institutional design and structures of democratic decision-making (Bickerstaff & Walker, 2005).

Box 2 A very brief citizen participation glossary

Involving citizens vs. involving stakeholders: In their guidance for citizen participation processes, OECD (2022b) defines a citizen as 'an inhabitant of a particular place', regardless of any other condition. A stakeholder is "any interested and/or affected party, including institutions and organisations, whether governmental or non-governmental, from civil society, academia, the media, or the private sector" (idem, p.15). OECD (2022b) advises that, when involving stakeholders, one should consider that their threshold for participation is low, that they can dedicate time and resources, that they usually have a clear interest or incentive to participate, and often have previous experience interacting with public authorities and decision-making processes. It is crucial to prevent policy capture by stakeholders. When involving citizens in participation processes, one should consider that their threshold to participate is often high and that they may lack the necessary time, resources, interests, and incentives to become involved. Additionally, citizens may not feel that their participation will have a meaningful impact on decisions. To overcome this, it is important to establish clear connections to outcomes of decision-making processes and actors involved in these.

Direct participation vs. organized interests: Direct participation and organized interests represent two distinct approaches to engaging citizens in decision-making processes. Direct participation refers to the involvement of individual citizens directly in the decision-making process. It emphasizes the inclusion of ordinary citizens and encourages their active engagement in shaping policies or making decisions that affect them. Direct participation methods can include public consultations, town hall meetings, referendums, or citizen assemblies. The goal is to provide citizens with a direct voice in the decision-making process, allowing them to express their opinions, provide input, and influence outcomes. On the other hand, organized interests focus on the involvement of specific groups or organizations that represent collective interests. These interests may include trade unions, advocacy groups, professional associations, or non-governmental organizations (NGOs). Organized interests function as intermediaries between citizens and decision-makers, representing and advancing the concerns and perspectives of their members or constituents. These groups often possess specialized knowledge, resources, and the ability to mobilize support around specific issues. They engage in lobbying, advocacy, and negotiation to influence policies and decisions.

The main difference between direct participation and organized interests lies in the level of involvement and representation. Direct participation aims to engage individual citizens directly, ensuring that their voices are heard and considered. It emphasizes inclusivity and equality among participants. On the other hand, organized interests focus on representing specific groups or organizations, allowing them to pool resources, expertise, and influence to advocate for their particular interests. Both approaches have their strengths and limitations. Direct participation can foster a sense of ownership and legitimacy, as it directly involves citizens in decision-making. It promotes democratic ideals and empowers individuals. However, it may face challenges in terms of resource constraints, lack of expertise, or difficulty in reaching a consensus among a diverse population. Organized interests, on the other hand, provide a more structured and focused representation of specific interests. They bring expertise and resources to the table but may be criticized for representing narrow or self-serving interests. In practice, a combination of direct participation and engagement with organized interests can lead to more comprehensive and balanced decision-making processes. The specific approach chosen will depend on the context, goals, and nature of the decision-making process at hand.

Levels of involvement: Several basic classifications to distinguish (and often qualify) participatory processes are in use. The most applied of these classifications describes levels of involvement in citizen participation. OECD (2022b) brings the number of levels of involvement down to three. The first level is 'information,' which involves the government providing information to citizens and stakeholders. The second level is 'consultation,' which is a two-way relationship where citizens and stakeholders provide feedback to the government, and the government responds in kind. The third level is 'engagement,' which involves citizens and stakeholders collaborating with the government throughout the policy cycle and service design and delivery, with the necessary resources and tools provided.

Depth of engagement: A similar classification distinguishes the 'depth of engagement.' Various measurements are used to decide if citizen engagement is shallow or deep. One measurement is the direction of interaction, for instance. It describes if participation is conducted via one-way or two-way communication or even takes the form of a partnership. The depth of engagement can also be measured by assessing citizen ownership of the policymaking process and resulting policies, which can range from being subjects (or consumers) in policymaking to being owners of (or producers in) the process. Power-sharing is another aspect of the depth of engagement, with various models and approaches for analysing shares.

Levels of involvement / depth of engagement in e-democracy: As in analogous citizen participation, there is a classification of the level of involvement or depth of engagement in e-democracy. E-enabling refers to providing support for people who do not typically use the internet to access the wealth of information available online. This can involve offering text-based information either passively or on demand. E-engaging focuses on consulting a wider audience to enable more meaningful contributions and foster deliberative discussions about policy issues. In this context, the term "engaging" refers to the government or parliament consulting citizens in a top-down manner. Examples include discussion forums, online consultations, and the use of social media. E-empowering citizens aims to facilitate active participation and encourage bottom-up ideas that can influence the political agenda. Examples include "online communities" of interest, e-petitions and e-referenda, and the use of social media (OECD, 2022b).

Co-production, co-creation, and co-design: In the design and research of participatory instruments, there is often a focus on hight levels of involvement. The concepts of co-production, co-creation, and co-design emphasize these high levels of citizen participation in the production and design of public goods and services (Brandsen & Honingh, 2016; Farr, 2018; Kleinhans et al., 2022; Voorberg et al., 2015). Co-production involves citizens playing an active role in shaping services they personally receive (Brandsen & Honingh, 2016), while co-creation refers to the involvement of end-users in various stages of the production process (Voorberg et al., 2015). Co-design and co-creation are based on the principles of co-production and utilize user-centred and participatory design techniques to create public services and policies. At times the term 'co-creative' is also used to describe processes that aim to stimulate alternative understandings of why and how things are, and how they could be (Franklin, 2022). The concepts of co-creation and co-production are often used interchangeably in the literature. They are often seen as part of a larger effort to promote voluntary participation and enhance social cohesion in a society that is becoming more fragmented and individualized (Kleinhans et al., 2022).

Governance and participation: A clear distinction between participation via organized interests and governance is difficult to draw. Governance concepts that include notions of participation are 'interactive governance', which refers to interactions initiated to solve societal problems and create opportunities, and 'collaborative governance', which brings public and private

stakeholders together with public agencies to engage in consensus-oriented decision-making (Ansell & Gash, 2007; Kooiman & Jentoft, 2009). Degrees of organization can be used to make a conceptual difference between co-production and co-governance. Co-production is seen as collaboration between public agencies and citizens, which may refer to individual citizens or collectives of citizens, but not necessarily to organizations. On the other hand, co-governance or co-management focuses on inter-organizational collaboration. Governance concepts that include notions of participation are 'interactive governance,' which refers to interactions initiated to solve societal problems and create opportunities, and 'collaborative governance,' which brings public and private stakeholders together with public agencies to engage in consensus-oriented decision-making.

3.2. Establishing the DUST focus: participation in the deliberative governance of place-based approaches to sustainability transitions

The research on citizen participation is vast. Scholars consequently contend that comprehending the factors that facilitate or impede participation requires a deeper understanding of the contextual conditions and selectivity in terms of the objectives of participation. DUST focuses on participation in the deliberative governance of multi-level place-based approaches to (just) sustainability transitions. A review of the citizen participation literature through the lenses of these three concepts, allows for the identification of more detailed benefits, barriers, and challenges.

3.2.1. Participation in (just) sustainability transitions

3.2.1.1. (Just) sustainability transitions – basic definitions

In its classic definition by the United Nations Brundtland commission, the concept of 'sustainable development' is defined by "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations, 1987, p. 42). Since it was first conceived, the concept became a ubiquitous meta-aim (Purvis et al., 2019). Among objectives built into it are human well-being; fulfilled basic needs of the poor; intra- and inter-generational justice; the preservation of environmental resources; and global life support systems that respect planetary boundaries (Meadowcroft, 2000, p. 373). More recently critique on a growth-oriented sustainability paradigm has led to an emerging shift towards social-ecological justice goals (Grossmann et al., 2022) as formulated 2015 in the UN Sustainable Development Goals. This shift brings together environmental justice and sustainable development, creating the concept of 'just sustainability.' Similarly, the concept of a 'just transition' seeks to inject social justice concerns into ecological discourses and green growth practices. It includes various approaches, from reformist just transition conceptions that focus on the greening of capitalist economies to critical analysis of the role of the capitalist economy in producing injustices in green economies (Grossmann et al., 2022). In this way, the concept offers a new space for exploring and promoting distributional, procedural, and restorative justice, with a focus on assessing where injustices will emerge and how they should be tackled (McCauley & Heffron, 2018).

While the concepts of 'sustainability' and 'sustainable development' are framing a collection of normative aspirations, the concept 'sustainability transition' describes the slow, evolutionary process of realizing these. Grin et al. (2011, p. 1), leading scholars in transition management, define a sustainability transition as a "radical transformation towards a sustainable society, as a response to a number of persistent problems confronting contemporary modern societies". They emphasise that transitions are transformative, requires long-term systemic change, new relations between market, government, and society, as well as an economic order that is based on new virtues and values.

3.2.1.2. Benefits of participation in just sustainability transitions

Scholars in sustainability transitions commonly describe citizen participation as a necessary ingredient of sustainable development. When reflecting on the benefits of participation for transitions, they regularly emphasise learning. Grin et al. (2011) conceptualise participation as part of a series of sub-processes that in conjunction determine transitions. The sub-process of 'co-evolution' is the interaction between societal subsystems influencing patterns of unreversible, transitional change. The concept of a 'multilevel perspective' describes how transitions evolve through an interference of innovative practices at a local level (called 'niche experiments'); structural change at a medium level (called 'the regime'); and long-term, exogenous trends at a high level (called 'the landscape'). Direct citizen participation plays a role in the interactive social processes of 'co-design and learning', which are acted out on the local level and oriented at the acquisition of the knowledge necessary for bringing transitional change about (Grin et al., 2011). Loorbach (2010, p.164) underlines the importance of social learning for sustainability transitions and notes that the building of a relevant body of knowledge requires the inclusion of stakeholders who act in different societal domains and at varying levels, and who hold different values and norms. Huttunen et al. (2022) have investigated citizen engagement in sustainability transitions research. They distinguish four purposes of such engagement, notably (1) understanding and deliberating the values and perceptions of citizens; (2) integrating different kinds of knowledge; (3) empowering citizens and facilitating learning; and (4) mobilising citizens as resources for knowledge creation.

Dabson et al. (2012, p.4) explain that sustainability transitions rely on an increased resilience and adaptive capacity of communities. Resilience refers to the ability of a community to withstand and recover from shocks and stresses, such as natural disasters, economic downturns, or social upheaval (Engle, 2011). Adaptive capacity refers to the ability of a community to adjust to changing circumstances and to develop new strategies and approaches to meet emerging challenges. In conjunction the two concepts form a framework for understanding how communities can effectively respond to and recover from disruptions and challenges and at the same time maintain a positive attitude towards the transformation of their places in the face of change and uncertainty (Boschma, 2015). Building resilience and adaptive capacity often involves a combination of participatory approaches, such as strengthening social networks, promoting local ownership and leadership, and fostering a sense of shared responsibility and ownership over community development efforts (Gallopín, 2006; Innes & Booher, 1999; Juhola & Kruse, 2015; Jungsberg et al., 2021). Ultimately, communities must be able to anticipate threats, take pre-emptive action, and respond appropriately to threats as they materialize (Dabson et al., 2012).

3.2.1.3. Barriers and challenges to citizen participation in just sustainability transitions

Contestation and conflict in the context of sustainability transitions: Authors studying sustainability transitions commonly underline the importance of citizen participation in the transitions. They, however, often also portray transitions as highly challenging contextual settings for participation. One reason for this lies in the contestation that sustainability transitions regularly unleash. As noted above, the concepts of sustainability and sustainable development incorporate a wide variety of sub-objectives. According to Meadowcroft (2000, p. 373), this conceptual ambiguity can constitute a "potentially unifying political meta-objective,

with a suggestive normative core". Ambiguity can, however, also result in various and contradictory interpretations and contestation. Lubitow & Miller (2013) observe an inevitable politicization of sustainable development once the concept falls on the ground and point at a consequent permanent need for negotiation. Connelly (2007, p. 260) advise to take "the implications of contestation seriously, not simply in the interest of intellectual rigour but in order to inform effective sustainable development policy and politics". Agyeman & Evans (2004, p. 156) observe that the "competing and conflicting views over what the terms mean, what is to be sustained, by whom, for whom, and what is the most desirable means of achieving this goal" risk derailing sustainability policies. Purvis et al. (2019) explain that the concept of sustainability includes competing economic, social, and environmental agendas. The authors call for an explicit description of how the ontologically open concept is understood across different contexts to be able to address conflicts in public policymaking. Wanzenböck & Frenken (2020) note that the societal challenges that are to be met during sustainability transitions are best pursued at subnational levels where "the contested nature of problem identification and the contextual nature of problem-solving" can be matched best. Scholars who study sustainability transitions from the perspective of spatial planning, note that transitions unleash a broad array of often competing spatial claims which turn transitions into a complex and contentious setting for public action (van Buuren et al., 2013).

Lack of awareness of social sustainability: A second reason why sustainability transitions present a challenging contextual setting for citizen participation lies in the often-neglected social dimension of sustainable development. Social sustainability is defined as "development (…) that is compatible with the harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population" (Polèse & Stren, 2000) (p.15). Social sustainability can evolve on an individual and collective level, according to (Dempsey et al., 2011). While there is broad agreement that economic, environmental, and social sustainability are equally important and thoroughly intertwined, in policymaking they are often pursued separately, and attention to social sustainability is typically low. This neglect of social sustainability and a corresponding ignorance of equity and justice rationales result in an unfair distribution of the benefits and burdens of sustainability transitions, particularly for vulnerable communities (Davidson, 2009; Walker & Bulkeley, 2006). Without proactive consideration of the deeply uneven impacts of policies promoting low-carbon futures and engaging vulnerable communities in governance of these transitions, there is a risk that these futures become "more antagonistic, exclusionary, violent, and destructive" (Sovacool, 2021, p. 14).

Barriers to learning and knowledge production: The importance of knowledge production and learning for sustainability transitions is highlighted above. Scholars, however, note that these processes are complicated by the often fundamental social and societal changes that the transitions imply. Changes necessitate the unlearning of exiting knowledge, and an acceptance of uncertain evidence. Learning processes require long-term commitment, novel iterative and reflexive forms of government–society interaction, interaction across different government levels, the integration of various perspectives, and experimentation on the level of society instead of policy alone (Prins & Rayner, 2007; Rabe, 2007).

Policy-related challenges: National-level government institutions typically prioritize technocratic approaches in their large-scale transition efforts. In order to meet deadlines and overcome political challenges, they often overlook the consideration of social and spatial consequences of transition interventions at the local level (OECD, 2020). Transition policies

encompass a wide range of economic, social, and environmental measures, each with distinct scopes and goals. When implemented together, these measures often result in conflicting dynamics between top-down and bottom-up approaches, competing agendas, confused expectations, and fragmented engagement at the grassroots level (OECD, 2022b). These complexities may also further accelerate barriers to citizen participation such as the effective coordination between deliberative and representative democratic institutions and the perception that there are limited opportunities for meaningful participation in decision-making processes regarding transition policies (Ryfe, 2005).

Table 2 Challenges and barriers to participation in just sustainability transitions

Participation in the context of just sustainability transitions: challenges and barriers		
Context	Likeliness of contestation and conflict in the context of competing economic, social, and environmental agendas; Likeliness of contestation and conflict in the context of uncertainty of long term transitional change; Likeliness of contestation and conflict due to uneven impact of sustainability transition (measures) 'on the ground;' A lack of proactive consideration of uneven impacts of policies;	(Agyeman & Evans, 2004; Connelly, 2007; Davidson, 2009; Lubitow & Miller, 2013; Purvis et al., 2019; van Buuren et al., 2013; Wanzenböck & Frenken, 2020)
Context	A lack of attention to the social dimension of sustainability transitions; A lack of comprehensive consideration of distributional, procedural, and restorative justice in sustainability transition management; A lack of practical guidance for justice and equity in sustainability transition management;	(Davidson, 2009; Dempsey et al., 2011; Polèse & Stren, 2000; Sovacool, 2021; Walker & Bulkeley, 2006)
Context	Barriers to knowledge production and learning in the context of fundamental social and societal change; Necessity of unlearning / learning to accept risks and uncertainty in the production of evidence.	(Huttunen et al., 2022)
Policy	Priority for technocratic and top-down approaches in transition management; Conflicting dynamics between top-down and bottom-up policy approaches; Fragmented governance; Competing agendas;	(OECD, 2022a)
Policy	Ambiguity of frameworks and a consequent lack of robust guidance in transition management.	(Agyeman & Evans, 2004; Davidson, 2009; van Buuren et al., 2013)

3.2.2. Participation in place-based policy approaches

3.2.2.1. Place-based policy approaches - basic definitions

New economic geography, new institutionalism and local economic development theories underline the importance of local socio-economic and institutional contexts and resources in informing sustainable transition processes. The main principle underlying place-based policy intervention is that all territories have development potential. A range of theoretical frameworks and empirical analyses have emerged, combining analyses at the local scale of processes of technology and knowledge diffusion, the operation of markets and competition, the evolution of transaction structures, networks and inter-enterprise relations, labour market profiles, and institutional cultures and capacities. The aim is to explain and address how these factors contribute to differences in local development dynamics and in the capacities of places to cope with, and adapt to change, including sustainable transition (Plummer & Taylor, 2001; Rodríguez-Pose & Wilkie, 2017).

The place-based approach concerns the design and delivery of distributed development policies which are sensitive to geographical context and focus on mechanisms that build on local capabilities and promote innovative ideas through interaction between local and general knowledge, and endogenous and exogenous actors. Place-based concepts emphasise the role of non-state actors in informing and implementing policies and plans, as locally autonomous decision-making involving state and non-state actors leads to a closer connection between policy and local needs and priorities. This makes measures better informed, efficient, embedded with stronger local commitment and ownership, and more transparent with stronger accountability at the local level. Structures and instruments are established to facilitate input from communities in steering local policies (Barca, 2009; Barca et al., 2012; Iammarino et al., 2017). Place-based policies emphasize the importance of subjective dimensions of places including considerations of fairness and inclusion, attachment to a specific location and focus on emotions. This stems from the understanding that places play a vital role in the lives of individuals and communities. Effective policies for addressing community disadvantage accept that there is an emotional dimension to structural change (Beer et al., 2020).

Place-based approaches to sustainable transition recognise the need to address complex linkages and interactions between different issues in a given territory and emphasise the multi-level dimension in developing policy responses. This requires dealing with different institutional and spatial scales and drawing in a range of funds and stakeholders from EU, national and local levels. To achieve this, place-based measures assume multi-level governance structures that can determine the optimal mix of resources and investment priorities and achieve necessary coordination. They may also involve a functional geographical approach and opening the process of developing policy interventions to achieve greater transparency and bottom-up contributions, including engagement of local communities and citizens (Benz, 2021; Rodríguez-Pose & Ketterer, 2020).

Due to their explicit territorial focus (defining the spatial scale suitable for achieving strategy objectives), strategic dimension (incl. the integration of local knowledge and ideas) and emphasis on territorial governance (illustrated by delegation of roles to local authorities, stakeholder integration and citizen participation), place-based measures are closely aligned with the concept of active subsidiarity and represent key tools for implementing it (Moodie, Salenius, & Wøien Meijer, 2022). The effective governance of territorial development strategies requires

the capacity to coordinate within and across different levels of government, public administrations, and agencies, as well as to engage the private sector, other public entities, NGOs, and citizen groups in the concerned territory (European Commission. Joint Research Centre., 2022).

Place-based policies face challenges related to complexity, stakeholder management, faltering expectations, vested interests, and a lack of financial resources. Operationalising effective regional and local governance can be hampered by continued dominance of central governments which may lead to public mistrust and apathy towards place-based initiatives. Success depends on the establishment of effective governance, quality of strategic integration, active involvement from key local leaders and their communities as well as a clear focus on the goals and aspirations of the policy from the outset, agreed upon by all stakeholders (Beer et al. 2020).

3.2.2.2. Benefits of participation in place-based policy approaches

Participation is needed to mitigate uneven territorial impacts of long-term development processes or sudden shocks: Long-term processes or 'megatrends' (including demographic transition, digitalisation, and climate change) and sudden shocks (e.g. global financial crisis, Covid-19) have socio-economic impacts that are spatially differentiated, generating territorial inequalities which present a major challenge to policymakers concerned with sustainable development. Unless carefully designed, policy responses to these processes can risk entrenching territorial inequalities. Place-based approaches based on top-down and bottom-up action and collaboration are required to mitigate uneven territorial impacts. The likelihood of contestation over policy measures from different groups that are represented unevenly across territories increases the need of legitimisation and articulation of priorities at regional, local or community levels (Mercier, 2020; OECD, 2019).

Participation boosts local accountability and transparency: Mismatches between the territorial scale of the issues being addressed, the multi-level institutional boundaries of the public authorities involved, and the communities with a direct stake in sustainable transition raises questions about who has a legitimate say in decisions that affect sustainable transition processes. Although there are challenges around making these processes and tools inclusive, legitimate and effective strong, participatory governance is crucial in this context (Sandercock, 2005).

Participation in place-based policies is often associated with a focus on well-being, quality of life and sustainability: Basic preconditions for participation in place-based approaches are improving the quality of life and well-being of actors, particularly at the local level, and the environmental, social, and economic sustainability of the communities they live in. This is to ensure they have the motivation, capacity and freedom to participate actively in place-based initiatives (Beer et al., 2020).

Participation is important to elicit local knowledge of local actors: Local individuals and businesses are deemed expert by their lived experience. They may also form the core of community-led actions and partnerships, forming new institutional arrangements and capacities to contribute to local development. The latter enable those designing and implementing place-based policies to strengthen the relationship between governments and citizens (Beer et al., 2020).

Territorial communities as drivers of collective action: The effectiveness of the multi-level place-based approach depends on the "shared solidarity that emerges from citizens' collective identification with the place in question" which on its end fosters communal spirit and perception of collective interests. This is the social logic of the place-based governance arrangements (Morgan, 2018).

Participation in place-based approaches can address the politics of place: Spaces and places are increasingly the product of global flows. In this context, Massey (2007) argues for an 'extroverted politics of place'. In this form of politics, places are perceived to not only being shaped by global forces, but also as the origins of these forces. This raises questions of responsibility for development and triggers a more relational conception of space and place, one which underpins a more networked local politics. Local internationalism ignores hierarchical presumptions. It cuts right across the scalar geographical imagination that supports the discourse of subsidiarity. If sustainability transition policies and plans are to succeed, they must address territorial specifics, and mobilise commitment from communities that are the most vulnerable in the face of the transitional challenge**.** Otherwise, they risk the perception of creating 'winners' and 'losers,' eroding trust in governance, increasing resistance to change, and exacerbating polarization and social unrest (European Commission, 2022; Wanzenböck & Frenken, 2020).

Open and inclusive participation prevents rent-seeking behaviour: Rent-seeking behaviour occurs when individuals or groups try to manipulate the political or economic system to their own advantage. This behaviour often involves lobbying, influencing regulations or policies, seeking subsidies or tax breaks, obtaining monopolies or exclusive rights, or engaging in corrupt practices. In the multilevel architecture (top-down and bottom-up approach) of the place-based approach the role of the upper levels of government is to set the general goals and performance standards, while the lower levels have "the freedom to advance the ends as they see fit" (Barca, 2009: 41). The ultimate purpose of the top-down part of the approach in this thinking is to induce local agents to commit their energy, knowledge, and resources to tackling untapped potential in their territory. Possible pitfall, especially in places with little experience and culture in multi-level governance, is that place-based policy instruments promote instead rent-seeking behaviour. To prevent such outcome, local decision-making processes need to be verifiable, open, experimental and inclusive (Morgan, 2018).

Participation in place-based measures can support inclusion of specific social groups and communities: Place-based policy makers are presented with a serious challenge to understand how policies and spaces act to include some social groups while excluding others. There is recognition that local economic development has tended to focus on growth, with little consideration of who benefits and increasing attention on shaping policies in a way that means they now consider distributive aspects. Yet there are significant challenges: the extent to which place-based policies engage different local communities and actors in shaping inclusive growth is uncertain, policy frameworks are still developing, and the evidence base on 'what works' is limited (Green et al., 2017; Lee, 2019).

Participation enables policies to assess and respond to the socio-cultural and emotional dimensions of structural change (among individuals and groups for whom adjustment processes are most challenging) Participation is crucial to address the emotional and cultural dimension of place-specific structural changes to ensure effective policy response to the damage on/loss of cultural identity, social capital, etc (Beer et al., 2020).

3.2.2.3. Barriers and challenges to citizen participation in the context of place-based policy approaches

Inclusion-related challenges: Place-based policymaking is expected to include affected citizens, social groups and communities. However, there are multiple challenges to the inclusive participation of these actors in decision-making. There is recognition that support for local economic development has tended to focus on growth and that there has been little attention to the often unintended distributive externalities of policies. When seeking to include actors significant challenges need to be addressed: the extent to which place-based policies affect different local communities and actors is often unknown; policy frameworks are regularly oriented at the long term and provide little concrete guidance for immediate action; and the evidence base on 'what works' is limited (Green et al., 2017; Lee, 2019). Also, the assumed link between place-based policymaking and enhanced democracy is not automatic. There is the recognition that the inclusiveness of representation strongly depends on how governance structures manage territories and promote participation (Beer et al., 2020).

Capacity-related challenges: The extent to which place-based measures support (decentralisation processes to) the local level and stakeholder participation depends on multiple factors. Key factors include resources and capacities at sub-national authorities (incl. staff, skills, scale to address complex issues). It is important to note that active participation of non-governmental local and regional stakeholders in place-based measures is often intended but not implemented effectively due to capacity deficits (Moodie, Salenius, & Kull, 2022). More detailed elaborations of capacity-related challenges bring multiple aspects to the foreground. Local and sub-regional administrations need, for instance, the capacity to think strategically ahead, to mobilise local stakeholders and connect these to each other, to cooperate with local partners in the design and implementation of concrete strategies and projects. Capacity formation is complicated by the fact that it cannot be built in a linear way. Instead it requires repetitive efforts, iterative learning processes and coaching (European Commission. Joint Research Centre., 2022).

Regulatory overload: Local agents experience disconnects with EU Cohesion Policy due to constrains driven by the imposed compliance culture which disables local creativity (Morgan, 2018).

Asymmetries of power and knowledge: Barriers to genuine deliberative democracy processes is that participants usually face each other from unequal position of power, based on class background, material wellbeing, level of knowledge (on the subject matter), education and occupation (Morgan, 2018).

Technocratic, sectoral priorities: Large-scale transition efforts are usually sectoral-oriented and highly technocratic. To meet time pressures and circumvent political difficulties, they often neglect deliberation on the social and economic implications of transition interventions for territories (OECD, 2020).

Disconnected 'top down' and 'bottom up' contributions: Transition measures are usually led by national governments. There is a risk of bypassing local channels of deliberative democracy, meaning that national policies can be abstract and distant from the communities and citizens that are most affected. The landscape of transition policies comprises numerous economic, social, and environmental measures with highly different scopes and objectives. In combination, these measures often create contradictory 'top down' and 'bottom up' implementation

dynamics, competing agendas, confused expectations, and fragmented engagement 'on the ground' (Corti & Núñez Ferrer, 2021; Harden et al., 2015).

Specific barriers for participation of vulnerable communities and structurally marginalised societal groups: Transitions are experienced differently across and within regions but have consistently significant impacts on particular groups and communities. Phasing-out industries usually have older, low-skilled, and male-dominated workforces. Women are often over-represented in supportive roles to these diminishing sectors, e.g., lower-paid service work and unpaid care work. There is low participation by women and ethnic groups in the new science-, technology-, and engineering sectors that are expected to emerge as transition outcomes. Young people are often directly affected by transition policies as economic restructuring is regularly accompanied by high youth unemployment and out-migration. Despite being disproportionally affected, these groups are often the least politically engaged. Citizen participation in policy responses to crises usually maps against the distribution of social capital and complex deliberative governance practices can further disempower the LEC as they make specific capacity demands, raise scepticism about tacit policy outcomes, and impede awareness of engagement opportunities, In addition, divisive climate-change-sceptic political discourses and narratives that spread via digital and traditional media often fuel discontent and disillusionment with democracy rather than enabling participation in democratic life at scale (Felici, 2020; Fry et al., 2021; OECD, 2021).

Table 3 Challenges and barriers to participation in place-based approaches

Participation in the multi-level governance of place-based approaches		
Context	Inclusion-related challenges: Lack of knowledge about distributional effects of policies; Lack of knowledge about what works;	(Beer et al., 2020; Green et al., 2017; Lee, 2019)
Community	Specific barriers for participation of vulnerable communities and structurally marginalised societal groups;	See Chapter 3.3 (Felici, 2020; Fry et al., 2021; OECD, 2021)
Policy	Capacity-related challenges;	(Moodie, Salenius, & Kull, 2022)
Policy	Regulatory overload;	(Morgan, 2018)
Policy	Asymmetries of power and knowledge;	(Morgan, 2018)
Policy	Technocratic, sectoral priorities; Disconnected 'top down' and 'bottom up' contributions;	(OECD, 2020)

3.2.3. Participation in deliberative democracy and governance

3.2.3.1. Deliberative democracy – basic definitions

According to Bächtiger et al. (2018, p. 2), deliberative democracy is about "mutual communication that involves weighing and reflecting on preferences, values, and interests regarding matters of common concern". Mansbridge (2015, p. 28) notes that "deliberation has at its root the idea of weighing alternatives" and is an opposite of aggregative democracy in which votes are counted. According to Callahan (2007) deliberative governance shows that public administration is transitioning from 'professional elitism' to a 'community paradigm'. In this context, public managers are increasingly seen as community builders and enablers of democracy. Thompson (2008) notes that deliberative theory aims to explain how citizens can arrive at a collective decision in a state of disagreement and highlights legitimacy as the key defining element of deliberative democracy in the context of this core problem. OECD (2020) characterises deliberation by four key ingredients, notably (1) the careful weighting of implications of alternative options as well as the views of different stakeholders on these, (2) the presence of accurate and relevant information, which reflects diverse perspectives and arguments, (3) broadly-shared evaluative criteria for considering solutions and reaching decisions, (4) the application of evaluative criteria to proposed solutions, to weigh trade-offs, and find common ground to reach a group decision.

3.2.3.2. Benefits of participation in deliberative democracy

Deliberative democracy is a mechanism for developing consensus and producing collective decisions on divisive issues and among stakeholders with competing perspectives. Deliberation allows for breaking political deadlocks in representative democratic processes. Scholars who discuss deliberative democracy promote citizen engagement as a basic necessity in negotiating plural preferences, values, and interests (Carpini et al., 2004; Gaventa & Barrett, 2012; OECD, 2020; Ryfe, 2005). Participation in deliberative democracy is, however, expected to not only increase the legitimacy of decisions, but also have positive impacts on the participating citizens and communities themselves. Impacts include trust in decision-making processes, a stronger sense of political efficacy, the development of social capital, and better-informed citizens (Mutz, 2008; R. Putnam, 1993; R. D. Putnam, 2000; Scharpf, 1999). Policy-based benefits of deliberative democracy (beyond the aforementioned core objective of legitimacy) include more efficient and effective policy that is context-specific and better targets the needs of the community, improved transparency of decision-making, clearer accountability for policies, a stronger sense of ownership among citizens, and greater justice of policy and outcomes that benefit poor and previously excluded groups (Gaventa & Barrett, 2012).

3.2.3.3. Barriers and challenges to citizen participation in deliberative democracy

Deliberative democracy is the most widely debated idea of democracy in recent years (Gutmann & Thompson, 2009). Yet, critiques of theories of deliberative democracy have pointed out the practical difficulties of achieving good deliberation. Criticism concerns inclusion, lack of capacities, quality of deliberation, influence of different interest groups and sustainability of the

practice over time. In response, scholars have increasingly performed empirical research specifically designed to overcome such limits, looking into issues of implementation, institutional design, and evaluation of deliberative processes. Empirical findings have been mixed. Research is indicating that deliberation can produce more sophisticated, tolerant, and participative citizens. However, it is also showing that success is reached only under certain conditions and if multiple challenges are overcome.

The success of citizen participation in deliberative governance and democracy is constrained by many factors. The connection between representative and participatory governance can be challenging and unresolved due to institutional constraints, which may make it difficult to involve citizens in established structures of democratic decision-making (Bickerstaff & Walker, 2005). New methods for citizen participation may be incorporated into a managerial approach to politics rather than genuinely empowering or democratizing (Rayner, 2003). Deliberative processes and the pursuit of consensus can be used to co-opt or silence oppositional politics, creating tension between closer interaction with local or regional authorities and the ability to criticize and challenge (Bickerstaff & Walker, 2005). Participation may be reduced to a symbolic role, with deliberative materials translated into technical language and structured analytical frameworks used by local and regional authorities to justify higher policy objectives or mobilize civic support (Healey, 1997; Mosse, 2001). Problems of representation and legitimacy can arise in small deliberative fora, raising questions of political and ethical legitimacy and the need for a clearer account of their role in democratic institutions and the proper sources of contestability of their outcomes (O'Neill, 2001). Crucial factor concerns power. Embedded power relations can affect participatory processes, such as the tyranny of the group and the distribution of control over deliberation, which can reinforce the interests of already powerful groups and legitimize established power relations (Cooke & Kothari, 2001; Hajer & Kesselring, 1999; Pratchett, 1999). More detailed challenges come to the foreground when studying these aspects in depth.

Challenges concerning the organisation of deliberation: Gutmann & Thompson (2009) identify multiple challenges one has to consider when reflecting upon who has or should participate in deliberative processes. Challenges include the disconnect between citizens and public officials which often includes great cynicism and distrust on both sides; the tendency that - in the face of difficult, complex issues - people seek to avoid responsibility for decisions and therefore pass on liability; the condition that the sampling of participants often relies on community networks, which represent homogeneous groups of people based on, for instance, education, race, and socio-economic situation; and that these homogeneous groups tend to prefer intimate conversations over potentially contentious discussion, which in turn challenges the central deliberative principles of equality and legitimacy.

Challenges related to the practice of deliberation: There are multiple challenges one must consider when reflecting upon how participants do and should talk to each other. Empirical research points to communication shortcomings such as a lack of authentic, informed exchange of opinion, and a lack of opportunity to build a true consensus during deliberation (e.g., in public hearings). The key to successful deliberation lies in the way individuals collectively account for problems. This requires participants who feel motivated to do the hard work of intentional reflection; are able to handle its complexities; and are culturally empowered to believe that their work can make a difference. Without feeling that the stakes are high, or that they are accountable for an outcome, individuals will be less willing to engage in truly deliberative processes (Gutmann & Thompson, 2009).

Challenges related to the product of deliberation: There are also challenges one must consider when deciding upon the product of deliberative encounters and what should be done with this product. In this context it is important to note that there are differences in the assumptions and expectations that deliberative groups and policy officials bring to deliberative processes; and that most initiatives focus their efforts either on education or consultation (via, for instance, citizens' juries or panels), which leave little opportunities for citizens to have an impact on the public decisions that affect them. These practical challenges raise the conceptual issue of how to coordinate deliberation with representative democracy (Gutmann & Thompson, 2009; Ryfe, 2005).

Challenges concerning the tangible value of including citizens in the deliberative process: According to Agyeman & Evans (2004) empirical evidence is needed to demonstrate the tangible value of including citizens in deliberative processes. Concerns are one the one hand related to the practicality of the deliberation process and include aspects of efficiency (considering, for instance time-consumption, and costs). Concerns are on the other hand related to the gained value of deliberation. Scholars note that the preferences, values, and interests that are expressed in deliberations can be based on politically naïve and unrealistic assumptions; be disruptive; lack representational weight; lack evidence due to a lack of expertise and knowledge; and be motivated by personal interest instead of an interest in the public good (Agyeman & Evans, 2004; Callahan, 2007; Innes & Booher, 1999).

One-off and ad hoc deliberation: In particular, deliberative-participatory initiatives have often been criticized for being one-off and ad hoc. As a result, the concept of embeddedness has been frequently invoked in recent scholarship on participatory governance and particularly so of deliberative-participatory initiatives in attempt to understand how these initiatives can be integrated in the political system (Bussu et al., 2022).

Elite-capture and tokenistic forms of participation: According to Carpini et al.(2004) main caveats in deliberative citizen engagement lie in the risk of elite capture of the process, bias towards elite interests, and tokenistic forms of participation, which result in 'gated democracy' or a system where access to democratic processes is restricted or limited to a select group of individuals or institutions. The authors argue: "Put simply, countering the optimism of proponents of deliberative democracy is a strong and persistent suspicion that public deliberation is so infrequent, unrepresentative, subject to conscious manipulation and unconscious bias, and disconnected from actual decision making as to make it at best an impractical mechanism for determining the public will, and at worst misleading or dangerous" (idem, p. 321).

Context-dependency: It is also important to note that the results of deliberative participation are highly reliant on the specific circumstances in which it occurs. The effectiveness of deliberative engagement depends on various factors, including "the purpose of the deliberation, the topic being discussed, the participants involved, their connection to decision-making authorities, the rules governing interactions, the information provided, prior beliefs, tangible outcomes, and real-world conditions (Carpini et al., 2004). These contextual factors in conjunction make it difficult to predict the performances of deliberative processes across events.

Table 4 Challenges and barriers to participation in deliberative governance / democracy

Participation in deliberative governance / democracy: Challenges and barriers		
Context	Challenges related to **connections between representative and participatory governance**; Problems of representation and legitimacy when deliberation is conducted in small deliberative fora;	(Bickerstaff & Walker, 2005); (O'Neill, 2001);
Context	Participation as a managerial approach to politics rather than genuinely empowering or democratizing; Deliberative processes and the pursuit of consensus can be used to co-opt or silence oppositional politics; Participation may be reduced to **a symbolic role** in justifying higher-level policy objectives or mobilizing civic support; Participation can be **tokenistic** (little more than just talk); There can be **elite capture** of the decision-making process;	(Rayner, 2003); (Healey, 1997; Mosse, 2001); (Carpini et al., 2004); (Bickerstaff & Walker, 2005)
Context	**Embedded power relations** can affect (the outcomes of) deliberation;	(Cooke & Kothari, 2001; Hajer & Kesselring, 1999; Pratchett, 1999)
Community	Challenges concerning **who participates**: Lack of civic capacity in communities and among community members; Participation is shaped by existing community networks / homogeneous; Participation is shaped by existing relations to policymakers (including existing distrust);	(Gutmann & Thompson, 2009; Ryfe, 2005)
Policy	Challenges related to **the practice and product of deliberation**: Difficulties to justify costs versus tangible value of deliberation; Challenges related to **the product of deliberation**: unclear impact of the results of deliberation on policy-making;	(Gutmann & Thompson, 2009; Ryfe, 2005)
Policy	One-off and ad hoc deliberation: a **lack of structural embeddedness** of deliberative processes in policymaking;	(Bussu et al., 2022)
Policy	**Multitude of contextual factors** hinders an assessment of the outcomes of deliberation;	(Carpini et al., 2004).
Other	Feasibility and desirability of the ideal of communicative rationality;	(Flyvbjerg, 1998; Huxley, 2000; Mouffe, 1999; Tewdwr-Jones & Allmendinger, 1998);

3.3. Establishing the DUST central research subject: least-engaged communities

3.3.1. Why focus on the least-engaged communities?

There are several reasons why a focus on the least-engaged communities (LEC) is appropriate in the context of sustainability transitions.

First, the **LEC are often the most affected by transitions.** Transitions are experienced differently across and within regions reliant on carbon-intensive sectors or fossil fuel extraction but have consistently significant impacts on vulnerable communities and structurally marginalised societal groups (OECD, 2021). On the one hand, the *costs* of these transition are inequitably distributed. The decline of carbon-intensive industries causes difficulties for individuals who hold jobs in these industries as well as the communities they live in (Wang & Lo, 2021). Phasing-out industries usually have older, low-skilled, and male dominated workforces (Fry et al., 2021). Due to skills gaps, members of these groups often encounter difficulties in finding new jobs and – when finding new employment – are forced to make sacrifices such as substantial wage losses, and long-distance commutes. In the context of longer term structural change, these developments also compromise local cultures, community identity, and a sense of place (Carley & Konisky, 2020). Moreover, fossil fuel industries often play an important role in the provision of a local tax revenue base; the decline of these industries consequently adversely affects not only the industries themselves but also public services such as education, transportation, and waste management (Carley & Konisky, 2020). Furthermore, the social consequences of labour disruptions usually extend to other employment sectors within fossil fuel-based communities, where women are often over-represented in supportive roles (Fry et al., 2021). On the other hand, the *benefits* of a low-carbon transition can be inequitably distributed. Studies indicate that renewable energy jobs hardly benefit marginalized groups (Wang & Lo, 2021). On a global scale, the trend of male dominance in highly technical, well-paid jobs, and the low participation of women and ethnic groups, remains a constant in the renewable energy sector, as well as other science-, technology-, and engineering sector that are expected to emerge as transition outcomes (Carley & Konisky, 2020; Fry et al., 2021). Finally, the unequal distribution of environmental externalities further adds to the multi-dimensional inequalities-environment (or climate) nexus (OECD, 2021). A growing number of studies in the environmental justice literature have shown that the impacts of environmental degradation, industrial pollution and related health risks are often concentrated among ethnic minorities, deprived communities, and other vulnerable groups and households (e.g. Pasetto et al., 2019).

Second, the **LEC are often the most affected by transition policies or sustainable development policies**. Benefits and costs of those policies are likely to be unevenly distributed across households. Even if small on aggregate terms, green policies can have important distributional implications for jobs at the sectoral or regional levels (OECD, 2021). More broadly, the relative costs and benefits of transitions - who pays for what and how these decisions are made - have political, economic, and social consequences (European Commission, 2020a). This inequality in economic, environmental and geographical manifestations has been identified as one of the most significant barriers to sustainable development (Adger, 2002). Ensuring just transition policies is complicated because of a procedural injustice. Decisions that transform the environment are usually made by people who enjoy the benefits rather than the burdens.

Gross inequalities of political authority, power, and influence remain the norm in environmental decision-making (Bell & Carrick, 2018).

Third, there are **normative, ethical reasons** why we need to focus on the LEC. If we believe in equality as a value to pursue in our democratic societies, we need to **ensure an equitable distribution of benefits and burdens** across social groups and across space. In other words, public policy – environmental or otherwise – must not disproportionally advantage any particular social group and afford opportunity for all. This is a precondition for the move towards truly just and sustainable societies (Agyeman & Evans, 2004). To achieve this in transition policies, broad inclusion of different vulnerable groups and communities is necessary (Pinker, 2020). Participation of only a few groups can even add to the social exclusion of the vulnerable. A good example of a vulnerable group are young people. They are often directly affected by transition policies as economic restructuring is regularly accompanied by high youth unemployment in regions and out-migration. Despite being disproportionally affected, these groups are the least politically engaged (Felici, 2020). Pinker (2020) stresses that we need to involve more people than just those directly affected by industry closure. We also need to include those indirectly affected by changes to the local economy or environment, or by shifts in energy costs or provision (such as low-income households). Pinker (2020) further makes the case for including inter-generational justice concerns, by taking into account the impact of decisions made (or not made) today on future generations

Fourth, there is a more **pragmatic reason** to focus on the LEC in sustainability transitions. We **need to ensure the support of the LEC if we aim at a socially acceptable implementation of collective planning for sustainability** (Adger, 2002). Ignoring the voice of the LEC is likely to fuel discontent and derail transition efforts. If sustainability transition policies and plans are to succeed, they must mobilise their commitment in the face of the transitional challenge. Otherwise, they risk the perception of creating 'winners' and 'losers,' eroding trust in governance, increasing resistance to change, and exacerbating polarization and social unrest (European Commission, 2022).

Finally, the development of transition policies provides a good **opportunity to (re)politicise sustainability**, a term that has since long been a buzzword, and is often uncritically applied without defining its meaning. Political discussions on "what" exactly we want to sustain are often non-existent, in particular regarding the economic and social dimension of sustainability. According to Lubitow and Miller (2013), a more just sustainability must encourage the politicization of the concept and the integration of numerous voices into a community's vision for the future. They further add that by avoiding the political, and focusing on a narrow environmental interpretation of sustainability, issues of justice and equity are often excluded. This can make it difficult for groups whose perspectives are being marginalised to open or politicise sustainability problems and projects. They conclude that we need critical moments in which the notion of sustainability can be challenged, critiqued, and potentially altered in pursuit of a more inclusive vision.

3.3.1.1. Who are the least-engaged communities?

There are various, partly overlapping terms that bear on the concept of LEC:

3.3.1.2. Deprived communities

The term “deprived” is mostly used as a place-based term, describing a specific area such as a neighbourhood that is experiencing structural unfavourable conditions. Opačić (2021) describes deprived communities as communities who have one of the following traits: they gather a significant number of inhabitants of low socioeconomic status, they have unfavourable developmental outcomes with respect to their surroundings, they face structurally conditioned obstacles in development, they are exposed to serious destructive risks and they create an unfavourable existential environment. Some authors identify deprived neighbourhoods through purely quantitative approaches. Bak et al. (2012), for example, operationalise deprived neighbourhoods as small geographical areas with a high concentration of people with a low socio-economic status characterised by indicators such as unemployment, low income and poor education.

3.3.1.3. Marginalized communities

The term “marginalised” is usually used as a people-based term, referring to individuals or groups who are socially and economically excluded from the society in which they live by race, class, gender, sexual orientation, socio-economic status, ethno-cultural identity, religion, age, disability, or other stigmatized identities such as refugees and migrants (Kempin Reuter, 2019; Montesanti et al., 2016). These individuals or groups are relegated to a powerless position at the margins of society and are lacking agency. Their existence is often neglected and their needs remain unheard, compromising their survivability (Baah et al., 2019; Kempin Reuter, 2019). Causes for marginalisation are mechanisms of oppression, structural violence, patriarchy or stigmatization (Montesanti et al., 2016), also in relation to structural and social inequalities (Baah et al., 2019).

3.3.1.4. Vulnerable communities

The term “vulnerable” is generally used in relation to health and environmental impacts, though the concept could more broadly also be interpreted as “being vulnerable to the impact of transitions.” In Environmental Justice research, vulnerability refers to the physiological, social, economic, and cultural factors that may mean that an entirely equal distribution of exposure to a burden may still have very unequal impacts. In other words: the same level of exposure to an environmental burden (or to a transition for that matter) may have different consequences for different people, since some people might be less able to anticipate, cope with, resist, or recover from this exposure (Rukmana, 2014; Walker, 2012). Because these distributional inequalities in vulnerability often compound distributional inequalities in exposure, powerful multi-layered claims of environmental and social justice can be constructed (Walker, 2012).

3.3.1.5. Seldom-heard groups

An interesting new term that was recently introduced in England and Scotland is ‘seldom-heard.’ The term is often used in social services and health services, but also in planning, and was formulated as an answer to the criticism of the term “hard-to-reach groups”, a label that can be interpreted as judgmental, suggesting that there is something about the individuals in these groups that results in them not engaging. The term “seldom-heard groups” focuses more on the responsibility of organisations to ensure that all people can have their voices heard (Paul Robson et al., 2008). The seldom-heard can include “people from an extensive range of backgrounds and

life experiences whose voices are typically not heard in decisions that affect them and who tend to be underrepresented in consultation and participation exercises, both as individuals and as groups" (Scottish Government, 2017, p. 12). Factors contributing to seldom-heard status might include physical disability, ethnicity, poverty and deprivation, geographical isolation, age, sexuality, communication impairments, mental health problems and other particularly challenging circumstances such as homelessness, drug use or excessive caring responsibilities. Sometimes these factors may be present in multiple and overlapping ways. The seldom-heard do not form monolithic groups. The recognised categories include individuals living in very diverse circumstances who may or may not identify closely with the group to which they have been assigned by policy-makers (Scottish Government, 2017).

3.3.2. Direct factors explaining lack of engagement

The causes of exclusion from planning and other decision-making areas are complex and multi-faceted. OECD distinguishes between two major groups of non-participants in public engagement: those who are able to get involved but are unwilling to do (the 'apathetic majority'), and those that are unable to participate no matter their willingness. This latter group includes people who would be willing to engage if the barriers were removed, but it would be a mistake to assume that they all would (OECD, 2009). We propose to further develop this framework and combine the two binary categories -able/unable and willing/unwilling- in a matrix, which we plan to use in the DUST project as analytical framework to identify and map different people and groups that are either or not participating (Table 5 provides a list of (often interrelated) direct factors that can explain inability and unwillingness. Making a clear difference between these two major causes for the lack of participation, and their explanatory factors, is not only useful from an analytical perspective. It will also be of great help when designing strategies or approaches to increase participation.

Figure 3). Table 5 provides a list of (often interrelated) direct factors that can explain inability and unwillingness. Making a clear difference between these two major causes for the lack of participation, and their explanatory factors, is not only useful from an analytical perspective. It will also be of great help when designing strategies or approaches to increase participation.

Figure 3 An analytical framework for distinguishing LEC

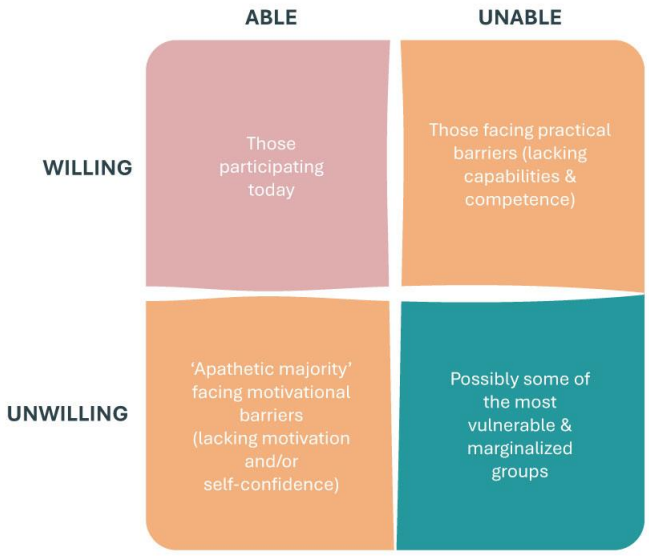


Table 5. Factors explaining lack of engagement

Direct factors explaining lack of engagement	
Being unable	**Being unwilling**
Cultural barriers	Not seeing any personal benefit or relevance
Language barriers	Difficulty of focusing on regional issues
Geographical distance	Trust that someone else will look after their interests
Physical or mental impairment	Lack of trust in government to make good use of their input
Socio-economic status	Discontent and disillusionment with democracy
Lack of time, schedule conflicts	Perception of powerlessness and limited agency
Challenging life circumstances	Lack of self-confidence
Technological illiteracy	
Difficulty understanding technical elements	
Lack of interpersonal skills	
(based on Dijkstra et al., 2020; Kelleher et al., 2014; Kitchen & Whitney, 2004; Loopmans et al., 2022; OECD, 2009; Rodríguez-Pose, 2018; Scottish Government, 2017)	

3.3.3. Underlying causes explaining lack of engagement

Apart from **structural socio-economic inequalities** that contribute to an unequal access to knowledge and capabilities to participate, in the academic literature a few more specific underlying causes are identified that might explain why citizens are unable and/or unwilling to participate.

First, **past experiences** can cause unwillingness. Gosman and Botchway (2013) point out that a history of failed participation processes and unpopular plans or projects makes citizens think their engagement is unlikely to be productive. At a smaller scale, **personal or group experiences of non-recognition**, either in institutional contexts or in everyday life, can lead to a lack of trust and feeling of powerlessness (Loopmans et al., 2022).

Second, the composition of the population poses challenges. Policy-makers and social movements find it difficult to manage the **increasing diversity of residents** in terms of, for example, ethnicity and lifestyles, causing both inability and unwillingness to participate. Some of the new inhabitants may not have the required skills for participation, but at the same time hardly any thought has been given to the question of how to involve the new groups in significant activities. The policy process itself may contain all kinds of **hidden mechanisms that, possibly unwittingly, exclude people from the policy process** and from governance structures (Dekker & Van Kempen, 2009). This population diversity also contributes to a growing disparity between the social composition of affected areas and the **social composition of movements that could represent citizen's voice**. Without pursuing equity in the distribution of networks and capabilities, environmental and social justice are difficult to realize. The perception of advocacy groups as predominantly white and middle class can further contribute to the lack of engagement among minority groups (Loopmans et al., 2022).

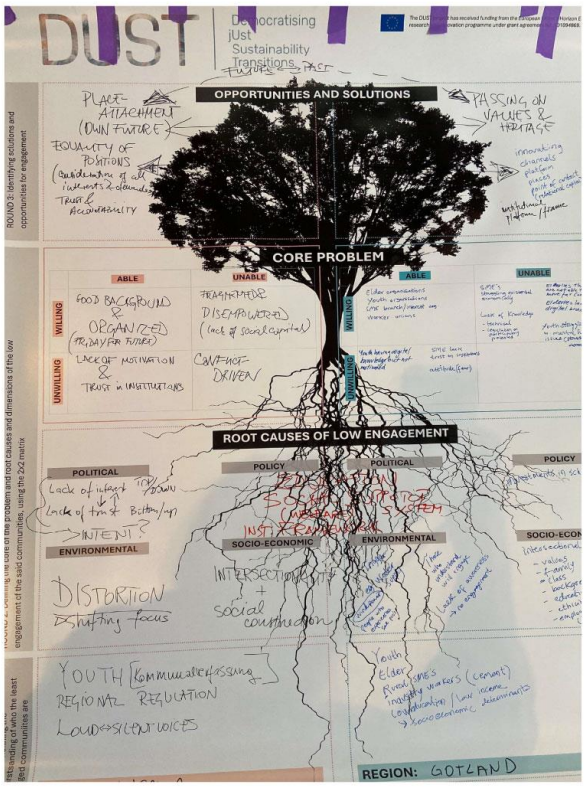
Third, compounding the challenge of designing inclusive participation processes, **policy-makers often find it difficult to value the contribution of marginalised groups** such as ethnic minorities and lower income families (Dekker & Van Kempen, 2009). One reason is that, often

unwittingly, **assumptions are made about the lack of capability** to participate. For example, Kelleher et al. (2014, p. 55) identified "adults' inability or unwillingness to recognise young people's agency in decision-making". Another reason is that policymakers face challenges reconciling different needs within decision-making processes. Since the opinions of different kinds of minority groups are often highly divergent and potentially conflicting, they are sometimes excluded in a **striving for an efficient process that leads to consensus and cohesion**, avoiding conflicts along the way (Dekker & Van Kempen, 2009). A third reason is the **expert-lay divide**, signifying that policymakers who have expertise in particular disciplines do not always want to share their responsibility and decision power with those less formally educated in the discipline. Government agencies sometimes believe they already have the necessary expertise to make sound decisions and they do not believe public consultation will substantively improve the knowledge base for decisions (Brown, 2012). These three reasons can help explain citizen's experience of epistemic exclusion i.e. the feeling that their voice, knowledge, interests … are of no concern for city leaders (Goossens et al., 2020).

Figure 4 Results of analysis of LEC in DUST case study regions during the DUST KoM







Box 3 Feedback on conceptualisation of LEC during the DUST Interactive Dialogues

The DUST project's KoM took place in Delft on 17 and 18 April 2023. One of the topics discussed during the Interactive Dialogues that were part of the meeting was the conceptualisation of LEC as it is presented in this Chapter 3.3. Several points of feedback emerged from the discussion.

Terms and terminology: Firstly, there were suggestions to clarify the term 'least engaged communities' in more detail. One advise was to specify if it refers to communities engagement in policy processes in general or if it refers to their engagement specific policy context (e.g., place-based policy approaches). A related description of communities that came up in the discussion was the description of 'left behind' people, places, or communities. It was noted that this term has gained traction in the context of EU Cohesion policy and the increasing urban-rural divide in political disenchantment and is therefore relevant to the participation challenge addressed by the DUST project. A more general remark concerned the use of terminology during research. It was pointed out that terms like 'vulnerable', 'marginalized', and 'seldom-heard' can be stigmatizing, may not be align with how these groups perceive themselves, and may have different meanings in the language of communities.

Factors influencing participation: During the DUST Interactive Dialogues other direct factors that explain why some people or communities are unable and/or unwilling to participate were identified. The most important ones among these refer to socio-cultural norms, values, and traditions. In some of the DUST case study regions there are, for instance, conservative views on gender roles, which lead to lower participation among women, and traditional lifestyles in village communities with an traditional 'own way' of making decisions. In addition to categorizing engagement as able/unable and willing/unwilling, another relevant distinction emerged: the mindset of the participants. It was noted that some individuals or communities exhibit a more conservative and opposing mindset, while others display a more accepting and open-to-change mindset. Recognizing this difference is crucial for determining appropriate participation strategies.

Categorizing participants as able/unable and willing/unwilling: It was noted that it is important to present the matrix with four quadrants 'willing, able, unwilling, and unable' as a simplified framework that will only be used as an analytical tool. In reality, individuals and groups will not clearly fall within one of the four quadrants. A lot of interrelated factors are often at play and only jointly explain why an individual or group is less engaged. This also means that only a combination of methods and solutions will be able to increase participation of a certain group. When analysing low engagement using the four quadrants, we should also consider that there are different degrees of organisation. We should make clear if we are analysing individual engagement or engagement of civil society organisations.

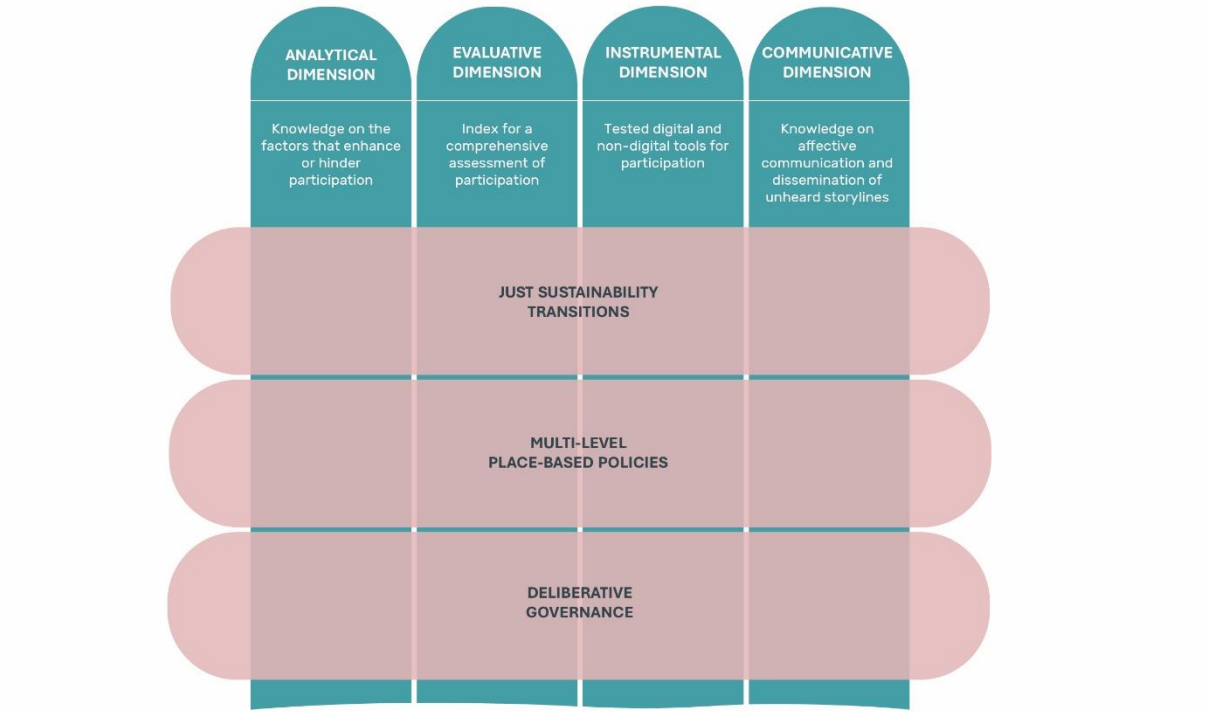
Aim of the DUST project: The matrix with the four quadrants also led to reflection on what the aim of the DUST project is. Do we only want to overcome the inability problem, by designing more inclusive participatory tools and increasing the capability of communities through teaching and learning initiatives? Or do we also aim to change the unwillingness of (some) least engaged communities? To what extent is that even possible in the timeframe of the project? And what strategies can we use for that? It was advised to clarify these fundamental questions before developing the matrix further.

4. Theories and concepts in dimensions of the DUST research

Guided by the concept of 'active subsidiarity,' the DUST project aims for a more sophisticated understanding of the determinants of participation of the least-engaged communities (LEC) in the deliberative governance of place-based approaches to just sustainability transitions. More detailed objectives of the project are related to different dimensions of the DUST research. In its analytical dimension research will unpack the interplay between policy, community, and inclusive deliberation and in this way produce new knowledge on the factors that enhance or hinder participation. In its evaluative dimension research will result in an index for a comprehensive assessment of participation. In its instrumental dimension, it will investigate and test combinations of digital and non-digital tools for enhancing participation at scale. In its communicative dimension research will increase our understanding of how narratives help or hinder participation and how affective two-way communication can support the emergence and dissemination of unheard story lines.

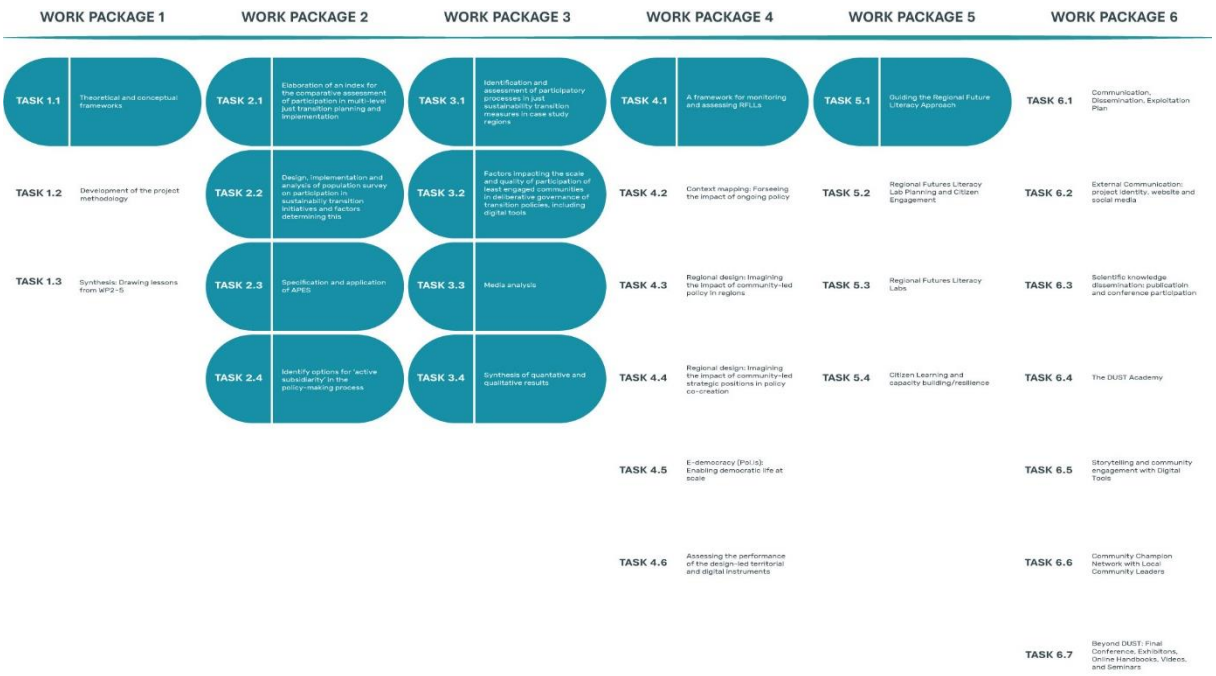
In this Chapter 3 the theories and concepts that guide analyses in dimensions of the DUST research are presented. Drawing on rounds of literature research and the interactive dialogues that were conducted during the DUST KoM, each sub-chapter firstly introduces the objectives of research, secondly elaborates key theoretical notions, and concepts, and thirdly presents the research questions, assumptions, and expected results that guide the research process. It is important to note that dimensions in the DUST research resemble lines of inquiry and stretch across WPs. The figures in the beginning of each sub-chapter indicate how tasks in WPs contribute to research in dimensions.

Figure 5 Dimensions of the DUST research



4.1. Analytical dimension: unpacking the interplay between policy, community, context, and inclusive deliberation

Figure 6 Tasks in WPs that relate to the analytical dimension of the DUST research



4.1.1. Objectives

The objective of the DUST analytical dimension is to assess how community, policy, and context factors (variables) enhance or impede participation of vulnerable and historically marginalised communities in place-based transition policies. To do so, it develops and operationalises an analytical framework that identifies existing place-based policies for sustainability transitions, the type of participatory processes that have been organised in designing and implementing these policies and assesses how multiple factors impact, in conjunction, communities' decision to participate in these processes. The analytical framework integrates dimensions that allow to appreciate how these factors may differ depending on the level of government and the stage of policymaking process at which participatory initiatives take place. As a whole, it provides a comprehensive understanding of why multi-level place-based policies face barriers in capturing and responding to concerns of communities which have been identified as least-engaged.

4.1.2. Theories and concepts

In building the analytical framework, the analytical dimension is informed by multiple theories and concepts, majority of which have been introduced in Chapter 2. First, the c**oncept of the place-based approach and multi-level governance guide the selection of place-based policies and the identification of arenas of participation**. The concept of active subsidiarity is closely related to the place-based approach (see also Chapter 2). It underpins the relationship between place-based approaches, multi-level governance and effective citizen participation,

incentivising deliberative forms of participation and highlighting the need to engage the LEC (Moodie, Salenius, & Wøien Meijer, 2022).

Further, the dimension is informed by the theories of participatory and deliberative democracy to identify the forms and key characteristics of participatory mechanisms that have been used in different stages of policymaking. In doing so, the concepts of e-democracy foresight and visioning come into play as the analytical dimension tries to establish if and how digital tools, local knowledge and anticipation have been used in identified participatory mechanisms and could enhance participation. In addition, the research makes use of the classification on 'depth of engagement' to gain deeper insights into the extent to which participants have been able to contribute to policy formulation and implementing (see also Chapter 4.2.). Finally, the challenges and barriers to participation and deliberative governance of LEC and in place-based policies identified in Chapter 2 inform the construction of classification of independent variables that facilitate or impede inclusive deliberative governance.

4.1.2.1. Selecting policy measures

The analytical dimension accesses participatory processes organised as part of policy making and policy implementation of measures for sustainability transition. The concept of the place-based approach is applied in the selection of policy measures. To define measures as place-based several criteria stemming from the key characteristics of the place-based approach are defined:

- **Objectives that apply multiple dimensions to the territory concerned:** Place-based measures aim for thematic or sectoral integration in order to meet inter-related territorial needs, drawing in economic, social, institutional, environmental elements. For instance, investment to improve connectivity for exports will not be enough without investment and training to ensure the competitiveness of firms in a given location.
- **A range of integrated tools:** Measures should also be coordinated functionally, combining investments, regulations, and the drafting of strategies that combine support for the public, private and third sectors (Duranton, 2018).
- **Multiple stakeholder involvement in governance, integrating 'bottom up' and 'top down' inputs** from public sector (multi-level), private sector, third sector and civil society. The argument is that measures tailored to specific territorial contexts based on local engagement of many different types of stakeholders can unblock local development traps and unlock local development potential. Thus, rather than centrally-designed measures implemented in a 'top-down' dynamic, measures should focus on coordinating inputs from a range of actors at multiple levels of governance. This, of course, requires requisite capacity at local levels (McCann, 2013).
- **Explicit territorial focus** that can include functional (rather than purely administrative) areas. A key principle of place-based approaches is targeting measures at the relevant functional scale in order to capture and address interrelationships and interdependencies within or between places. Emphasis is placed on measures that cover functional areas rather than administrative boundaries, for instance covering city regions, spatial economic networks between urban centres and urban-rural links, macro-regional scales or inter-municipal co-operation (O'Brien, 2015).

The concept of the place-based approach to measures is applied to the analysis of measures supporting sustainability transitions, particularly in terms of the engagement of

marginalised or 'seldom heard' communities. DUST research posits that, for a range of reasons, sustainability transitions require a place-based response:

First, sustainability transitions inevitably require that environmental, social, and economic factors are considered in an integrated way in a given territory. The ability to adapt to environmental and resource vulnerabilities requires building on the specific resources, assets, and capacities of individual regions and cities. The configuration of energy, food, transport systems etc. have a profound effect on sustainability pathways and these emerge differently in cities, regions, or countries, e.g., in terms of pace or scope, as well as in type of policies or technologies that are preferred or implemented.

Second, a place-based focus allows people to address the sustainability challenges and to be part of the transition process itself. Place is relevant as the site of social interaction. It is where people can discuss the qualities of their local ecosystem, what they value, or how to build a place-based narrative for sustainable transition. This decreases the scope for resistance to change as it supports the development of social capital, consensus and trust-based, reciprocal relationships among key stakeholders, which in turn provide a basis for more meaningful processes of knowledge transfer as transition measures roll out (Grenni, 2020). Important in this are relationships between political institutions, local organisations, communities, and individuals. The place-based concept connects political institutions with civil society (Bachtler, 2010; Barca, 2019).

Within this, place-based approaches offer scope to consider the capacity for excluded groups to play a part in sustainable transitions. Such approaches offer an alternative to arguments that the scale of sustainable transition is too complex and too sectorally-oriented to accommodate active local participation and that local capacities, particularly among vulnerable or marginalised communities are too limited to be useful. On the contrary, place-based approaches, in theory at least, offer the potential for a more just transition by empowering local communities, including underserved groups proactively (Bouyé, 2021).

A variety of place-based measures are potentially crucial to transition processes. This can involve alignment of local development strategies and local plans with the national sustainability agenda, creation of mechanisms which enable planning across local authority boundaries, investment in addressing territorial disparities related to just transition (e.g. in skills, training, productivity, access to technical and social infrastructure, technical and financial support to planners in local authorities to address barriers to delivery, harnessing the power of data sharing to promote access to information about the planning process such as platforms for digital collaboration and engagement etc. Each type of measure provides different potentials and arenas for collaboration and engagement with local communities and citizens. According to (OECD, 2020), the thematic focus of participatory processes varies depending on the level of government. Local and regional/state level processes are typically focused on urban and strategic planning, infrastructure, and health-related questions, while national and international processes tend to centre on environment and technology policy issues. The DUST analytical dimension distinguishes among the following broad type of measures (Krawchenko & Gordon, 2021; Nadin et al., 2021; Nowakowska et al., 2021)

- **EU Cohesion policy programmes and projects**, notably Just Transition funding (in national or territorial plans) as well as territorial tools such as ITI and CLLD that aim to respond to context specific challenges and build resilience in an integrated way (ITI) and based on community action (CLLD).

- **National regional policies**, including those responding to structural changes and economic transformations. This includes economic/industrial transitions that aim to align regional economies with climate and energy transition targets.
- **Innovation measures including smart specialisation strategies** for sustainable transition.
- **City and regional spatial plans** (e.g., transport and mobility plans, brownfield regeneration interventions; renewable energy and circular economy).

4.1.2.2. Arenas of participation

In the context of place-based policies for sustainability transition, the formulation and implementation of measures mandates the dispersion of decision making away from central states and the formation of multilevel modes of governance stratified across subnational, national, and supranational levels of government (Topaloglou, 2022). Key concept that captures this process is the concept of multi-level governance, introduced in Chapter 2. The relevance of the concept in the analytical dimension is in that it poses the question about the *balance* and *mix* of actors and roles at the central, regional, and local levels of administration in applying top-down and bottom-up approach to place-based policies (Hooghe & Marks, 2003). As there is no prescriptive rule how this balance and mix shall look like, different governance modes have emerged across countries. The objective of the analytical dimension is to reflect if these diverse modes open different arenas at which participatory processes are organised and, if that is the case, to understand if this relates to certain stages of policymaking process. Research on multi-level governance has also challenged the notion of territorially fixed levels of government and introduced the notion of 'flexible jurisdictions' conceived as voluntary coalitions, for instance, among sub-national authorities such as city-region, functional urban area, etc. (Hooghe & Marks, 2003). In response, the analytical dimension also takes account of whether and how such jurisdiction re-scale the participatory landscape.

Based on the concept of multi-level governance, arenas of participation are distinguished on the basis of the level of government including national level (country), regional level (NUTS2/3 level depending on countries' administrative division), local level (municipal/city level), community level (groups within the city level) and at the level of the functional area (across administrative boundaries).

4.1.2.3. Stages of policymaking

Citizens can be involved in policy measures throughout different stages of policymaking cycle (OECD, 2022a). The latter is a concept that distinguishes a series of stages of the policy process, starting with a very early stage when policymakers start to consider a problem to a final stage when a policy has been implemented and policymakers reflect about its success (Cairney, 2019). There is some variation in literature regarding the number of stages and the actions that fall under each. A classic policy cycle framework involves agenda-setting, policy formulation, adoption/legitimation, implementation and evaluation (Cairney, 2019; Jann & Wegrich, 2017). The European Commission 'Better regulation' framework describes the policy cycle starting from policy design and preparation, through adoption, implementation (transposition, complementary non-regulatory action) and application (including monitoring and enforcement) to evaluation and revision (European Commission, 2021a). According to OECD (2022a) policy or project cycle is usually composed of five stages: issue identification; policy or project formulation; decision making; implementation; and evaluation.

Distinguishing participatory processes across stages of the policy cycle is important first because it is indicative for the scope of the input that the participatory process aimed to collect, and second, because it may reveal difference in provided participatory opportunities in the early stages and in the later stages of decision-making.

The analytical dimension adopts the following definition of stages of policy making cycle:

- **Issue identification/agenda setting stage:** this can include identifying problems that require government attention; discussion on challenges and opportunities. In this stage, participatory processes can support the collection of evidence and knowledge from citizens and civil society organizations.
- **Policy formulation stage**: this includes strategy/plan development, including setting objectives and selecting policy instruments. In this stage, participatory processes can support the development of territorial strategies/plans, spatial plans, investment plans etc. on the basis of which policy would be implemented.
- **Decision-making stage**: this can include participatory processes to decide on the solution to be implemented, the budget to be allocated, or the projects that will be selected.
- **Implementation stage:** this includes application of legislation, policies, and guidance. In this stage, participatory processes can support the deployment of the solutions or projects that were previously agreed on.
- **Monitoring and evaluation:** this can involve assessment of results, collection of (research) evidence and views of users, where participatory processes can feed in. This stage can be used to identify emerging or unaddressed problems that the policy needs to address in a following funding period/amendment. Similarly, participatory processes can contribute to these objectives as well (OECD, 2022a).

4.1.2.4. Typology of participatory instruments.

Public authorities are using diverse participatory practices to involve citizens and citizen organisation more directly in identifying place-based needs and challenges, deciding on policy priorities, building, and implementing solutions. Participatory processes take many forms and for the purpose of the analytical dimension some key typologies are defined distinguishing forms that were designed as deliberative from those that did not aim to promote collaboration and consensus building, digital forms of participant, unconventional forms that are citizen-driven, and other potentially innovative practices to involve citizens:

- **Basic consultation and information exchange:** These are processes associated with one-way provision of information by public authorities as well as activities, which allow for participants to provide feedback/opinion on policy priorities, solutions, etc. that have been prepared and presented by the institution organising the participatory activity (two-way process including exchange between citizens and public institutions). In the case of the latter public administrators actively seek input from citizens or stakeholders but do not employ methods of participation that promote collaboration/co-creation among participates, building compromise or reaching a common decision.
- **Deliberative practices:** These involve a process of deliberation that may have different objectives – to provide collective recommendations, to build collective position, etc. As mentioned in Chapter 2, deliberation is characterised by four key ingredients, notably (1) the careful weighting of implications of alternative options as well as the views of different

stakeholders on these, (2) the presence of accurate and relevant information, which reflects diverse perspectives and arguments, (3) broadly-shared evaluative criteria for considering solutions and reaching decisions, (4) the application of evaluative criteria to proposed solutions, to weigh trade-offs, and find common ground to reach a group decision (OECD, 2020).

- **Spontaneous or unconventional forms of participation:** These are citizen-driven forms of participation that aim at changing/challenging current policies/plans or more general transition-related policy discussions or targets such as national/regional CO2 reduction targets. Such forms of participation are often marked by a conflictual relation between public administrators and citizens. They may also emerge due to lack of institutionalised channels of participation. Examples may include informal grassroots initiative, (youth) movements, demonstrations, protests, social media.
- **Digital participatory mechanisms:** These can be more traditional or more deliberative mechanisms that take place in digital format such as online platforms for citizen inputs; citizen questionnaires/surveys; e-petitions; digital platform supporting co-creation (e.g. such as Decidim), etc.
- **Other (innovative) participatory practice:** Any other form of participation not fitting into above categories, e.g. such based on open innovation (hackathons); civic monitoring (involving citizens in monitoring of public decisions/policies/ services); citizen science (any activity that involves the public in different stages of the scientific process such as the design of research questions or collection of data (OECD, 2022a). For instance, this can be used to collect data to monitor indicators defined in policy measures).

4.1.2.5. Depth of engagement

The concept of depth of engagement has been introduced in Chapter 2 with measurements based on the direction of interaction or an assessment of citizen ownership of the policymaking process and resulting policies. Depth of engagement is part of the analytical dimension as it provides further insights into the way and the extent to which local knowledge has been solicited and used in the formulation of policies and in their implementation. The depth of engagement can also be a factor that impacts the choice of citizens to take part in a participatory activity. The measurement approach adopted in the analytical dimension is in line with the evaluative dimension where the concept is applied as well:

- **One-way process:** Involves solely provision of information by public authority with no active/direct role of citizens in any stage of the policy making.
- **Two-way process:** Involves communication, consultation, or engagement with citizens where the latter can provide feedback/opinion or generate and propose policy solutions/projects in collaboration.
- **Partnership:** Involves collective decision-making on final set of policy options/projects and commitments to invest in collective goals and distributed actions. It represents the highest degree of engagement and empowerment of numerous stakeholders, requiring a longer-term commitment of time and resources (Clarke & Erfan, 2007).

4.1.2.6. Variables that facilitate or impede participation

Chapter 2 has extensively exemplified the variety of factors that may impact – positively or negatively - citizen participation. The analytical dimension of DUST sees these factors as

independent variables that can help explain what enables and what impedes citizens to participate in the design and implementation of policies for sustainability transition. Building on the categorisations made by Lowndes et al. (2006) and Ianniello et al. (2019), mentioned earlier, the analytical dimension defines three types of such variables – community, policy and contextual. **Community variables** comprise relevant citizen characteristics in relation to collaboration skills and capacities, interest to participate and be involved in decision making, time, trust in government, etc. Building on Chapter 2, community variables further reflect the difference between factors defining citizens as **'unable'** or **'unwilling'** to participate. **Policy variables** encompass multiple factors associated with attitudes and capacity of policy-making bodies, as well as factors related to how participatory processes are organised and carried out in policy making and implementation (e.g., were citizens provided sufficient time and information by the organising public body; how participation was foreseen to inform policy, etc.) **Contextual variables** take account of specific to the place cultural, political, and geographical factors. These include (culture of) openness of the policy system/embedding of participatory governance; lack of awareness of social sustainability; low/high institutional thickness; hierarchical shadow (strong control of the national level); highly contested policy issues; large physical distance, etc.

Altogether, this framework allows DUST to analyse what facilitates and what impedes the inclusive deliberative governance of place-based sustainability transition policies (see Table 6 and

Figure 7).

Table 6: Variables that facilitate or impede participation

Community variables		Policy variables	Contextual variables
Associated with 'being unable'	Associated with 'being unwilling		
Lack of capacity (incl. technical knowledge and technological literacy); Lack of time; Cultural barriers; Social capital.	Lack of interest/apathy; Discontent and disillusionment with democracy; Lack of trust in government; Perception of powerlessness (incl. past experiences of non-recognition); Lack of self-confidence; Influential community representatives (not)willing to participate.	Technocratic, sectoral priorities; Disconnected 'top down' and 'bottom up' contributions; Capacity/Skills, staff, and sustainability of resources available at level of sub-national authorities; Public officials' attitudes; Asymmetries of power and knowledge/elite capture of the process; Regulatory overload; Procedural aspects related to the organisation & carrying out of the participatory/deliberative processes incl. timing; Communication (channels); selection of participants; Choice of mode of participation, (no) clarify how participation will feed into the policy process, etc.; Aspects related to the practice of deliberation and the product of deliberation.	Lack of civic capacity; Geographical distance; Low/high institutional thickness; (Culture of) Openness of the policy system/embedded participatory governance; Strong control of the national level; (Lack of) Awareness of social sustainability; (Lack of) Practical guidance for justice and equity in sustainable development; Climate-change-sceptic political discourses and narratives; Contestation and conflict of transition related measures due to uncertainties or high interest in the issue;

4.1.3. Research questions

(1) Classification of measures: There are different types of place-based initiatives for sustainable transition. How do these initiatives vary in the provision of different structures, processes, and arenas for strengthening community mobilisation?
(2) Identification and assessment of barriers – especially focusing on least-engaged and vulnerable communities: What are the most important barriers to this mobilisation? What impedes decentralised, deliberative governance of transitions, particularly for the communities that are the most vulnerable in the face of the transitional challenge?
(3) Identification and assessment of facilitators – especially focusing on least-engaged and vulnerable communities: What participatory instruments and methods are most effective in facilitating mobilisation and co-creation between policymakers and local communities for sustainable transition?

4.1.4. Assumptions

- It is assumed in the literature that participation in deliberative governance of place-based interventions offers significant potential for community mobilisation in just and sustainable transitions, but this raises a series of research questions.

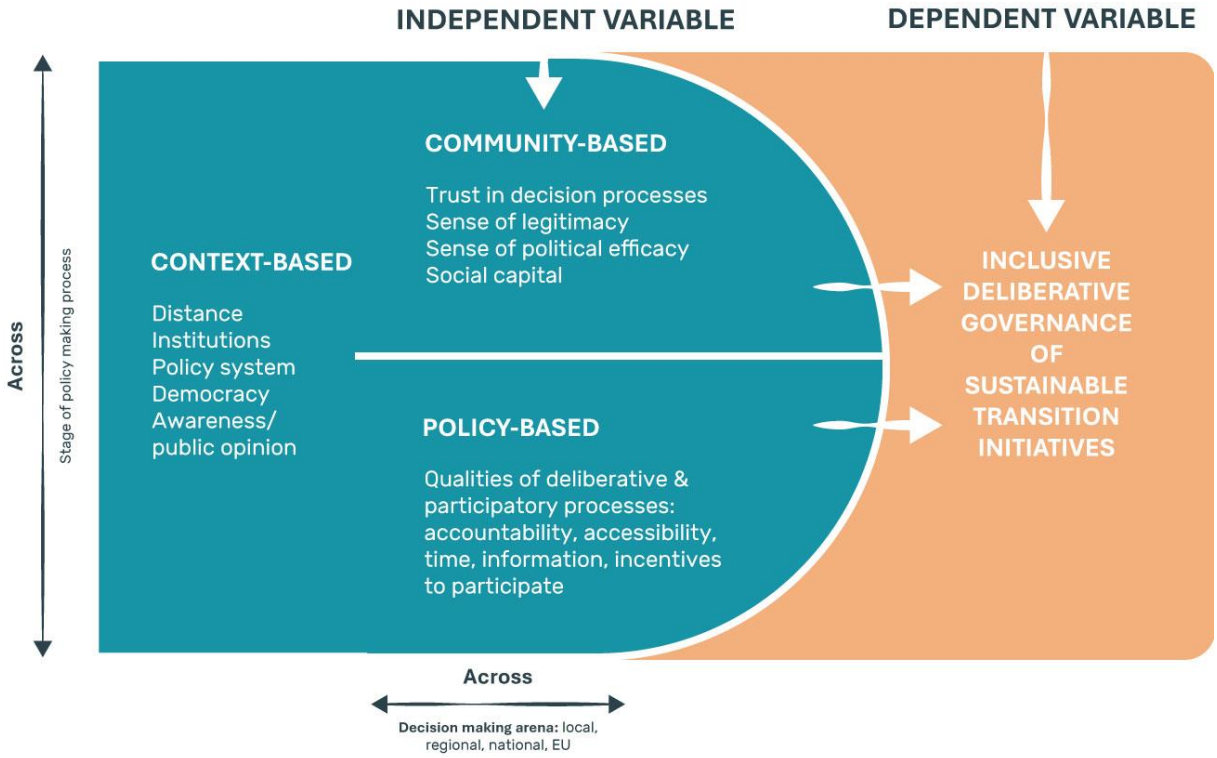
4.1.5. Expected results

(1) Categorisation of place-based sustainable transition measures according to structures, processes, and arenas for strengthening community mobilisation.
(2) Demonstration of factors inhibiting/facilitating voices of vulnerable/disengaged groups in place-based policymaking for sustainable transition.
(3) Identification of lessons on modes of engagement that provide opportunities for changes to inclusive community participation in transition.

Table 7 Categories / ranges / aspects in the analytical dimension of DUST research

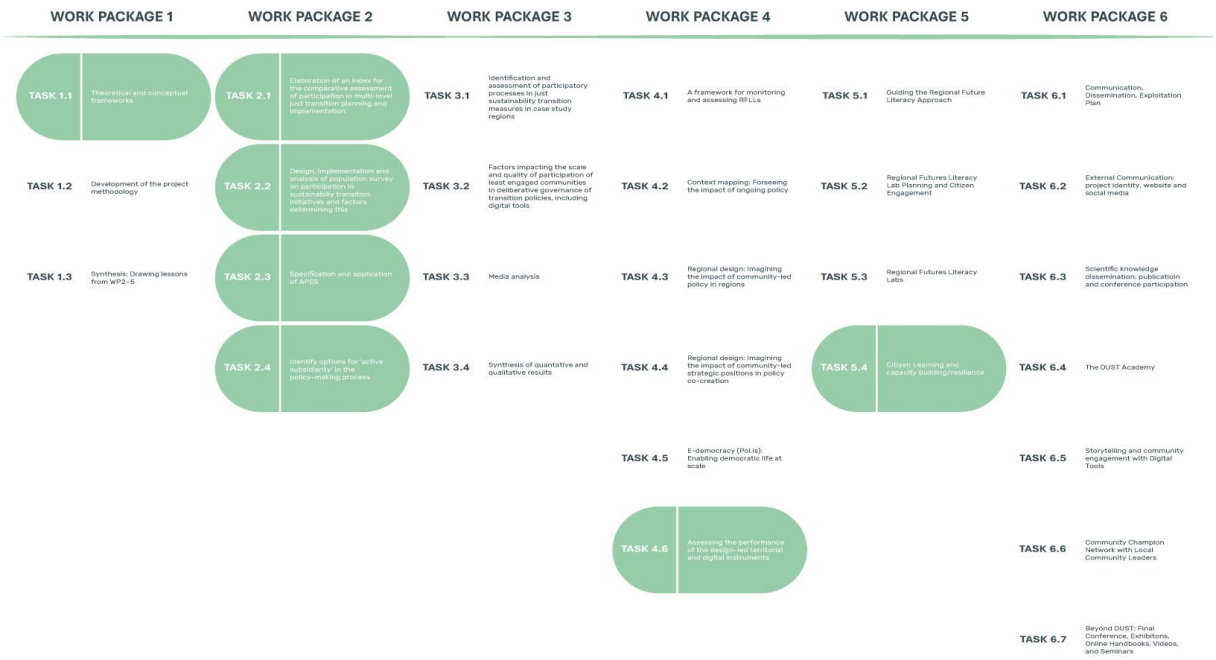
Concept	Categories / ranges / aspects of variables	Sources
Place-based approach	Explicit territorial focus; Multiple stakeholder involvement in governance, A range of integrated tools; Objectives that apply multiple dimensions to the territory concerned	McCann, 2013; Duranton, 2018; O'Brien, 2015
Classification of participatory instruments	Basic consultation and information exchange; Deliberative practices; Spontaneous or unconventional forms of participation; Digital instruments; Other (innovative) participatory practice	OECD, 2020; OECD, 2022;
Stages of policymaking	Issue identification/agenda setting stage; policy formulation; decision-making; implementation; monitoring and evaluation	OECD, 2022; Cairney, P., 2019;
Arenas of participation	National level (country), regional level (NUTS2/3 level depending on countries' administrative division), local level (municipal/city level), community level (groups within the city level) and at the level of the functional area (across administrative boundaries)	(Hooghe & Marks, 2003); Topaloglou, 2022
Depth of participation	One-way participation; two-way participation and partnership	Clarke, A. & Erfan, A. (2007).
Variables that facilitate or impede participation	Community, policy, and contextual variables	Lowndes et al., 2006 Ianniello et al., 2019

Figure 7 Conceptual framework in the analytical dimension of the DUST research



4.2. Evaluative dimension: assessing citizen participation in just sustainability transitions comprehensively

Figure 8 Tasks in WPs that relate to the evaluative dimension of the DUST research



4.2.1. Objectives

One objective of the DUST project is to develop a novel index to assess the degree of public participation in the process of planning and implementation of just transition policies at multiple territorial levels. The index aims at the improvement of the implementation of the Just Transition Fund (JTF), Cohesion policy programmes, and other EU, national and regional key sustainability transition policies in a bottom-up way and to enable comparative analysis of civil society engagement across different Member States.

The JTF is one of the pillars of the Just Transition Mechanism (JTM) implemented under Cohesion policy. Its main objective is to mitigate the adverse effects of climate change by supporting the most affected territories and communities. Member states are responsible for implementing multi-level governance mechanisms, involving regional, local, urban, and other public authorities in partnership with other type of stakeholders. In accordance with the EU regulation on the JTF, member states are required to prepare Territorial Just Transition Plans (TJTPs). These plans must include a list of investments that support the modernization and diversification of local economies to unlock their endogenous growth. The territorial focus of the TJTPs is aligned with the EC's recent emphasis on territorial governance, place-based policymaking, and 'active subsidiarity', which advocates a central role of regions, cities, and citizens in EU policy formulation and implementation (see Table 1)). The TJTPs should explicitly outline governance mechanisms, partnership arrangements, monitoring and evaluation measures, and the bodies who are responsible for these aspects of the plans. However, despite the requirement for inclusive participation of all stakeholders and the aspired empowerment of the most affected

local actors in the decision-making process, formal documents lack specific guidelines and specifications for assessing and monitoring participatory arrangements.

The DUST project aims to address this gap by combining established assessment frameworks and monitoring methods for citizen participation. Its goal is to provide viable tools for evaluating the performance of citizen participation in just transition policies. Drawing upon the objectives of the active subsidiarity principle, the evaluation tools developed by the project could assist local and regional authorities in gaining insights into their performance and facilitating comparisons with other territories when it comes to involving and empowering citizens to participate in the decision-making process. Moreover, they could be used to report partnership arrangements and practices applied during the process of TJTPs development and implementation.

4.2.2. Theories and concepts

The STEP index builds up upon two existing analytical frameworks for the assessment of engagement and participation, notably the TJTP Comparative Evaluation Framework (Trifonova et al., 2021), and the Actor-Process-Event Scheme (APES) method (Widmer et al., 2008). Conceptually, these instruments cover different aspects of the involvement in public policymaking.

4.2.2.1. TJTP Comparative Evaluation Framework

The TJTP Comparative Evaluation Framework consists of three primary pillars, which are defined by the principles of inclusiveness, decarbonisation ambition, and realised impact, as depicted in Figure 9. The three pillars encompass the key objectives and requirements that are outlined in the JTM Regulation, and reflect wider EU economic and climate policy goals. The framework is intended to be utilized by a neutral evaluator, such as a researcher or consultant, who seeks an objective comprehension of decisions pertaining to the level of stakeholder participation and its impact on TJTP performance.

For the DUST project, only the prior work conducted within the Stakeholder Engagement pillar is pertinent. The methodology which is the result of prior work, assesses the inclusivity and partnership mechanisms of the TJTP development process, in in line with EU's requirements for better regulations (European Commission, 2021a). As shown in Table 8, the TJTP Comparative Evaluation Framework encompasses six indicators for judging stakeholder engagement, which are organized into three groups.

Figure 9: Pillars and dimensions of the TJTP Comparative Evaluation Framework

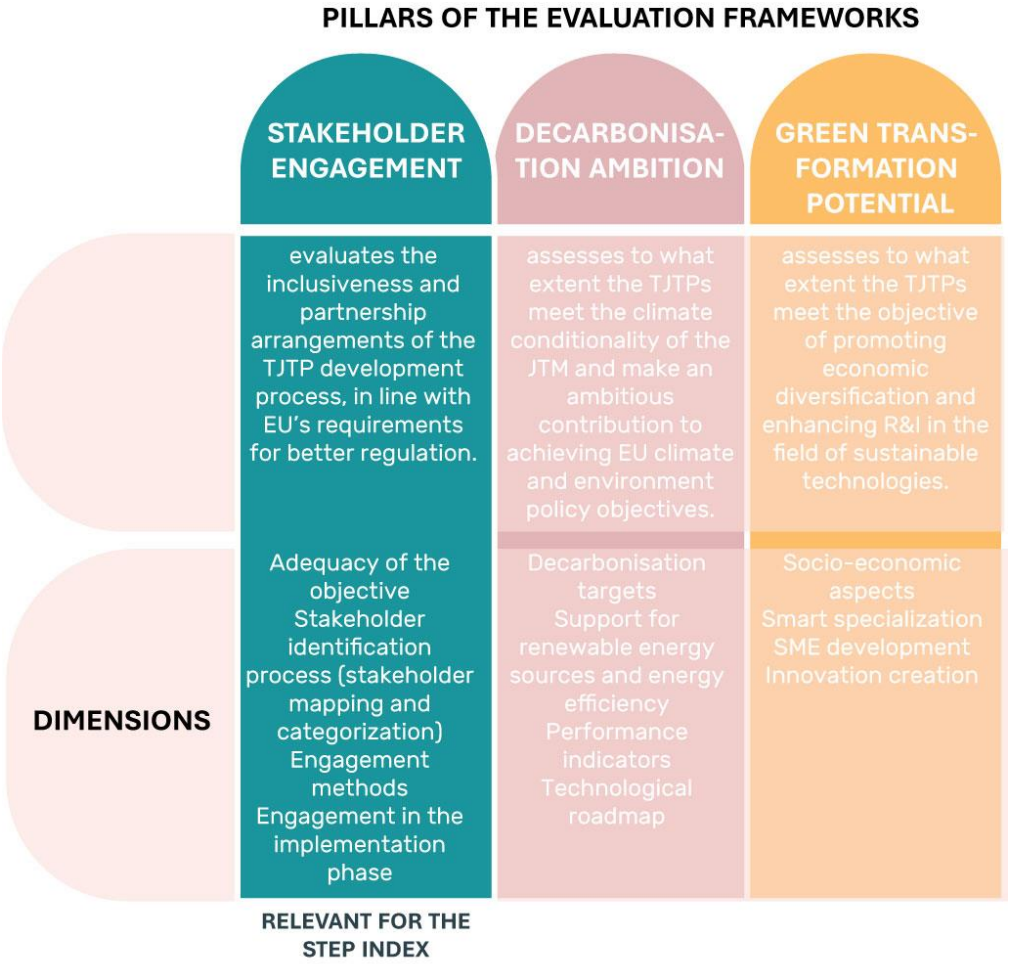


Table 8 Dimensions and Indicators in TJTP Comparative Evaluation Framework

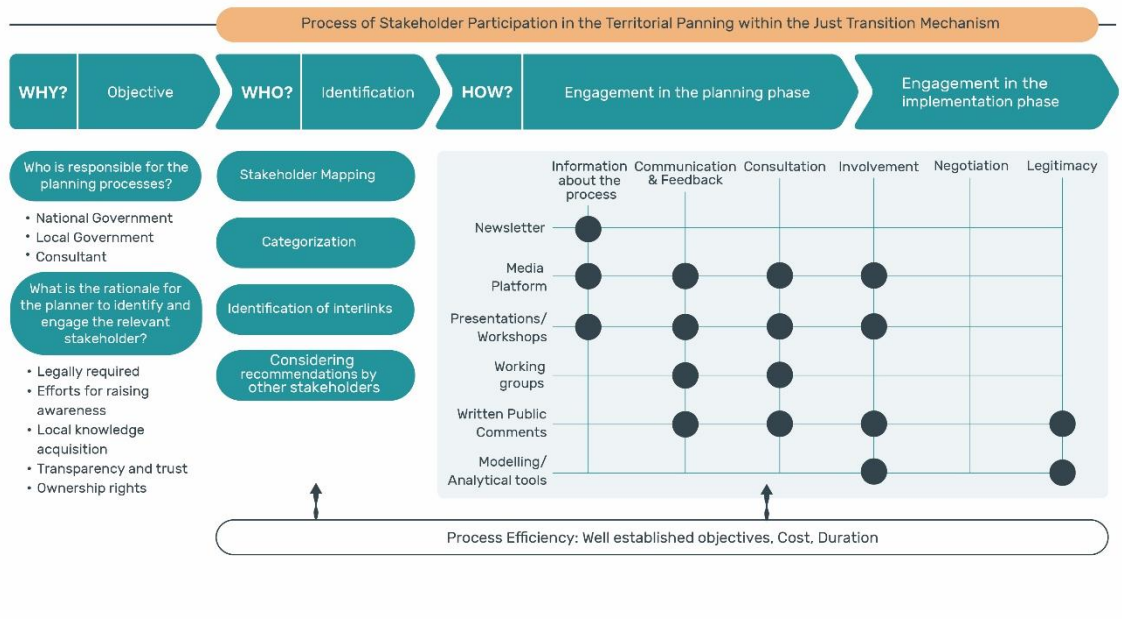
Dimension	Indicators
Objectives	I 1: Adequacy of the objective
Stakeholder Identification	I 2: Identification of inclusiveness I 3: Balance of stakeholder influence
Engagement methods in the planning phase Engagement methods in the implementation phase	I 4: Depth and proper timing of the engagement methods
	I 5: Comprehensiveness of the engagement strategy I 6: Potential depth of the engagement methods

The initial set of indicators draws upon prior research conducted by CSD on transitions away from coal in Central and Eastern European countries. This research involved extensive consultations and workshop discussions with experts from Czech Republic, Romania, Hungary, Greece, and Bulgaria, who observed closely and/or participated in the process of TJTPs preparations for the coal-dependent regions in these countries. In 2022, the applicability of these indicators was tested through a pilot study focused on the preparation process of the TJTPs of three coal-dependent regions in Bulgaria (Trifonova et al., 2022).

The six indicators measuring the adequacy of the objective, the inclusiveness and balance of stakeholder influence, and the depth and proper timing of the engagement method are based on the key theoretical aspects of participation, or the 'why, who, when and how to engage stakeholders' questions (Quick & Bryson, 2016). Stakeholder engagement is defined as set of actions aimed at stakeholder identification (who), in response to pre-defined objectives (why), and meaningful stakeholder participation in the decision-making and in a plan's implementation (how). Public participation in the development of the TJTPs is understood as a common framework for the process of communication, consultation, and contribution to the final version of the strategic documents and their subsequent implementation. Stakeholders are the citizens, businesses, informal groups, and organizations interested and affected by the proposed measures and projects. The overall logic of the TJTP Comparative Evaluation Framework is illustrated in Figure 10.

Stakeholder participation in the planning process is more than just a legal requirement for the approval of the strategic documents. It is also key for the success of the TJTPs, as it ensures knowledge-sharing, governance continuity, and the legitimacy of the process. Giving stakeholders access to the decision-making process helps those governing it to collect better information, ideas, and perspectives, to increase compliance and acceptability, and to reduce uninformed opposition. These elements are crucial for dealing with the complexity of the transition challenges, as well as for identifying and reaping all the potential benefits. Below the rationales behind the TJTP Comparative Evaluation Framework are elaborated in more depth.

Figure 10 The logics of the TJTP Comparative Evaluation Framework



Stakeholder objective

Clearly formulating and communicating the reasons and purpose of involving participants in the process is believed to have a significant impact on process efficiency (Morf et al., 2019). Innes and Booker (2004) identified seven purposes that serve as justifications for stakeholder participation, including:

- Identifying the preferences of the public;
- Incorporating local knowledge into decision-making processes;
- Advancing fairness and justice;
- Incorporating legitimacy into public decisions;
- Fostering the development of civil society;
- Creating an adaptive and self-organized system for problem-solving;
- Complying with legal requirements.

During expert consultations, the following rationales for stakeholder participation in the TJTP process have been highlighted: legal requirement, efforts for raising awareness, local knowledge acquisition, transparency and trust, and ownership rights.

Stakeholder identification

Stakeholder mapping and categorization: The dimension of stakeholder identification plays a crucial role in stakeholder engagement processes, aiming to determine which stakeholders are considered relevant and should be involved in decision-making. Identification involves understanding the **composition of stakeholder groups**, their **representation in different sectors or professional spheres,** and assessing their **level of influence.** Therefore, the stakeholder identification process involves stakeholder mapping and categorization. The stakeholder mapping leads to the identification of a wide range of actors from different economic sectors and professional categories. It involves mapping out individuals, organizations, and groups that may have an interest, expertise, or resources related to the issue at hand. Ideally, the stakeholder mapping in the context of TJTPs includes participants from all the following economic sectors and professional categories, while a more limited range of participants implies a less inclusive process:

- **Economic sectors:** incumbent sectors (carbon-intensive industries); green energy (pv, wind, bioenergy, geothermal); supporting low-carbon industries (batteries, building materials, recycling, etc.); and IT and digital technologies;
- **Professional categories:** academia; civil society/local communities; local government; regional government; SMEs; large enterprises; trade unions; and financial institutions.

Stakeholder identification includes examining the sectors or professional spheres that stakeholders represent. This helps in understanding the diverse perspectives, interests, and expertise brought by different stakeholder groups.

Next to stakeholder mapping, the dimension of stakeholder identification involves the analysis of the interlinks between different stakeholder groups. This step ensures insight into the balance of their level of influence. The analysis includes understanding the formal and informal authority, resources, expertise, networks, and capacity of stakeholders to influence the decision-making process and outcomes. Power dynamics among stakeholders may shape their involvement and the extent to which their inputs are considered. Ideally, a balanced identification process implies that no stakeholder group has a disproportionately high level of influence in the decision-making process, either by being overrepresented in terms of number of participants or by dominating communication channels.

Engagement over the planning and implementation phase

Methods, depth, and quality of engagement vary from simple provision of information and mainstream approaches such as public consultations, surveys, and focus groups to a truly collaborative decision-making process, such as foresight, co-creation, and voting. To analyse these variations, there are six levels of depth of stakeholder engagement included in the TJTP Comparative Evaluation Framework. 'Information about the process' represents the lowest level of depth, while 'legitimacy' is the highest level. With some modifications, the levels are based on the stakeholder engagement strategies that were developed by Quesada-Silva et al. (2019). These strategies consider degrees of decision-making power, and the types of interaction between decision-makers and planning authorities. The authors also reviewed complementary classifications in other studies. The levels of depth of stakeholder engagement included in the TJTP Comparative Evaluation Framework resemble a classification that is presented by the International Association for Public Participation (IAP) in their IAP2 Spectrum of Public Participation (IAP, 2018) and that is designed to define a suitable role of the public in any public participation process with regard to policy planning.

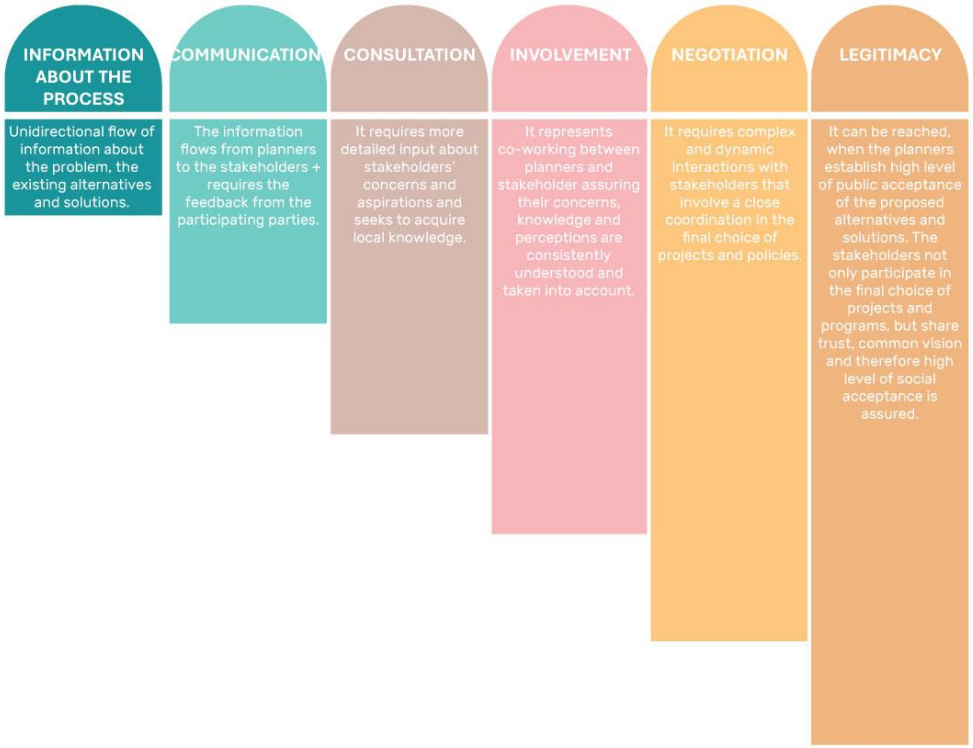
The levels of depth align with the typology of 'depth of engagement' presented in the analytical dimension (chapter 4.1.2.5). The primary distinction lies in the third level of the analytical dimension, specifically pertaining to partnership. This level provides a more comprehensive explanation, encompassing involvement, negotiation, and legitimacy, which represent long-term partnership agreements, co-creation, and shared decision-making.

Depth of stakeholder engagement methods and communication: The depth of stakeholder engagement methods depends on the specific communication tools and the frequency and adequacy of their usage. Regarding the communication tools applicable for each level of depth further guidance is provided below and in Figure 11, where higher levels of depth imply that the requirements of the lower levels have been met:

- **Information about the process:** The applicable communication tool could be a simple newsletter, non-interactive media platforms, one-directional presentation, or workshops (no feedback required from stakeholders);
- **Communication:** The applicable communication tools could include interactive media platforms and written public comments that require feedback from stakeholders;
- **Consultation:** The applicable communication tools could include interactive media platforms and workshops that require more detailed input about stakeholders' concerns and aspirations and seek to acquire local knowledge. More frequent/sophisticated use of the communication tools, implying multiple feedback iterations.
- **Involvement:** The applicable communication tools could include interactive media platforms, workshops, which are more frequently used compared to 'communication', together with additional collaborative techniques (e.g. interactive workshops) that require co-working between planners and stakeholders. The usage of these communication tools allows for better, more consistent understanding of stakeholders' concerns and deeper local knowledge acquisition.
- **Negotiation:** more frequent and sophisticated usage of collaborative techniques (e.g., interactive workshops, seminars, formal negotiation meetings with stakeholder representatives, etc.) that gives some decision-making power to stakeholders in the final choice of projects and policies.

- **Legitimacy:** the usage of analytical and modelling tools (e.g., foresight methodologies, voting procedures, publicly accessible data, and scenario builders, etc.) and seeks to ensure the acceptance of the proposed solutions by the majority of stakeholders.

Figure 11 Depth of stakeholder engagement and communication tools



Timing of stakeholder participation: The effectiveness of territorial planning is influenced by the timing of stakeholder participation during the process. While the analytical dimension of DUST project distinguishes between various stages, including identification/agenda setting, policy formulation, decision-making, implementation, and monitoring, in practice, it can be challenging to clearly differentiate between these stages as they tend to be more fluid and can vary across different territories. To address this, the evaluative dimension combines the initial stages into policy planning, followed by policy implementation and monitoring.

New variables in the STEP index

Under the framework of DUST project, additional variables, such as the intensity of participation/ frequency and the comprehensiveness of engagement strategies, have been added to broaden the scope of the indicators. Another novelty lies in the operationalisation of indicators, which will allow a quantitative assessment and comparison of the findings across studied regions. The STEP index will offer a broad perspective on participation in sustainability transitions policies, not having a specific focus on the LEC. That said, it will allow for identifying which communities are engaged effectively and which in a shallow or insufficient way, which will in turn indicate towards which groups the efforts to improve participation should be directed.

4.2.2.2. Actor-Process-Event Scheme

The intensity of partnership agreements and comprehensiveness of public participation will be measured using (Assessment of Public Engagement in Sustainability) Actor-Process-Event Scheme (APES) method. The APES method focuses on two dimensions: the actor dimension and the events dimension. Both are displayed on a time axis. Actors can be mapped on multiple

levels and aggregated into groups (e.g., all stakeholder groups, including public administration). On the time axis, events can be aggregated into phases (e.g., planning and implementation phases of the participation of actors). The specification of APES consists in defining all actor groups (including the groups representing the LEC), actors, phases and, in particular, the events beforehand in a catalogue. The APES tool produces analytical output for the process of event participation and helps to visualise process data and to automatically generate a corresponding actor network diagram. The software thus enables to capture both the process dynamics and the structure of the network involved. It transforms two-mode network data to a one-mode network. The network metrics such as density and centrality inform us how well actors or whole actor groups are integrated into just transition policies. The APES tool will be fine-tuned to address the specific needs of the DUST research.

The insights on the participation networks - with metrics for the respective phases as well as actor groups of the selected multi-level policy processes - will be used as indicators within the STEP index.

4.2.3. Research questions

This research aims to find out about to what extent stakeholder participation has been secured in the process of planning and implementation of just transition policies at multiple governance levels. By addressing the question of 'how and to what extent stakeholder participation has been secured,' the study seeks to identify key indicators and metrics that can be used to measure the effectiveness and inclusiveness of stakeholder engagement processes. The research will analyse various territorial levels, examining the mechanisms and approaches employed to ensure meaningful participation. Additionally, the study will consider the challenges and opportunities associated with stakeholder involvement, with the ultimate goal of developing a comprehensive index that can guide policymakers and practitioners in assessing and improving stakeholder participation in just transition policy planning and implementation.

4.2.4. Assumptions

To ensure the replicability of the STEP index application and its usability in future periods, the DUST team has devised an approach that relies on objective data obtained through expert assessments and desk research. This data will be derived from various sources such as policy documents, reporting acts, meeting notes, check-lists, etc. Conducting continuous stakeholder opinion surveys is not considered feasible due to the significant resource requirements. However, qualitative data provided by the APES tool will be utilized to inform the indicators related to the composition of stakeholder groups and the intensity of participation. If the APES tool cannot capture all stakeholder participation events and actor characteristics due to data unavailability in specific regions, alternative indicators will be formulated as a backup solution.

The following systematic approach to develop the STEP index as comprehensive and robust measurement tool is planned:

(1) Defining purpose and scope of the STEP index (see 4.2.1. and below in 4.2.5.);
(2) Identify Key Variables and Indicators (initial set of variables and clarification questions outlining possible indicators are presented in Table 9);
(3) Determine the source of data and initial scanning of possible evidence source;
(4) Stakeholder workshop to test applicability of the indicators and to discuss weights;
(5) Final confirmation of the indicators;

(6) Assign appropriate weights to each indicator based on their relative importance;
(7) Validation and calibration- only if comparable results with external benchmarks or existing measures are available;
(8) Ensuring usability as Excel tool;
(9) Developing guidelines for interpretation and communication of the results as well as for continuous improvement.

4.2.5. Expected results

The expected result of analysis in the evaluative dimension of the DUST research is the Stakeholder Engagement and Participation (STEP) Index, a tool for measuring involvement in just sustainability transition policies from a comparative perspective. Beyond this practical result, the research is expected to have wider input. The STEP index brings measuring and comparing the depth and intensity of public participation in transitions planning, and implementation to a new level. It provides a framework for assessing if specific societal groups face barriers for participation in policymaking for just transitions at different levels of government and identifying factors that create those barriers. The index produces insight into the factors influencing participation during the project, identifying opportunities and obstacles for active subsidiarity in transition policy processes and feeds into the science-policy-citizen dialogue in the case study regions. After the project, the STEP index can benchmark different regions in their success in including LEC in place-based participatory processes. The index enables local regional and national governmental bodies and EU institutions to evaluate their policies in terms of participation performance assisting them in their obligation to report partnership arrangements and practices applied during the process of territorial just transition planning and implementation. In this way, the accountability, transparency, effectiveness, and trustworthiness of participatory processes can be assessed while increasing the citizens' trust in democratic institutions and policies. An online methodological handbook for the use of the index will be elaborated and integrated into the DUST Academy activities to secure this impact beyond the project duration.

The following variables are proposed to be measured through the index. They related to the dimensions of the Comparative Evaluation Framework and integrate the data on composition of stakeholder groups as well as the intensity of participation which is obtained through the APES tool:

Table 9 Initial set of variables and indicators in the STEP Index

Dimension	Variable	Clarification
Objectives of stakeholder participation	Clear allocation of roles and responsibilities	Are the roles and responsibilities of the planners (agents responsible for the planning process) clearly defined and communicated?
	Governance responsibility in front of the local community	What is the level of accountability and responsibility on the part of the governing bodies towards the local community?
	Purpose of the stakeholder participation	Is the purpose explicitly defined?

	Adequacy of the objective	How does the explicitly defined purpose of the stakeholder engagement process align with the desired outcomes of the planning process? Are objectives meaningful and relevant to the stakeholders involved?
Inclusiveness (Composition of the stakeholder groups)	Representation of different economic sectors	What measures have been taken to ensure the representation of both incumbent and alternative economic sectors?
	Balance between different professional categories	What measures have been taken to ensure the representation of professional categories such as academia; civil society/ local communities; local government; regional government; SMEs; large enterprises; trade unions; financial institutions?
	Inclusion of vulnerable groups	Are vulnerable groups explicitly defined? Are inclusive and accessible communication channels for vulnerable groups available, so that they can express their views and participate? Existence of targeted outreach and engagement efforts specifically designed to include vulnerable groups? Proportion of vulnerable groups represented in decision-making bodies, committees, or advisory groups or any other participation arenas?
	Balance between different age groups	What is the proportion of participants in citizen participation processes from each age group? What is the level of representation of a broad range of issues and concerns relevant to different age groups (inclusion of age-specific recommendations or policies in the outcomes of citizen participation initiatives)?
	Balance of stakeholder influence measured as frequency of the participation	Consideration of stakeholder input by specific groups in shaping policy outcomes or project implementation.
	Depth of used engagement method	The depth of stakeholder engagement methods depends

Engagement methods in the planning process	Usage frequency	on the specific communication tools and the frequency and adequacy of their usage. Which types of methods have been used and with what intensity?
	Proper timing of the engagement methods and adequacy	At which stage of the stakeholder engagement process which methods have been applied?
Engagement methods in the implementation phase	Comprehensiveness of the engagement strategy	Is the engagement strategy in the implementation phase explicitly defined?
	Depth of the engagement methods	Which types of methods have been used and with what intensity?

Box 4 Objectives and requirements of the JTF

The Just Transition Fund (JTF) is one of the pillars of the Just Transition Mechanism (JTM) implemented under Cohesion policy. Its main objective is to mitigate the adverse effects of the climate transition by supporting the most affected territories and workers. The fund promotes a balanced socio-economic transition. The EU Regulation 2021/1056, which establishes the fund, emphasizes:

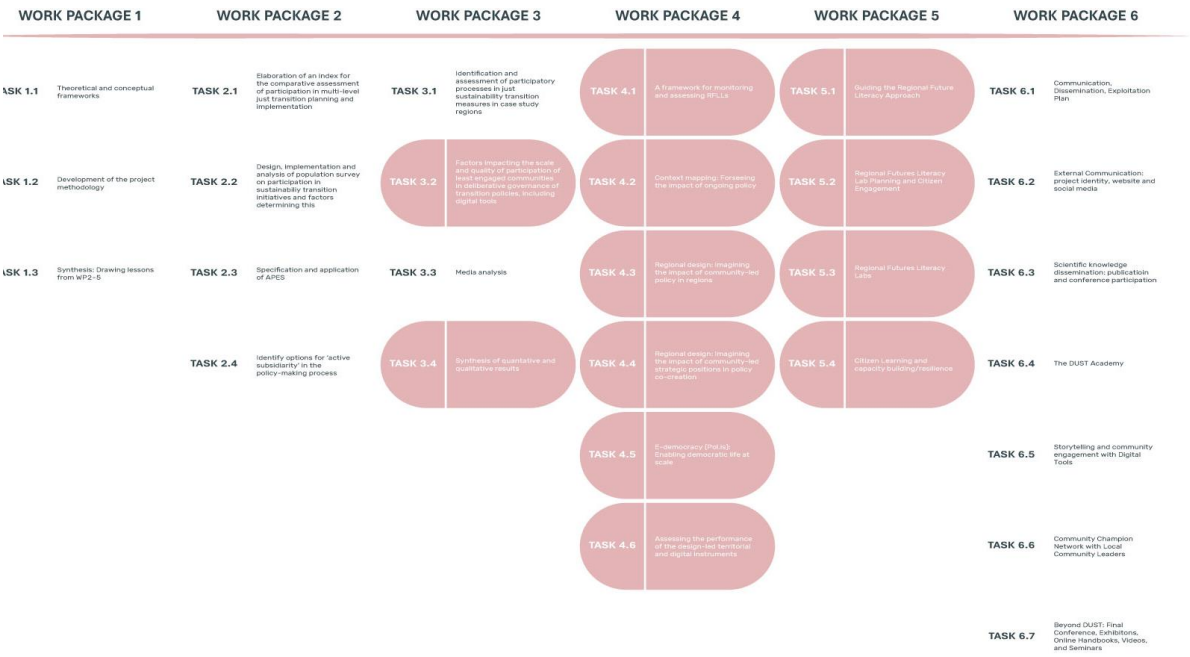
- Inclusiveness of the transition process;
- Place-based policy-making recognizing and mobilizing territorial natural and human capital, while considering the specificity of a given place;
- Multi-level governance mechanisms, involving regional and national authorities in the decision-making on a comprehensive package of transformation measures;
- Social dialogue and cooperation with the relevant stakeholders;
- Monitoring and evaluation measures.

According to Regulation (EU) 2021/1060, which lays down common provisions and financing conditions for various funds including the JTF, member states are responsible for implementing multi-level governance mechanisms involving regional, local, urban, and other public authorities. These mechanisms should be developed in partnership with other stakeholders such as social partners and environmental NGOs. The regulation emphasizes an endogenous approach to sustainable transformation, focusing on harnessing local actors' knowledge, creativity, and innovation.

In accordance with the EU regulation on the JTF, member states are required to prepare Territorial Just Transition Plans (TJTPs) in collaboration with relevant local and regional authorities of the most negatively affected territories. These plans include a list of investments that support the modernization and diversification of local economies to unlock their endogenous growth. The territorial focus of the TJTPs is aligned with the Commission's recent emphasis on territorial governance and place-based policymaking, such as the development of regional smart specialization strategies. The TJTPs are also meant to apply the concept of 'active subsidiarity,' which advocates a central role of regions and cities in EU policy formulation and implementation. The TJTPs should explicitly outline governance mechanisms, partnership arrangements, monitoring and evaluation measures, and the responsible bodies.

4.3. Instrumental dimension: enhancing participation of the least-engaged communities in place-based approaches and democratic life at scale

Figure 12 Tasks in WPs that relate to the instrumental dimension of the DUST research



4.3.1. Objectives

In its instrumental dimension, the DUST research will examine the instruments, mechanisms, and processes that enhance the participation of the LEC in the deliberative governance of place-based approaches to just sustainability transitions, as well as citizens' attitudes towards them (WP3). The DUST experiments, titled 'Regional Futures Literacy Labs' (RFFL), will test the potential of a hybrid format that combines design-led territorial and digital instruments for this purpose (WP4&5). Overall, research in DUST's instrumental dimension aims at a more sophisticated understanding of how LECs' ability to anticipate and envision regional structural change can be increased, how their building of capacity can be supported through consensus formation in a pluralistic and inclusive decision environment, and how the communities can position themselves more proactively, strategically, and forcefully in multi-level policymaking processes and democratic life at scale. Proactive participation implies the intentional participation of communities during early moments of policymaking cycles. Strategic participation emphasises increased civic society organisation and deliberative capacity-building across regions, as well as communities' ability to articulate interests and concerns in ways that can influence political outcomes, actively enhance subsidiarity, and build regional adaptive capacity and resilience.

4.3.2. Theories and concepts

4.3.2.1. Instruments for reflexivity and learning in place-based policies

Instruments, mechanisms, and processes that are analysed and tested in the DUST project aim at deliberation in the multi-level governance setting of place-based approaches. A series of theories and concepts underpin a need for reflexive feedback in policy argumentation and learning from comparison in this context. As noted in Chapter 2, deliberation has at its root the idea of weighing alternatives for the purpose of consent formation in pluralistic decision-making environments (Mansbridge, 2015). The theory of experimentalist governance – central to place-based approaches – emphasises a need for a reflexive consideration of policy options at levels of government and local discretion in processes of rule-building (Wolfe, 2018). Morgan (2018), referring to (Sabel & Zeitlin, 2012, p. 169), defines this form of governance as "a recursive process of provisional goal setting based on learning from the comparison of alternative approaches to advancing them in different contexts". The author stresses that experimentalist governance - also called democratic experimentalism - requires decision-making processes that are open, verifiable, experimental, and inclusive (Morgan, 2018).

The DUST case study research examines deliberative mechanisms in place-based policy approaches on the inclusiveness and representativeness of citizen participation, and on how policy options are considered at different levels of government and during various stages of the policymaking cycle. The DUST experiments will test design-led territorial instruments. These instruments draw on precedent for reflexive and iterative learning processes in the fields of the future studies, spatial design, and spatial planning. Foresight methodology emphasises time in processes of reflection. The methodology involves gathering future intelligence and mobilizing joint action through a systematic, participatory vision-building process. Insights generated through the description and production of differences between envisioned futures and current situations are used to construct meaning during an interpreted feedback process (Fuller & Loogma, 2009). Spatial design concerns the imagination of possible, plausible, and desirable spatial change for the purpose of improved decisions in the realms of architecture, urbanism, and spatial planning. Spatial design theory emphasizes an explorative, conjecture-and-refutation logic (reflexivity) in the production of argument for change (Schön, 1983). Schön (1988) compares design processes to legal rule-building procedures in that rules are derived from reflecting on the performances of types of solutions in types of environments. Local discretion involves improving rules through judging their implications for specific situations. Regional design is perceived as a discretionary spatial planning practice that uses spatial design to proactively test the impact of generally applicable policies at high levels of government on particular local places (Balz, 2019, 2021). The practice is used in the Netherlands and other countries to investigate the multi-scalar impact of spatial planning at levels and motivate likewise the centralisation and de-centralisation of territorial governance (Lingua & Balz, 2020).

4.3.2.2. Instruments that expose local knowledge, stimulate plurality in the constitution of knowledge and knowledge-co production

The importance of local knowledge, plurality in the constitution of knowledge, and knowledge co-production in place-based approaches to just sustainability transitions is discussed in Chapter 2. The concept of 'citizen science' underpins this importance as it emphasizes scientific

work that involves members of the public in various stages of the scientific process, including data collection, analysis, interpretation, and contribution of local knowledge (DG Research and Innovation & Warin, 2020; Irwin, 1995). Kleinhans et al. (2022) note that there is a multitude of concepts seeking to capture active citizen participation in the production of public services and policymaking, and that concepts in conjunction reflect "consolidated shifts towards a more communicative and collaborative approach" to policymaking (idem, p.771). A shared theoretical foundation of concepts supporting communication and collaboration in decision-making is in 'social constructionism', which "(...) asserts that meaning and understandings emerge from the interactions between people, i.e., neither objectively nor subjectively, but inter-subjectively" (Fuller & Loogma, 2009, p. 3). In this way the theory challenges the idea that there is a single, objective truth that can be discovered through isolated empirical observation, and instead emphasizes the constitution of knowledge in social networks. From an epistemological perspective, this means that traditional views of knowledge acquisition and validity need to be re-evaluated considering the social context, cultural influences, and subjective experiences that shape our understanding of the world (Fedyk & Xu, 2018; Phillips, 1978).

The DUST case study research examines processes of knowledge co-production in place-based approaches. The DUST experiments draw on precedents in the co-production of local knowledge. 'Science-policy-society interfaces' are social processes that allow for the exchange and co-construction of knowledge between scientists and other actors in the policy process with the aim of enriching decision-making (van den Hove, 2007). The approach of 'participatory foresight' breaks away from practices that depend on technical experts and instead encourages citizens to shape decisions about their future (UNDP Global Centre for Public Service Excellence, 2018). According to experts on the approach, foresight should not be limited to forecasting based on past data and current feasibility, but should, drawing on different stakeholders' perspectives and aspirations, consider a broad range of possible futures. Foresight should recognize that in uncertain and complex environments – such as in sustainability transitions - relevant knowledge is dispersed and depends on the participation of diverse cognitive perspectives. By involving non-traditional actors, participatory foresight expands the democratic basis and legitimacy of knowledge production and policymaking (UNDP Global Centre for Public Service Excellence, 2018).

4.3.2.3. Instruments that support an account of (new) geographies

As noted in Chapter 2, the main principle underlying place-based policy intervention is that all territories have development potential. Participatory instruments that are analysed in the DUST case study research support an account of this potential in deliberation and policy argumentation. Instruments that are tested in the DUST experiments draw on theoretical notions and concepts that detail potential and, in this way, allow for a more accurate description of how place-based policy objectives relate to communities' hopes and expectations concerning the development of their places and identities. The concept of 'territorial capital,' for an instance, considers a variety of aspects beyond the usual-suspect descriptions of potential for economic development. It includes environmental indicators such as climate and natural resources, as well as social indicators, such as traditions and quality of life. Because of the concept's comprehensive perspective on development potential, it is suited to frame a multi-dimensional and inclusive discussion of policy options in place-based policy approaches (Orsi et al., 2022). It is important to note that a more detailed and systematic account of development potential in regions will be developed as part of the experiments and in collaboration with stakeholders in these.

Analysis and experiments also draw on theoretical notions that explain how an account of development potential interacts with territorial governance and citizen participation. Place-based approaches link development potential to governance via comparing the geographical location of potential to the territorial boundaries of jurisdictions, administrations, and/or 'soft planning' schemes (Havlík, 2023; Purkarthofer, 2018). Scholars in multi-level governance note that concepts that envision a match between the location of potential and the boundaries of governing (for example the concept of 'functional regions') are usually oriented at the economic efficiency and effectiveness of governance (Hooghe & Marks, 2016). Particularly when perceiving citizen participation as an integral part of governance, however, a desirable spatial scope of local governance should not only consider economic (and technical environmental) aspirations but also sociality and community. Hooghe & Mark (2016), for an instance, emphasise interdependencies between 'territorial proximity' and communities' capacity for collective action. The post-functionalist theory of multilevel governance maintains "that governance arrangements at the subnational level need to be understood as the interplay of functional logic and social identity rather than via functionalism alone" (Morgan, 2018, p. 42). Hajer (2003), when studying interrelations between regional governance and spatial planning, introduces the concept of 'territorial synchrony' to describe a desirable match between autonomous spatial development processes and the scales and scopes of territorial governing. The author notes that such synchrony requires not just effective and efficient politico-administrative structures but also institutions that hold a deeper knowledge and cultural understanding of regions. Davoudi et al. (2018, p. 101) notes that spatial imaginaries are "tacit, taken-for-granted understandings of spatiality that give sense to, enable and legitimate collective spatial practices".

4.3.2.4. The role of imagination, anticipation, and futures literacy in policy co-creation

Instruments, mechanisms, and processes that are tested in the DUST experiment use imagination, anticipation, and futures literacy to build capacity for change. There are several theories underpinning the importance of these abilities and skills in participation. As noted in Chapter 2, sustainability transitions rely on an increased resilience and adaptive capacity of communities. This capacity depends on communities' ability to maintain a positive attitude towards the transformation of their places in the face of change and uncertainty and their ability to "anticipate threats, reduce the impact of these threats by taking pre-emptive action, (and) respond appropriately when these threats materialize (...)" (Dabson et al., 2012, p. 6). Miller (2018b) argues for the importance of 'futures literacy', which is "(...) the skill that allows people to better understand the role of the future in what they see and do. Being futures literate empowers the imagination, ability to prepare, recover and invent as changes occur" (UNESCO, 2021).

A series of participatory approaches in the fields of the future studies, spatial design, and spatial planning recognize that the role of imagination and anticipation in policy co-creation is significant and identify aspects that characterise related instruments and their intended results. As noted above, foresight methodology is a systematic, participatory, future-intelligence-gathering, and medium-to-long-term vision-building process. It involves the anticipation of alternative future scenarios to enable present-day decisions, mobilize joint action, and reflect on new values. Regional design is a type of foresight methodology that emphasizes the concepts of space, place, and territory as culturally produced social constructions. It shares a series of conceptual foundations as well as aspirations with foresight methodology. As foresight is perceived in the realm of public policy, regional design has: (1) an interest in futures; (2) a central concern about

representation; (3) a reliance on simulation and imagination of alternative futures as a way to produce argument; and (4) the recognition that communication and interaction are central to the production of agency around arguments (Lingua & Balz, 2020; Neuman & Zonneveld, 2021).

Central to the DUST experiments is the hypothesis that the agency which is triggered by anticipation and imagination needs to be rooted not in pre-conceived ideas behind policymaking but communities' own hopes and expectations. The UNESCO Futures Literacy Lab (FLL) format enables people's skill to imagine future development and intentionally act rather than react based on anticipation (Miller, 2018b). The format builds on a process that activates 'collective intelligence for knowledge creation' (CICK). The CICK design process is oriented at overcoming 'poverty of the imagination' and providing a sustainable source of hope for a 'better life' in the future, while also building social capital by enhancing the local participants' professional networks. The process encompasses four dimensions, notably (1) properly co-designed CICK have a diversity in the representation of stakeholders; (2) CICK are designed in a way that is inspiring the participants to apply their creativity identifying new alternative, inclusive and green pathways for the region they live in; (3) CICK processes have the virtue of integrating existing procedures and build upon local momentum to create change; and (4) CICK is purpose driven by bringing in the topics people are occupied with locally (Miller, 2018b).

4.3.2.5. A hybrid format of digital and analogous tools for deliberation at scale

Instruments thar are analysed and tested in the DUST project include digital participatory tools. DUST acknowledges the advantages and major barriers to the success of these tools, understood as the use of ICT tools for online information sharing, consultation or co-decision-making between governments at all levels and citizens (for further definitions and discussion on digital tools, see Box 5). In this context, it is now widely acknowledged that digital democracy thrives on a combination of instruments and processes that combine digital tools with interaction and deliberation in non-digital settings. Both, the DUST case study research, and the DUST experiments will pay attention to these complementarities.

The DUST experiments respond to e-democracy through testing a novel hybrid format of online and off-line citizen participation and deliberation. The format combines an already successful precedent in the realm of e-democracy – the widely adopted open-source consensus-oriented deliberative decision-making software Pol.is – with instruments for proactive and strategic involvement of communities in the co-creation of place-based policies for just sustainability transitions. Particular innovative elements are in (1) the combination of the tool with instruments that emphasise anticipation, imagination, and artistic expressions of concerns; (2) the strategic targeting of pertinent policy issues by digital deliberations; and (3) the close association of tools with civic society organisations that are active in regions and pursue close ties to communities that are to be digitally engaged. Innovation in the realm of e-democracy is also expected to emerge from the analysis of digital and non-digital participatory mechanism and processes as well as citizens' attitudes towards these processes.

4.3.3. Research questions

DUST focuses on the participation of LEC in the deliberative governance of place-based approaches to just sustainability transitions. Within this context, it raises a series of questions concerning both, digital and non-digital instruments:

(1) Classification of instruments in the deliberative governance of place-based approaches to just sustainability transitions: What are instruments related to place-based approaches to just sustainability transitions? How can these instruments be classified by participatory mechanism and processes, and the arenas and means available for deliberative citizen participation in their design and delivery?
(2) The role of digital tools and instruments in participatory strategies: How do digital tools and instruments influence the extent and quality of participation (by LEC in deliberation over sustainability transition initiatives)?
(3) Attitudes and barriers to digital participation: What are citizens' attitudes towards digital participation? What are barriers to digital participation (of in particular LEC) in (place-based) policy approaches to sustainability transitions and how can these barriers be overcome?
(4) Matching digital and non-digital participatory mechanism and processes: What are complementarities between digital and analogue forms of participation and how do they vary across different (representative / deliberative) participatory mechanism and processes? How can these complementarities be enhanced to increase the strategic positioning of communities' interests in multi-level policymaking? How can these complementarities be enhanced to increase democratic life at scale?
(5) Instruments for active subsidiarity: What are instruments to support active subsidiarity in multi-level place-based approaches to sustainability transitions? How can the performances of these instruments be increased?
(6) Design-led territorial instruments in the DUST experiments: Instruments in the DUST experiments place emphasis on: (1) proactive participation enabled via anticipation, imagination, and foresight; (2) strategic participation of the LEC in multi-level policymaking, and (3) the upscaling of participation from the local to the regional level. Questions in this context are: What are the performances of design-led territorial instruments in in the deliberative governance of place-based approaches to just sustainability transitions? How can performances (proactive, and strategic participation at scale) be enhanced?

4.3.4. Assumptions

Investigations in the instrumental dimension of the DUST research concern instruments that support the proactive and strategic participation of LEC in the deliberative governance of place-based approaches to sustainability transitions and in democratic life at scale. Analyses and experimentations draw on the following assumptions:

- Reflexivity/the allowance for interpreted feedback and local discretion increase the quality of decisions in multi-level place-based policymaking;
- Place-based approaches thrive on local knowledge, plurality in the constitution of knowledge, and knowledge-co production;
- An account of development potential enhances the strategic participation in place-based policy approaches;

- Anticipation and futures literacy empower communities to proactively participate in place-based policy approaches;
- Hybrid formats of digital and analogous forms of participation increase communities' participation in deliberative democracy at scale.

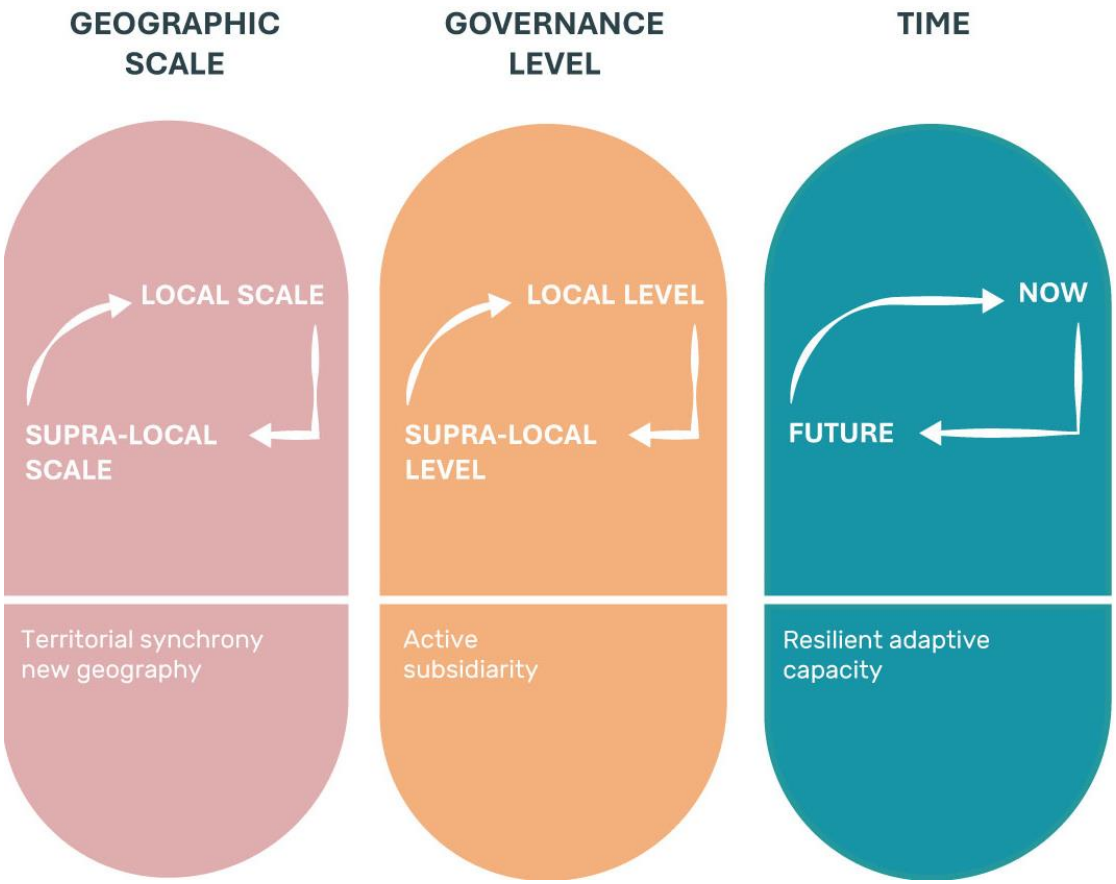
4.3.5. Expected results

Key output in the instrumental dimension of the DUST research is a new hybrid format, called Regional Futures Literacy Labs (RFLL), for citizen participation in the deliberative governance of place-based approaches to just sustainability transitions. The format combines design-led territorial instruments and successful precedent in e-democracy. It emphasises proactive and strategic participation of LEC in place-based just sustainability transition measures and in democratic life at scale.

Table 10 Initial set of aspects of design-led territorial and digital instruments

Concept	Aspects of instruments	(Sources)
Design-led territorial tools	Support reflexivity and local discretion in place-based approaches and MLG;	(Balz, 2019; Fuller & Loogma, 2009; UNDP Global Centre for Public Service Excellence, 2018)
	Support local knowledge, stimulate plurality in the constitution of knowledge and processes of knowledge-co production;	(van den Hove, 2007)
	Support imagination, anticipation, and futures literacy;	(Miller, 2018b)
	Support new geographies and new forms of territorial governance that matches these;	(Lingua & Balz, 2020)
	(Support communication and narrative construction; see also Chapter 4.4 Communicative dimension: enabling affective two-way communication);	(Van Dijk, 2011)
Participatory digital tools	Support deliberation;	(Deseriis, 2023)
	Support democratic life at scale;	
	Consider complementarity between digital and non-digital instruments.	(Falco & Kleinhans, 2018; Kleinhans et al., 2022)

Figure 13 Aspects of reflexivity in design-led territorial tools



Box 5 E-democracy and participatory digital tools

Aspects: E-democracy refers to the use of electronic communication technologies, such as the internet and social media, to facilitate democratic processes and engagement. Participatory digital tools can in this context support decisions by mediating large scale collaboration among various stakeholders, through the exchange of data, endorsement, and opinion (OECD, 2020; Simon et al., 2017). Aspects that determine participatory digital tools refer to (1) data collection (concerning the ways data is collected, who collects it, and who is represented or not); (2) co-creation (concerning ways communities are incentivised to develop solutions together); (3) real-time information processing and analysis (concerning issues of computation, accountability, bias and representation); and (4) interaction (concerning accountability and transparency).

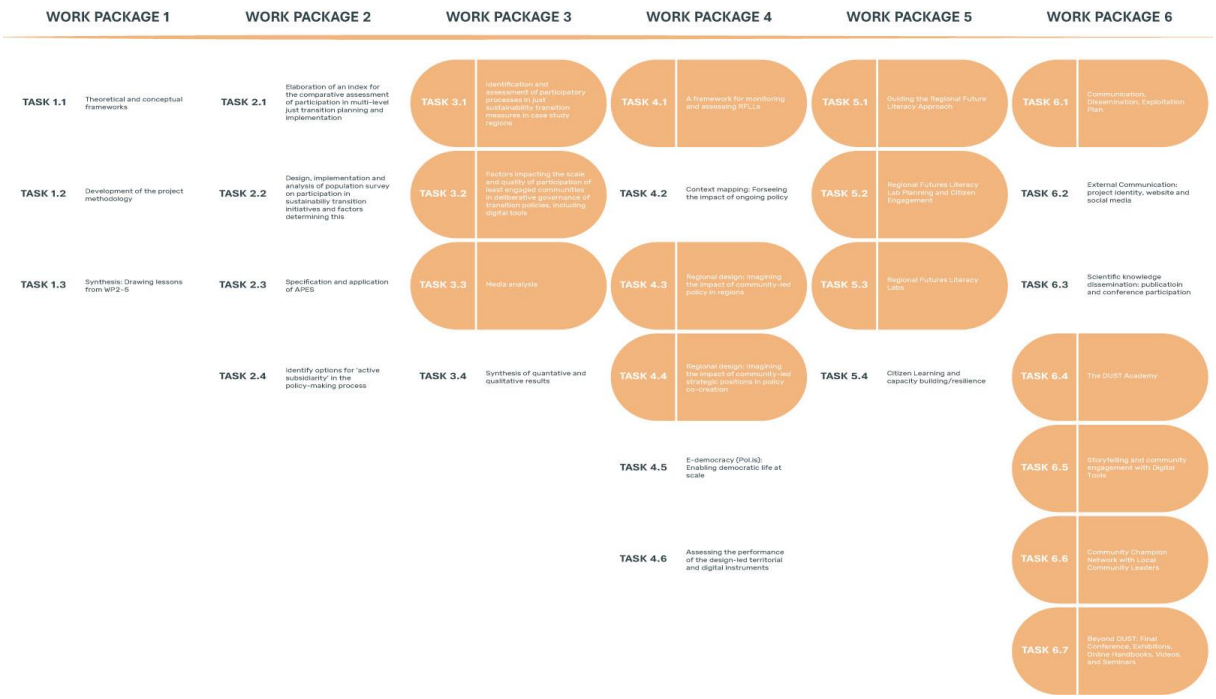
Benefits: The use of electronic communication technologies in participatory processes assumes that these technologies contribute to overcoming barriers to participation in democratic decision-making, including distance, time constraints and monetary advantage for seeking mobility. Technologies can provide opportunities for citizens to engage with governance through sharing their views and feedback on policymaking and other public affairs. Moreover, e-democracy can improve transparency and accountability in decision-making processes by making information more accessible and by providing a platform for public scrutiny and feedback. It can also facilitate collaboration and dialogue between citizens and government officials, allowing for more inclusive and informed decision-making processes (Axinte, 2022; McCall & Dunn, 2012; Ramirez Aranda & Vezzoni, 2022). OECD (2020) argues that these technologies can be 'e-enabling' (supporting those who would not typically access the internet and take advantage of the large amount of information available); 'e-engaging' (consulting a wider audience to enable deeper contributions and support deliberative debate on policy issues); and 'e-empowering' (supporting active participation and facilitating bottom-up ideas to influence the political agenda).

Barriers and challenges: According to Simon et al. (2017), e-democracy tools face various barriers to success, including the unwillingness of traditional institutions of democracy to adopt new digital methods, an over-reliance on technology, a neglect of the demands of specific policy argumentations and debates, and a failure to fit uses to prevalent organizational models and the real institutional spaces within which communities act. Kleinhans et al. (2022), who have examined conditions for the use of digital participatory platforms (DPPs), note that these platforms emerge as 'ecologies of co-production', and through significant experimentation and learning-by-doing processes. The authors argue that the implementation of DPPs is therefore challenging in organisational terms, and often takes extended time and effort. Falco & Kleinhans (2018) advise on a series of approaches to overcoming barriers to digital participation. Firstly, policymakers, especially in English-speaking countries, should consider using tested and validated DPPs. Secondly, policymakers should remember that not all members of a target community will possess the technical skills that are necessary to utilize features of a DPP. Lastly, policymakers should recognize that the applications of DPPs should not be viewed as standalone objectives. Instead, it should be acknowledged that digital democracy thrives on a combination of instruments and processes that combine e-democracy tools with interaction and deliberation in non-digital settings. Digital tools allow policymakers to tap into the 'wisdom of the crowds.' However, authors argue that the possibility to reach a broad audience with little effort also holds threats. Public opinion that is established via digital tools can, for an instance, be unstable, and dominated by the opinion of a few. Other problems in the realm of e-democracy and participatory digital tools concern a focus on data collection instead of meaningful data analysis.

The digital divide: The term ‘digital divide’ refers to the gap or disparity between individuals, communities, or countries in terms of access to and use of digital technologies, such as the internet and digital devices. It encompasses both the availability of digital infrastructure and the ability to effectively utilize and benefit from digital resources. The digital divide can be influenced by factors such as socioeconomic status, geographic location, age, education, and infrastructure development. It creates inequalities in accessing information, communication, services, and opportunities, thereby affecting social and economic participation in the digital age. Efforts to bridge the digital divide involve promoting equitable access to digital technologies and promoting digital literacy and skills for all individuals and communities. Van Dijk (2020), who has examined the digital divide, notes that few individual tools have succeeded in bridging this divide. Scholars therefore advise to - instead of trying to solely increase the tech literacy of a population – allow citizens’ analogue participation and focus on the development of tools that translate their input into digital information. The rapidly emerging field of transitional e-tools aims, for instance, to use artificial intelligence (AI) to combine analogous and digital participation mechanisms and in this way contribute to inclusivity (Denwood et al., 2023).

4.4. Communicative dimension: enabling affective two-way communication

Figure 14 Tasks in WPs that relate to the communicative dimension of the DUST research



4.4.1. Objectives

The overarching objective of the communicative dimension explores communicative design strategies that enable two-way exchanges to use throughout the duration of the DUST project. These design strategies are underpinned by both affective communication and narrative construction. The communicative dimension is especially salient for strengthening and facilitating citizen engagement. The emphasis on affective communication in narrative construction sets a foundation for greater understanding and uptake of content in the process of communicative design.

4.4.2. Theories and concepts

What is affective communication? Affective communication focuses on the expression of feelings surrounding content and relates to expressions of value and belief (Gudykunst & Ting-Toomey, 1988). There is a link between affective and non-verbal communication as spaces in which meaning is transferred beyond explanation or comprehension. In the DUST project, it relates to the production of visual (graphic) material, expressions of design, digital tools, and sensory (experienced) devices.

Why is affective communication relevant in the DUST project? Affective communication relates to the affective domain of learning that concerns engagement, attitude, and/or emotion. The affective domain is different yet inextricably intertwined with the cognitive domain that centres on understanding, comprehension, or application. The latter domain is commonly emphasized in science education (Lesen et al., 2016). Science or science education is often perceived as a superior way of knowing. This thinking works to not only dismiss other

epistemologies but also exclude people with 'non-scientific' backgrounds, who may include communities who are least-engaged.

Affective communication (1) facilitates tools/lenses to understand the construction of identity and value systems. Therefore, (2) providing a means for the DUST project to examine the existence and impacts of varying narratives expressed through media (both traditional and social), policies and otherwise. The impacts are explored in relation to how the aforementioned narrative creators *affectively* influence people, especially those from LEC, perception on sustainability transitions. In addition to the differing narratives disseminated throughout society, the diverse identities and values of LEC come together to define the conceptual framework for the DUST. The framework provides a structure and purpose to both ground and guide affective communication for wider citizen engagement.

An essential element underpinning this framework is the aim to ensure two-types/two-way interactions between different communities and stakeholders. Hence, it is necessary to consider the often complex contexts in which contrasting groups construct narratives to best engage with them. For example, existing narratives use affective communication and language tools to shape people's perceptions, which in turn has an influence on their values and perhaps informs how their identities evolve. To best involve LEC in sustainability transitions, it is salient for us to understand the local context – what ways of knowing exist; what, why and how value is expressed; and how feeling is perceived. These findings can then be translated into tailor-made affective communication strategies and languages adapted to each least-engaged community.

In doing so affective communication contributes to epistemic justice, both testimonial and hermeneutical justice. For instance, testimonial justice involves the dismissal of someone's thoughts and ideas based on their social identities including class, gender, sexuality, race, ethnicity and so forth. The other, hermeneutical justice concerns the language tools and skills in which someone has to express their perceptions of life as well as understand others (Fricker, 2007). Affective communication allows for the valuing of 'othered' knowledge combatting testimonial injustice, while also exploring other non-verbal ways in which the world is understand and perceptions are expressed, informing improved hermeneutical justice (Fricker, 2007). The hypothesis is that utilising affective communication through tailor-made strategies would help to construct narratives within LEC and enhance their participation in societal debates on alternative futures- the third line of inquiry of the DUST project.

Why is narrative construction important? Storytelling, or narrative construction, has long been acknowledged as a model of (or aspect of) planning: storytelling has been a democratic, inclusive activity; one that offers space to a variety of actors, all with their own lived experiences and their emotions; and one that enables actors to co-construct shared understandings of what their situation is and what can be done (van Hulst, 2012). Throgmorton (2003, p. 125) has argued that "(...) the storytelling perspective on planning and the role of design from this perspective offer a way to link design with the planning debate and replace the notion of a central actor found in government-centred paradigms (...) with a more relational perspective".

The construction of narratives not only serves as a way of communication. It also reflects power dynamics between different actors. It is recognized that asymmetrical power dynamics, which may result from historical hierarchies, directly affect what stories are told and what stories are excluded (Ortiz, 2022). Without consciously acknowledging these imbalances, current practices and systems work to maintain unequal status quos. The continuation of this norm would muffle and dismiss the voices of the seldom heard while simultaneously hindering ambitions for two-way communication and exchanges of knowledge. Therefore, if narrative construction in spatial

design can act as a vehicle for changing realities and equalising power, communication between governments, citizens and other actors needs to be re-evaluated (Van Dijk, 2011). Furthermore, narrative construction works as means to understand someone's identity – the values, the culture and the wider context that have informed who they are. In relation to epistemic, pedagogical, and social justice, there is the need to reflect on our own positionality within interactions as urbanists. That is, if we are willing to embrace and explore both discomfort and 'otherness', the alterity of identities (Evans, 2014).

Active narratives can be a powerful tool to bridge the gap between social and spatial research and local knowledge. If stories are embedded in a process of participatory analysis, instead of having local actors respond to pre-constructed concepts, local actors can become co-creators of knowledge and space (Devos et al., 2018). This implies that prevailing narratives (e.g., those spread through media) imposing pre-structured concepts can also influence the perception of local people. It is therefore necessary for the DUST project to understand how such existing prevailing narratives and communicated values have shaped people's perceptions on sustainability transitions in the LEC.

How can affective communication enable the construction of narratives? There are other types and ways of constructing narratives that break beyond the bounds of rigid power dynamics and widely accepted norms. Take the pluriverse and sentipensante, the latter of which directly translates to the act of thinking and feeling, recognize and embrace other ways of knowing and exchanging much like affective communication (Escobar, 2011; Ortiz, 2022). Communications that draw on the affective domain, which use emotions to build understanding and persuade, provide other means to create alternative narratives (André et al., 2011).

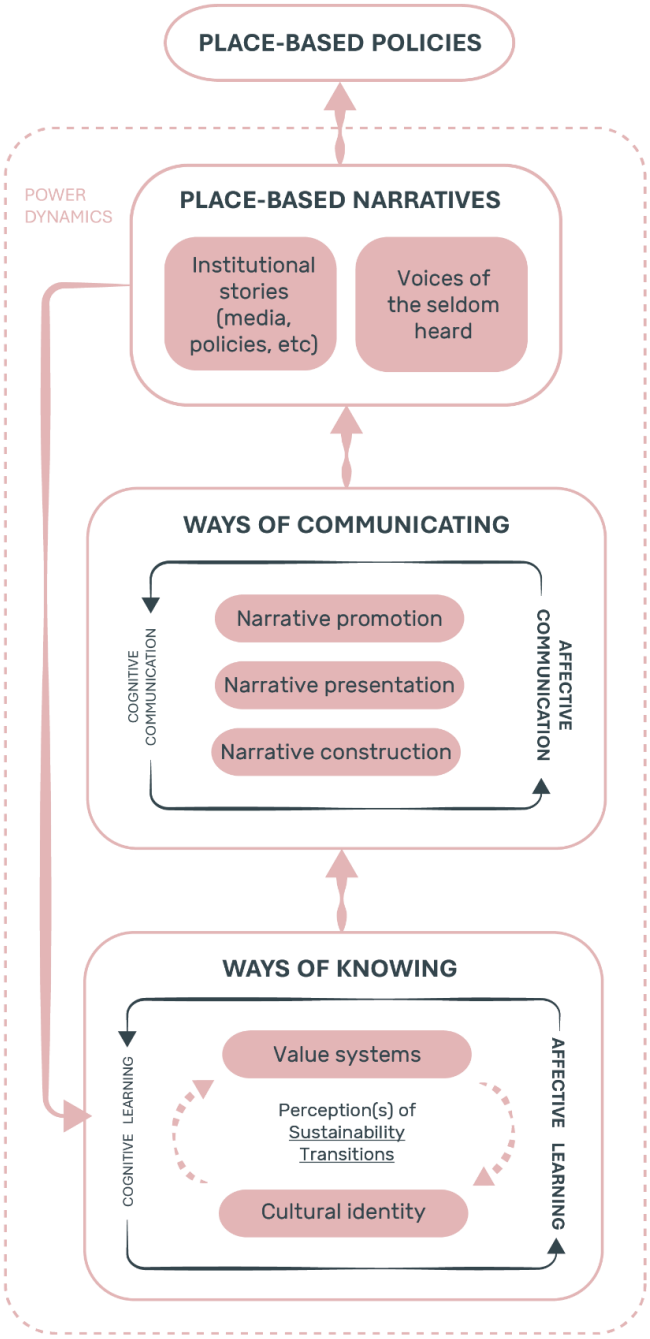
Affective communication also enables differentiation in communication styles with different stakeholders based on the context and conditions on which they are based. For example, formal language may be appropriate for one whereas informal language works best with another. Besides, recognition of group identity underpinned with the ethos of solidarity, similar to the Nguni and Bantu languages' definition of what it means to be human, ubuntu, where 'I am because we are' (Schuermans & Debruyne, 2017).

Affective communication as an explanatory or persuasive tool exists within and at the intersection of multiple narratives. Therefore, it can be leveraged to re-shape/represent targeted narratives and achieve broader aims of co-understanding, and co-creation.

How is affective communication reflected through (spatial) design? By considering regional design as story-making, it is also seen to affect the frames with which we perceive reality. Thus, affective communication intervenes in the social, cognitive and intentional processes of presenting and constructing reality and regional action (Van Dijk, 2011). An often-used channel for communicating knowledge about the past, present and future is using symbols. These symbols include words, texts, images, objects, and symbolic actions, which help derive meaning in actions, decision, investments, conflicts and accords (Fuller & Loogma, 2009). Spatial representations, in word and image, are socially constructed perceptions of the built environment produced by socio-political "struggles about conception, perceptions and lived experiences of place" (Davoudi et al., 2018, p. 101). They are expressions of what different actors find important and what they are willing to neglect, as well as being indicative of the power relations of these varying actors (Davoudi et al., 2018; Neuman, 1996). They are purposefully employed by plan actors to inform the behaviour of other, related actors by drawing on the repertoires of existing symbols (Daum & Hasse, 2011; Dühr, 2004).

It is essential to explore, expand and select appropriate communication tools and languages to limit the sole use of 'expert' visual languages that hinder citizen participation (Till, 2005). Carefully chosen visual methods can assist in (1) delaying the expression of researchers' preconceptions, and (2) nurturing understanding of diverse perspectives (Mannay, 2010). This can in turn be used to strengthen the voices of the seldom heard (Berardi, 2018).

Figure 15 Conceptual framework in the communicative dimension of the DUST research



4.4.3. Research questions

In line with the theoretical discussions above, research questions that are related to the communicative dimension of the DUST project can be centred around:

(1) What are the existing stories/narratives and how did they affectively influence the perception of people in the LEC on sustainability transitions?
(2) How to assess the level of affective communication in communicative design?
(3) What are the tools (both digital and non-digital ones) and languages of communicative design that facilitate the narrative construction for people in the LEC through affective learning?
(4) What communication and dissemination strategies help with the narrative representation and promotion through affective communication?

4.4.4. Assumptions

- There are organized processes of participation, in which affective communication can be tested through e.g., the narrative construction, representation and promotion
- The decision-making process is inclusive enough to consider various narratives: once the voices of people are heard, their interest could be reflected in the decisions on regional actions towards energy transition

4.4.5. Expected results

(1) Inventory of the existing narratives that affect the perception of people in the LEC on energy transition (link with WP2,3)
(2) The framework of affective communication that can guide the evaluation and experimentation of citizen engagement (link with WP4,5)
(3) Selection of tools and languages of communicative design that facilitate the narrative construction for people in the LEC (link with WP4)
(4) Concrete communication and dissemination strategies for narrative representation and promotion (WP6).

Table 11 Initial set of aspects in the communicative dimension of DUST research

Concept	Categories / ranges / aspects of variables	(Source)
Place-based narratives	Institutional stories (media, policies, etc) Voices of the seldom-heard	
Ways of communicating	Affective communication Cognitive communication	Davoudi et al., 2018; Neuman, 1996; Gudykunst & Ting-Toomey, 1988; Lesen et al., 2016;
	Narrative promotion Narrative presentation Narrative construction	André et al., 2011; Ortiz, 2022; van Hulst, 2012;
Ways of knowing	Affective learning Cognitive learning	André et al., 2011; Escobar, 2011; Ortiz, 2022

	Value systems in perceptions of sustainability transitions Cultural identity	Escobar, 2011; Evans, 2014; Ortiz, 2022;

5. Outlook

This deliverable presents the results of the DUST project's Task 1.1, which was to deliver an up-to-date comprehensive theoretical and conceptual framework guiding the DUST project's further research. The framework has been accomplished during a process of cross-disciplinary and collaborative theory formation, including an intuitive scanning and a systematic review of predominately scientific literature in the fields of public policy, the democracy studies, spatial planning and spatial design. As noted in the introduction to this document, D1.1 is a living document; knowledge presented here will be further developed during research in DUST's individual work packages.

During rounds of literature research it became apparent that some of the concepts that provide a foundation to the DUST project not only overarch disciplines but also span the analytical, evaluative, instrumental, and communicative dimensions of the research. Concepts prominently include the ideas of a place-based approach, MLG, and active subsidiarity. The work also brought a need for a series of shared definitions and categorisations to the foreground. These include, for instance, a definition of factors that influence and explain the participation of LEC, a shared perception of levels of depth of participation, arenas and moments of participation, and a distinction between direct participation and organized interest. The latter distinction is of particular importance for conceptualising the challenge of participation of the LEC in place-based approaches and MLG. Follow up work will have to continue to detail these concepts, ideas and definitions, in order to support analyses in different dimensions of DUST research while also framing the project as a whole.

It is important to note that some of the dimension have gained more attention than others in Task 1.1 and are for this reason more elaborated at this stage of the project. This is due to the timing of different work packages. While research in the analytical and evaluative dimension has already started, research in the instrumental and communicative dimension is concentrated in later stages of the project. Eventually research in all dimensions is intended to contribute to the DUST's ambitioned comprehensive recommendations for involving the LEC in the deliberative governance of place-based approaches to just sustainability transitions.

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Annex

Attendees of the DUST Interactive Dialogues

The below listed persons have attended the DUST KoM on 17 and 18 April 2023 in Delft, the Netherlands. Via their participation in the 'DUST Interactive Dialogues' they have contributed to D1.1.

Name	Organisation	
Partners		
Verena Balz	01 TU Delft	
Marcin Dabrowski	01 TU Delft	
Alexander Wandl	01 TU Delft	
Lei Qu	01 TU Delft	
Thomas Verbeek	01 TU Delft	
Gisela Garrido Veron	01 TU Delft	
Mimi Ramirez Aranda	01 TU Delft	
Rebecca Baugh	01 TU Delft	
Anna Gralka	01 TU Delft	
Helma van den Bos	01 TU Delft	
Ellen van Bueren	01 TU Delft	
Eva Pfannes	01A OOZE	
Elin Cedergren	02 NR	
Leneisja Jungsberg	02 NR	
Martin Vladimirov	03 CSD	
Mariya Trifonova	03 CSD	
Silke Weidner	04 BTU	
Tihomir Viderman	04 BTU	
Adam Drobniak	05 UEK	
Artur Ochojski	05 UEK	
Samir Amin	06 ISOCARP	
Yoann Clouet	06 ISOCARP	
Elisabeth Helm	09 KiJuBB	online
Sara Orlamünder	09 KiJuBB	online
Grzegorz Trefon	10 KADRA	
Uwe Serdült	11 UZH	online
Fernando Mendez	11 UZH	
Martin Ferry	12 STRATH	
Neli Georgieva	12 STRATH	
EEAB members		
Paolo Graziano	University of Padua	
Cristina Cavaco	University of Lisbon	
Patrizia Sulis	EC - Joint Research Centre	online
Riel Miller		Individual meeting on 30 April 2023
SAB members		
Stefan Simonides	City of Cottbus	
Apostol Dyankov	World Wide Fund for Nature	
Małgorzata Grodzicka-Kowalczyk	PHENO HORIZON	
Maciej Kowalczyk	PHENO HORIZON	

Name	Organisation	
Luc Hulsman	Samenwerkingsverband Noord-Nederland (SNN)	
Agneta Green	County Administrative Board of Gotland	
Anna Dudek	Silesia Marshal Office / DUST SAB	online
Kenneth Sjaunja	Region Norrbotten / DUST SAB	online
EU		
Samuela Caramanica	EC REA / DUST Project Officer	online
Nora Allavoine	EC RTD / DUST Policy Officer	online