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The nature and role of intermediation in making actors cooperate and transact with each other

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Summary

This deliverable examines the role of intermediaries in enabling and promoting energy citizenship. Intermediations and intermediaries represent a central part of the emerging ‘new’ forms of governance aimed at accelerating the energy transition. D4.1 elaborates on the role of intermediaries in helping to achieve the goals/objectives of energy citizenship (ENCI) initiatives. Despite the growing and strong interest in intermediation in recent literature studies, research specifically into the impact of intermediaries on the goals of energy citizens’ initiatives is understudied and underappreciated. The deliverable addresses this gap by empirically investigating the contribution of intermediaries in an ENCI context. In doing so, we analyse intermediation mainly from the perspective of ENCI case actors. The role of intermediation/intermediaries in goal achievements of ENCI is developed as part of the Research Topic on ‘Conditioning factors of intermediation’ ([D3.3](#)). The key question this deliverable aims to address is, ‘*what types of intermediations are (or have been) needed so that cases of ENCI can achieve their goals?*’ Data were collected via desk research and interviews from 34 ENCI case studies across nine partner countries (see case study data collection methodology at [D3.3](#)).

The analysis reveals that the studied six forms of intermediations (i.e., financial, management, information and communication, networking, technic-scientific, legal/lobbying) were well distributed across the empirical cases with financial and management intermediation reportedly of highest importance. In further investigating what actors and organisations are part of ENCI intermediations, the results show that five sorts of intermediaries (i.e., commercial, governmental, non-government, education, other-civil, and intercessors) can perform a wide range of intermediations by combining the required skills, knowledge, and expertise. The roles of commercial, government, and intercessor intermediaries were of high importance in shaping both the creation and development of the cases but that varied over time and the different stages of the cases. Overall, the studied intermediary practices demonstrate a rich mosaic of kinds of intermediaries, the functions that they fulfil, and the activities they conduct, illustrating a dynamic picture. Intermediaries were also found to contribute to the achievements of ENCI cases with varying degrees of intensity, influence, and longevity.

By enhancing our understanding on intermediation, this research found that intermediaries operating in an ENCI context, can encourage the (further) development of ENCI cases by successfully addressing their needs and fulfilling their goals regarding a fair and sustainable energy production, consumption, and governance.



1 INTRODUCTION

Energy citizenship projects involve collaboration and transactions with other actors (such as government, finance providers and knowledge institutes) for which intermediation may be needed for crossing such boundaries. To obtain a more complete picture about such collaborations and transactions, we are studying the degree to which intermediary actors and intermediary organisations play a role in the goal achievements of ENCI cases.

Pressures to accelerate a rapid energy transition are becoming manifest at a point in history when the governance of these transitions is increasingly (understood as) polycentric, at multiple levels or scale of governance and control is dispersed and distributed. Within this context, ‘new’ forms of governance are emerging, being designed and experimented with to intervene in and seeking to transform and decentralise energy systems. An increasingly central part of these new forms of transition governance are *intermediaries*.

Thus far, the role and work of intermediaries in promoting, enabling, or establishing a phenomenon as complex and diversely embedded as ENCI remains largely underappreciated and understudied¹. A root cause for the long neglect of intermediaries in enhancing energy citizenship lies in the invisibility of most intermediaries' contributions to energy citizenship and energy democratic procedures in general (Warbroek et al., 2018). Most of this invisibility can be described as, a) not being recognised as occurring on the ground or being of importance, b) not showing up using the “typical” research instruments (e.g., interviews, surveys) used in the studying areas (Hyssalo, 2021).

This invisibility has entailed the need to study intermediaries in a more specific and detailed manner in order to make their contributions visible and to better understand their role and importance in enhancing or promoting ENCI. The contribution of this deliverable is thus to provide one of the first detailed, empirically grounded analysis of the activities of intermediaries in cases of ENCI.

1. A notable exception is the Changing Behaviour (FP7) project where the role of intermediaries in changing energy use behaviour as well as supporting relevant organisations was investigated, Hodson, M. and Marvin, S. (2009b) Report— Conceptualising and understanding intermediaries in context: developing an enhanced understanding of context, actors and transferability. Changing Behaviour Project, 7th Framework Programme, European Commission.



Research into the reasons of successes and failures of intermediary work will help to further understand the conditions and mechanisms that shape ENCI. In this deliverable we, a) describe the role of intermediaries in a wide range of literature by providing a theoretical context to position intermediation in the wider context for studying ENCI in EnergyPROSPECTS and we b) present results on the role of intermediation in the goal achievements from 34 case studies of ENCI as collected in WP3².

Originally, we intended to use the strategic collective system building activities framework of Planko et al. (2016) for studying system building activities and the role of intermediation. The framework consists of four elements: technology development and optimisation, market creation, social-cultural change and coordination as a meta-element with Cramer (2020) adding a fifth element: creation of preconditions. It is a framework for innovations new to the world pushed by entrepreneurs (and their allies) interested in scaling and expansion, something which requires system building activities.

From the engagement with the diversity of the ENCI cases as defined in EP, it became clear that the framework is less relevant. The reasons for this are: 1) ENCI initiatives primarily adopt technologies, they hardly ever engage in technological development themselves, 2) ENCI initiatives are mostly oriented towards members and local allies, not towards clients somewhere else in the world, 3) few initiatives undertake system building activities, because this is viewed as something for which they do not have suited competences, nor a strong inclination. System building activities in relation to (renewable) energy are undertaken by renewable energy network organisations (such as [REScoop](#)), business entrepreneurs and governments, organisations which are not the focus of EnergyPROSPECTS. Instances of system building in the case studies will be described, but the focus of this deliverable is on intermediaries, which have been found to play an important role in the development and goal attainment of ENCI initiatives.

2. Detailed data collection requirements for this deliverable on the role of intermediaries in goals achievements of ENCI cases are detailed described in D3.3 (Pel et al., 2022) and D3.4 (Vadovics et al., 2022).

2 WHO ARE THE INTERMEDIARIES?

2.1 Multiplicity of intermediary terms

Intermediaries are a crucial ingredient of any system of innovation. Traditionally, intermediaries connect, translate and facilitate flows of knowledge and support individual organisations through management support (van Lente et al., 2003). Intermediary actors have been proposed as key catalysts that speed up change towards more sustainable socio-technical systems (Kivimaa et al., 2017). Research on intermediaries has gradually gained traction since 2003, but it has been complicated by inconsistencies regarding what intermediaries are in the context of such transitions and which activities they focus on, or should focus on.

To begin with, the literature applies various concepts to categorise the functions and activities of intermediaries including: transition intermediaries (Kivimaa et al., 2017), innovation intermediaries (Howells, 2006; Stewart and Hyysalo, 2008), energy intermediaries (Backhaus, 2010), user intermediaries (Boon et al., 2011), niche intermediaries (Geels and Deuten, 2006; Hargreaves et al., 2013; Seyfang et al., 2014), systemic intermediaries (van Lente et al., 2003); cultural intermediaries (Bourdieu, 1984), technology translators (Iles and Yolles 2002), social intermediaries (Piore, 2001), grassroots intermediaries and community intermediaries (Seyfang et al., 2014) and the work of Callon (1986), Latour (2005), and others on intermediaries in relation to actor-network theory. Figure 1 illustrates the variety of studies, terms and definitions applied to describe intermediaries in many studies.

Intermediation by and for initiatives characterised by energy citizenship³ did not receive much attention in the literature on intermediation (Howlett, 2006; Moss, 2009; Backhaus, 2010; Hodson et al., 2013; Bird, et al., 2014, Kivimaa, 2014; Kivimaa et al., 2017) and on energy citizenship (Ryghaug et al., 2018; Beauchamp and Walsh, 2021). A root cause of why intermediaries' role in enhancing energy citizenship has not been investigated much earlier lies in the relative invisibility of intermediaries' contributions to energy citizenship and energy democratic procedures more general (Warbroek et al., 2018; Hyssalo, 2021). Various understandings of the role of intermediaries appear in literature as underlined by Hoffmann et al. 2022: mediators, bridge builders, boundary crossers, translators, catalysts, advisors, facilitators (of innovation), shapers. This proliferation of labelling

3. For more information on the energy citizenship concept, see [D2.1](#). For more information on the energy citizenship concept, see [D2.1](#) (Pel et al., 2021).



makes the intermediaries not easily distinguishable from each other. Therefore, addressing intermediations that impact ENCI required some dedicated definitional and conceptual work.

Term	Study	Definition/role
Organizations		
Intermediaries	Watkins and Horley (1986)	Explores role of intermediary agencies support technology transfer to small firms
Third parties	Mantel and Rosegger (1987)	Persons or organizations that intervene in the adoption decisions of others
Brokers	Aldrich and von Glinow (1992)	Agents facilitating the diffusion of in a social systems of new ideas from outside the system
Intermediaries	Seaton and Cordey-Hayes (1993)	Examines the role of intermediaries in technology exploitation
Intermediary agencies	Braun (1993)	Role of mission agencies in formulating research policy
Intermediaries	Callon (1994)	Role of intermediaries in effecting change within science networks and local collectives
Consultants as bridge builders	Bessant and Rush (1995)	Role of independent consultants as bridge builders in the innovation process
Intermediary firms	Stankiewicz (1995)	Adapt solutions available in the market to the needs of the individual user
Intermediaries	Shohert and Prevezer (1996)	Public and private organizations that act as agents transferring technology between hosts and users
Bricoleurs	Turpin et al. (1996)	Agents seeking to develop new applications for new technologies outside their initial development field
Superstructure organizations	Lynn et al. (1996)	Organizations that help to facilitate and coordinate the flow of information to substructure firms
Knowledge brokers	Hargadon (1998)	Agents that help innovation by combining existing technologies in new ways
Intermediary level bodies	Van der Meulen and Rip (1998)	Help orient the science system to socio-economic objectives
Innovation intermediaries	Howells (1999b)	Proactive role that certain types of service firms play as intermediaries within innovation systems
Technology brokers	Provan and Human (1999)	Actors filling gaps in information and knowledge in industrial networks
Regional institutions	McEvily and Zaheer (1999)	Provide 'surrogate ties' by serving as functional substitutes for a firm's lack of 'bridging ties' in a network
Boundary organizations	Guston (1999)	Role of boundary organizations in technology transfer and 'co-production' of technology
Boundary organizations	Cash (2001)	Role of boundary organizations in technology transfer
Knowledge intermediaries	Millar and Choi (2003)	Organizations that facilitate a recipient's measurement of the intangible value of knowledge received
Processes/activities		
Innovation consultancy services	Pilorget (1993)	Role of consultancy firms specifically to promote innovation; involves a variety of actors including consultancy firms and intermediary agencies
Technology brokering	Hargadon and Sutton (1997)	Technology brokering is where an organization routinely creates new products by making connections between existing solutions in other sectors or technologies
Innovation bridging	Czarnitski and Spielkamp (2000)	Provision of knowledge or services that are complimentary to firms
Knowledge brokering	Wolpert (2002)	Intermediaries that facilitate the exchange of information about innovation amongst companies

Figure 1: Summary of studies examining intermediaries, different terms, definitions and roles ⁴

4. Source: Howells, 2006:718.

2.2 Definition of intermediaries in EnergyPROSPECTS

There are, in short, many different kinds of intermediaries – many of which would not characterise themselves as intermediaries and some of which do not primarily work with a focus on energy citizenship issues - operating in different settings and conditions. It is the aim of this deliverable to conceptualise what can be perceived as an intermediary in an ENCI context. Based on the aforementioned literature review and within these multiple spaces, contexts and dynamics, in EnergyPROSPECTS we define intermediaries in ENCI as:

“actors or organisations that mediate, work in-between, make connections, and enable a relationship between different persons or things” (Hodson et al., 2013).

While the concepts of intermediaries and intermediation are useful, they remain essentially unknown in the field of ENCI. Considering that the literature lacks consensus on how intermediation is defined, where it begins and ends, and where interaction, in general, becomes intermediation (Kivimaa et al., 2019), in EnergyPROSPECTS we are taking an exploratory stance to investigate ENCI intermediation. We want to know more about *intermediation as an interaction-based process* (either project-based or systemic) and shaper of activities and outcomes regarding a fair and sustainable energy production, consumption and governance.

At the beginning of the EnergyPROSPECTS project, we were not aware if there is/was ENCI intermediation. We therefore empirically explored:

1. **if there is a need for ENCI intermediation;**
2. **how intermediation is shaped;**
3. **what type of actors are involved;**
4. **what type of activities are implemented on the ground;**
5. **how intermediation and intermediaries can help ENCI cases to achieve their goals.**

2.3 Sorts of intermediaries and intermediations in the EnergyPROSPECTS cases

Despite differences in the ways in which intermediaries and intermediation are defined, their attributes, and the associated typologies (Kivimaa et al. 2017), the literature shares a fundamental understanding, that intermediaries:

bridge between actors and their related activities, skills and resources in situations where direct interaction is difficult due to high transaction

costs, information asymmetry or communication problems (Kivimaa et al., 2019: cited by Kanda et al., 2022).

Based on our literature review on intermediaries, below we distinguish five main sorts of intermediaries that we empirically explored in EnergyPROSPECTS. These are:

1. **Commercial intermediaries** for knowledge-intensive business services: banks who offer a mortgage or a loan (thus connecting capital providers with those that need capital), business lawyers and consultants who are hired for assisting in deals between two parties.
2. **Governmental intermediaries**, e.g. government agencies that manage programmes with loans and funds and technical assistance on, for instance, energy renovation and energy cooperatives, platforms for knowledge exchange.
3. **Non-government intermediaries**, civil society umbrella organisations (for transition towns), collective actors such as cooperative networks (e.g., [REScoop](#), the European Federation of citizen energy cooperatives), chambers of commerce.
4. **Other civil society organisations**, not created explicitly to be intermediaries, non-sector or umbrella organisations.
5. **Intercissors**, are individuals who talk to different actors with the aim of learning about possibilities for collective action, cooperation, partnerships, institutional change by learning about the beliefs, material interests, mandates, responsibilities, capabilities and resources of specific actors.

The above five categories of intermediaries are further described by six kinds of intermediary activities explored in ENCI cases. These are:

1. **Organisational intermediation:** Structuration and organisation of the functioning of the case: entities composing the case, legal status, coordination of the various activities (capacity building, energy production retail), negotiating with administrative authorities.
2. **Financial intermediation:** Capitalisation and resource mobilisation required for the case to build up and sustain/grow.
3. **Scientific-technic intermediation:** Technical and scientific expertise activities for concretising the project: ICT conception, planners, architects, PV or wind power specialists, monitoring of the project, facilitating experimentation and pilots, facilitate/support adoption and implementation of innovations.
4. **Networking intermediation:** All networking activities with actors that present similarities with the case, enabling cooperation between actors, building and managing networks of multiple stakeholders, exchange of knowledge and visions.
5. **Information intermediation:** Communication activities making the case public: consult demand-side for implementation, mediation activities, put suppliers in contact with end users.
6. **Legal/regulatory and lobbying intermediation:** Lobbying activities, protest against or attempts to modify legislative proposals or draft laws.

2.4 The role of intermediaries in goals and achievements of ENCI cases

Previous studies have shown that despite the potential of energy citizens' initiatives towards a more local and decentralised energy system, their future development faces many struggles and barriers (Warbroek et al., 2017). Some of these barriers include financial and legal challenges, but also organisational challenges, such as safeguarding continuity, effective leadership, and attracting and retaining members (van der Schoor and Scholtens, 2015). Furthermore, they require regular communication with their local environment and securing municipal and/or regional (funding, financial) support.

According to Warbroek et al. (2018), to further support such initiatives, more strategic support is needed to build their capacities, alleviate institutional barriers and open up the system for their uptake and their acceptance. In other words, energy citizens' initiatives will require transformational support in order to achieve their full potentials, goals and become viable alternatives to the 'status quo' of the current energy system.

In this ever-changing and complex energy governance context, the role of intermediaries can be part of the solution in accelerating the development and impact of energy citizen's initiatives (Hargreaves et al., 2013; Warbroek et al., 2017; Warbroek et al., 2018). Intermediary actors especially due to their 'in-between' nature (Moss, 2009:1481) can cut across multiple sectors, bridge needs and catalyse the much-needed transformational change.

Intermediary organisations (e.g., NGOs, consultancy agencies, and research institutions) can accelerate the development of local energy initiatives (Hargreaves et al., 2013). For example, many studies have shown the crucial role of intermediaries in building capacities, facilitating dialogue, enabling and coordinating collaborations between local initiatives and other central actors out-with local communities (Spiro et al., 2013). According to Warbroek et al. (2018), intermediaries can help local energy initiatives to achieve their goals by helping address three key challenges: (i) lack of resources and capacities due to their bottom-up and often voluntary nature (Park, 2012; Rogers et al., 2012); (ii) institutional hurdles and barriers stemming from the fossil fuel-based energy regime (Oteman et al., 2014); and (iii) difficulties in opening up the regime for their uptake, acceptance or breakthrough (Bird and Barnes, 2014; Seyfang et al., 2014).

In addition, Germes et al. (2021) offer indications on how to contribute to the further development of local energy initiatives (LEIs). Their results indicate that an important factor in the goal achievements of a LEI in the Netherlands is the support of their social networks, including intermediary organisations. Via intermediary relationships, they can receive guidance, support, and gain knowledge from local governments/municipalities, and other LEIs. Germes et al. (2021) emphasise that collaboration with intermediary

organisations (i.e., umbrella organisations such as [Groninger Energiekoepel](#) in the north of the Netherlands) is a key player in LEIs' successes. For example, intermediaries can guide a LEI in their initial phase and provide knowledge on how to start an initiative. Additionally, intermediaries can support initiatives with the implementation of large renewable energy projects. Due to their intermediary role and their in-between position, they can gather knowledge and best practices from similar initiatives.

While intermediaries can at first glance be seen as 'neutral' mediators or as helpers with necessarily empowering contributions (e.g., Kivimaa, 2014), they have also been shown to be more engaged, and less neutral. Therefore, not all intermediary activities have positive impact. Intermediaries may cause negative effects by failing to perform their functions, or by a blocking rather than a facilitating role (Sovacool et al., 2020; Zaunbrecher et al., 2021). According to Sovacool et al. (2020), intermediaries such as industry associations (who are institutionally tied to established regimes) may actually want to prevent transition-oriented policy change. Intermediaries are therefore not always neutral actors and may play an active role in outlining and regulating policy processes to protect their interests (Nordt et al., 2023). According to Martiskainen and Kivimaa (2017) some intermediaries might also adopt more normative positions, often through their funding, which means that they may champion certain innovations or based on Hyysalo et al. (2018) represent certain interests.

However, and despite the growing and strong interest on intermediation, research specifically into the impact of intermediaries into goals and achievements of energy citizens' initiatives is understudied and underappreciated in literature (Warbroek et al., 2018) especially as the very notion of ENCI seems to refer to individual citizens (see D2.1, Pet et al., 2021). This Deliverable aims to fill this gap by investigating the contribution of intermediaries in the goals, achievements, and successes of ENCI cases in Europe.

3 ENERGY CITIZENSHIP CASES IN ENERGYPROSPECTS

In recent years there has been a growing focus on the emerging role of ‘energy citizens’ as both an actor and site of energy governance (Hamann et al., 2023). Energy citizen’s initiatives do not only relate to the decentralisation of the energy transition but connect to a variety of issues relating to active citizenship, democratisation of the energy system, promotion of energy behaviour change, promoting social innovation, inclusivity, participation of marginalised groups and disadvantaged areas as well as their role in addressing energy poverty in general (Seyfang and Haxeltine, 2012; Warbroek et al., 2018).

There is a strong and growing interest in the role of collective energy citizen-based initiatives in energy transition. The recent mushrooming of energy citizens’ initiatives is quite remarkable and is manifested by the multiple interrelated terms that are found in recent literature and in relation to energy transition. Some of these terms include, citizen initiatives (Soares da Silva et al., 2018), local energy initiatives (Hasanov and Zuidema, 2018), local community initiatives (Van der Schoor and Scholtens, 2015), community energy (Bauwens et al., 2016), renewable energy communities (Dóci et al., 2015), Local Low Carbon Energy Initiatives (LLCEIs) (Warbroek et al., 2018; 2019), Local Energy Initiatives (LEIs) (Germes et al., 2021), Citizen Activities in Energy Transition (Hyssalo, 2021), Collective Alternative Everyday Practices (CAEPs) (Deflorian, 2021). In various publications, such practices have been labeled as ‘everyday environmentalism’ (Loftus, 2012), ‘post-environmentalism’ (Certomà, 2016) or ‘pioneers of change’ (German Advisory Council on Global Change, 2011). What these initiatives have in common is that they are initiated and run by a locally embedded collective of individuals (i.e., citizens) and they demonstrate alternatives to everyday practices.

In EnergyPROSPECTS we define Energy Citizenship (ENCI) as:

“Energy citizenship refers to forms of civic involvement that pertain to the development of a more sustainable and democratic energy system. Beyond its manifest forms, ENCI also comprises various latent forms: it is an ideal that can be lived up to and realised to varying degrees, according to different framework conditions and states of empowerment” (Pel et al. 2021:64).



This definition illustrates how ENCI is in the political-normative aspect not an empty buzzword term. On the contrary, it appears to be a relevant term for various people and organisations involved in the energy transition. It forms a crossroads of political ideals. Second, the definition explicitly reminds of the various ‘latent’ forms that can be discerned beyond the manifest (active, individual, pragmatic, etc.) forms.

Based on the EP definition of ENCI and the literature on energy initiatives we define ENCI cases as: CF [D3.1](#) (Vadovics et al., 2022:10-11): Building on this definition of energy citizenship, a case of ENCI in the EnergyPROSPECTS project:

1. is a constellation of actors (in a context) and how it:

- enables/supports citizens to become active private and/or public energy citizens;
- acts as a collective energy citizen by contributing to change of the energy system or

2. includes individual energy citizens and how they realise their potential in a private, public or organisational setting.

As indicated by the definitions above and underlined by the agency dimension of the conceptual typology presented in Debourdeau et al. (2021), an ENCI case can be centred around an individual, or realised in a multitude of collective forms.

4 EMPIRICAL RESEARCH

4.1 Research topic: Conditioning factors of intermediation

As elaborated in [D3.3](#) (Pel et al., 2022), in EnergyPROSPECTS we examined three overarching Research Topics: 1) *ENCI achievements*, 2) *Conditioning factors of intermediation* and 3) *Development over time*. The role of intermediation and intermediaries in goal achievements of ENCI cases is a sub-part of the Research Topic on ‘Conditioning factors of intermediation’. This topic identifies conditioning factors for ENCI achievements as specified in Research Topic 1: ENCI achievements which will be in detail discussed as part of D4.3. In D4.3, Qualitative Comparative Analysis (QCA) will be applied to find necessary and sufficient (combinations of) conditions for the occurrence of the QCA-outcome, which we defined as achievements towards the democratisation of the energy system in the context of hybrid/citizen-based cases (see Chapter 5.1 and [D2.1](#) and [D2.2](#) for elaboration of these concepts)”⁵. In other words, conditioning factors related to intermediation will also be analysed in D4.3.

In this deliverable, the focus is solely on the role of intermediaries in the goals and achievements of ENCI cases. We extend the emerging literature on the role of intermediation in enhancing ENCI by analysing intermediation mainly from the perspective of specific ENCI case actors, rather than from the perspective of specific intermediary actors; which much of previous research has focused on (e.g., Bush et al., 2017; Hargreaves et al., 2013; Seyfang et al., 2014). In doing so, we add a new layer to intermediation by focusing attention on who are important in facilitating the ENCI cases achieving their goals. We address this gap by examining what is the need of intermediation and by whom according to ENCI cases actors. The next section elaborates on the specific empirical research questions that we investigated.

5. In D4.3 we are investigating the research question: ‘Why (and under which conditions) do cases of energy citizenship achieve their goals and make achievements towards the democratisation of the energy system?’



4.2 Research questions on intermediation

Below we present the main research question and a set of sub-questions that we empirically investigated in order to learn more about the extent to which ENCI cases are able to do intermediary work by themselves through knowledgeable, self-confident members who are trusted by others and to what extent this requires the involvement of external organisations such as intermediaries. In addition, by asking questions on the nature of intermediation in relation to ICT, business models and obtaining external funding we explored more about the role of intermediation therein.

The central research question in the EnergyPROSPECTS project around intermediaries is:

What type of intermediation is (or has been) needed so that the case can achieve its goals, and what sorts of intermediary actors/ organisations are (have been) part of (or conveying) this intermediation?

This question is investigated through a series of empirical questions, listed below:

1. Was this type of intermediation needed in the case?
2. What kind of intermediary provided it?
3. How important was the intermediation?
4. What are/were the results of this intermediation (e.g., was it satisfactory?)

4.3 Research Methodology

To answer the above research questions, a mixed-data collection was applied combining, desk-research, in-depth interviews with key informants and an intermediary mapping tool. Below we elaborate on the methods applied during the data collection.

- The 40 cases – 34 of which were considered for the current deliverable – were selected from the larger EnergyPROSPECTS database of 596 cases of ENCI in Europe. All the 40 cases are found in EnergyPROSPECTS partner countries in order to have relatively easy access to the cases. Since project partners are well distributed among EU regions, this appeared a good choice for the detailed case studies. For the detailed case selection criteria refer to D3.3 (Pel et al., 2022).
- Data collection from 34⁶ ENCI cases. Data were collected using a Research Template that is presented in [D3.4](#) (Vadovics et al., 2022; the overview of the selected cases is found in the Appendix 1 and their geographical spread is presented in Figure 2).

6. 34 out of the original 40 cases are being analysed in D4.1 due to late case data collection.



Figure 2: Distribution of the 34 detailed case studies in Europe

- The data for this deliverable were collected via the dedicated empirical questions on intermediation and intermediaries in the Research Template described in D3.4 (please see Appendix 3 for the intermediaries related questions).
- The methodology developed to collect data for the 40 detailed cases is elaborated in detail in the Deliverable 3.3 (Pel et al., 2022). The methodology and filling in the research template entailed both desk-based research and conducting interviews with case participants.
- Use of an intermediary visualisation and mapping tool⁷: Intermediary actors, their links, interactions, roles and activities are often difficult to be explained and discussed during interviews and desk research. That stems from the complexity of intermediaries, their multiple interactions and their in-betweenness as they can be found in the sphere between different actors and institutional domains cutting across individuals, communities, private, public, third organisations, state and market (Huntjens and Kemp, 2022). In EnergyPROSPECTS, in order to make these interactions more visible we developed a visualisation tool (using Miro boards) to map the multiplicity of intermediary actors and to describe their direct relationship with the ENCI cases. The visualisation tool was piloted first among a core task team in EnergyPROSPECTS before it was further refined. The updated version of the visualisation tool was applied during a training session with all the consortium

7. At the time of writing this deliverable 4 out of 9 partners had finalised their intermediary mapping tools. Thus, the analysis of the intermediary maps is does not reflect all 9 EU partners. So, caution is taken in interpreting the results.

partners where the case *LILAC*, based in the UK, was tested. As part of this training, the WP4 core team developed an instructions document, a tutorial and Q&A in order to guide the researchers in collecting the visualisation map data (Appendix 2 shows the mapping tool template, together with instructions for partners and a tutorial; the mapping was created in Miro online board software).

4.4 ENCI case data details

This subsection summarises basic information about the detailed ENCI case studies. For more detailed insights, see Vadovics et al. (2023: D3.5, forthcoming).

Number of interviews

In total 57 interviews were conducted for the 34 ENCI cases (Figure 3), which represents about 1,7 interviews per case. Two case studies could not conduct an interview, and half of the case studies involved only one interview. However, the number of interviews realised for the detailed case study analysis should not have a major impact on the aspects which are studied in this deliverable.

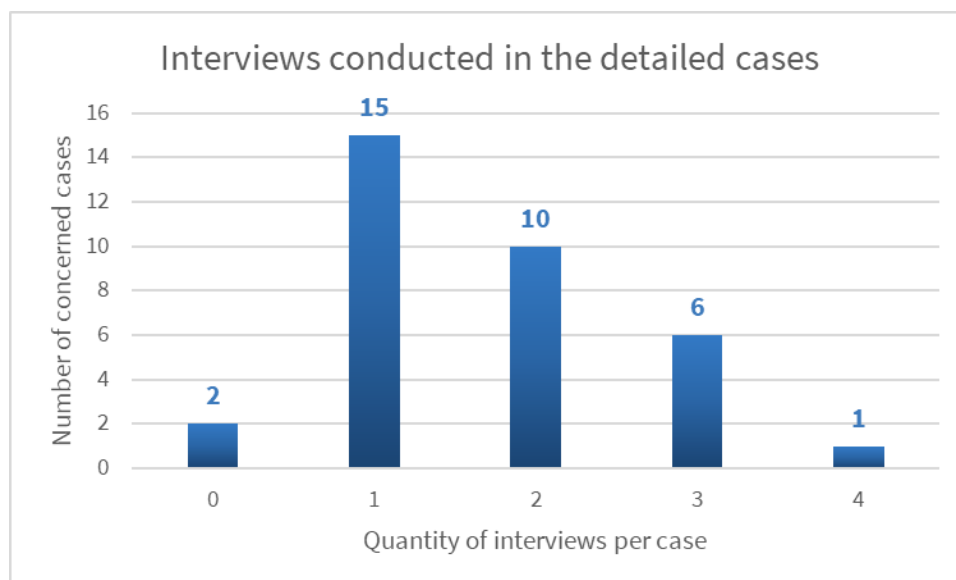


Figure 3: Interviews conducted in the ENCI cases

Interviewee details

As shown in Figure 4, the interviewees were in a large majority founders and leaders of the case (67% of the interviewees). Employees represent 17% of the interviewees, and very few of them are participants, members or volunteers in the cases. Nine of the interviewees had several roles simultaneously (e.g., founder and leader, case participant and volunteer).

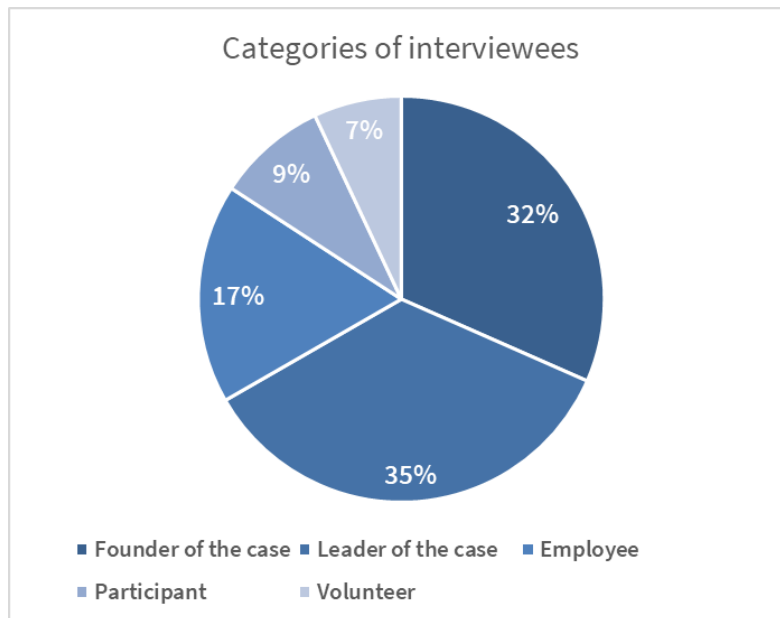


Figure 4: Categories of interviewees (percentage)

Data treatment for intermediation and intermediaries

The output of the detailed case studies survey consisted in a list of the 10 main intermediations that are/were involved in the case, a description and an assessment of their importance (low, medium, high – see Chapter 5.3), completed with information about the intermediary that provided this intermediation i.e., its name, the category it belongs to (among the five identified or as “other”). On this basis, the data treatment of the aggregated inputs from all the cases consisted in two parallel analyses of the whole set of intermediations and of that of the intermediaries. The various sorts of intermediations were thus decomposed according to the kinds of intermediaries that provide them and, conversely, the various sorts of intermediaries were decomposed according to the kinds of intermediations they provide. This double parallel data treatment enabled a precise study of both intermediation and intermediaries and of their respective specificities.

5 RESULTS

5.1 Intermediations needed in goals and achievements of ENCI cases

The key research question of this deliverable was to shed more light into what kinds of intermediation is (or has been) needed so that the ENCI cases can achieve their goals. During the literature review, we summarised six main kinds of intermediations that we expected to play a role in the goals and achievements of ENCI cases (Figure 5). These intermediation categories are not considered to be clear-cut but their intermediary functions might connect and overlap with each other.

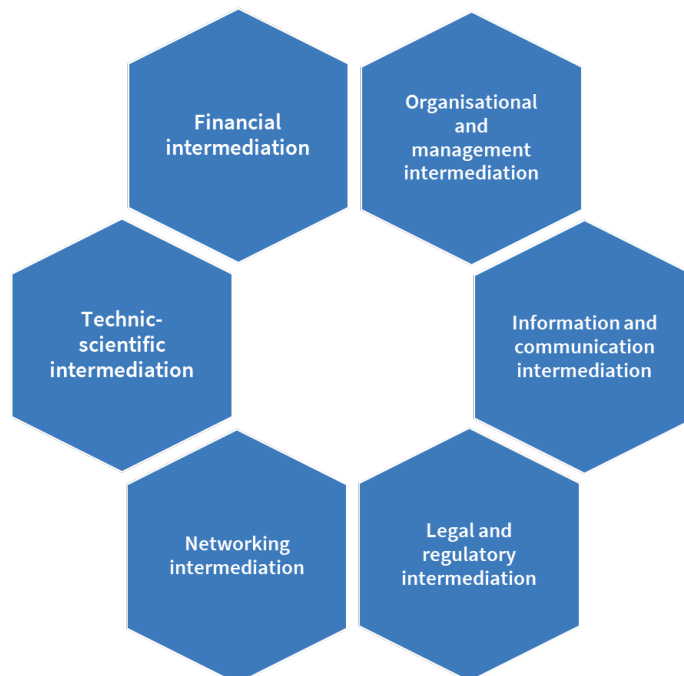


Figure 5: The Six kinds of intermediations examined in ENCI cases

The Table I below presents the sorting out of the various intermediaries that are involved for the six main forms of intermediation in the detailed case study analysis. The purpose here is to explore the relationships between the intermediations and the intermediaries, and to identify eventual intermediaries that would particularly be involved in some forms of intermediations.

Table I: Distribution of the intermediation forms in the ENCI cases

Distribution of the intermediation forms in the case studies		Quantity	% of the intermediation category	% of the total
a) Management and organisation intermediation	a) Commercial intermediaries	6	13,6	16,3
	b) Governmental intermediaries	6	13,6	
	c) Educational intermediaries	1	2,3	
	d) Non-government (collective) intermediaries	7	16	
	e) Other civil society organisations acting as intermediaries	17	38,6	
	f) Intercessors	3	6,8	
	g) Other	4	9,1	
	Subtotal	44	100	
b) Financial and funding intermediation	a) Commercial intermediaries	16	23,2	25,6
	b) Governmental intermediaries	23	33,3	
	c) Educational intermediaries	1	1,5	
	d) Non-government (collective) intermediaries	9	13	
	e) Other civil society organisations acting as intermediaries	6	8,7	
	f) Intercessors	6	8,7	
	g) Others	8	11,6	
	Subtotal	69	100	
c) Networking and coordination intermediation	a) Commercial intermediaries	2	3,8	19,6
	b) Governmental intermediaries	7	13,2	
	c) Educational intermediaries	5	9,4	
	d) Non-government (collective) intermediaries	23	43,4	
	e) Other civil society organisations acting as intermediaries	10	18,9	
	f) Intercessors	2	3,8	
	g) other	4	7,5	
	Subtotal	53	100	
d) Information and communication intermediation	a) Commercial intermediaries	11	24,4	16,7
	b) Governmental intermediaries	6	13,3	
	c) Educational intermediaries	5	11,1	
	d) Non-government (collective) intermediaries	8	17,8	
	e) Other civil society organisations acting as intermediaries	5	11,1	
	f) Intercessors	3	6,7	
	g) Other	7	15,6	
	Subtotal	45	100	
e) Technic and scientific intermediation	a) Commercial intermediaries	18	46,2	14,4
	b) Governmental intermediaries	2	5,1	
	c) Educational intermediaries	10	25,7	
	d) Non-government (collective) intermediaries	5	12,8	
	e) Other civil society organisations acting as intermediaries	2	5,1	
	f) Intercessors	2	5,1	
	Subtotal	39	100	
f) Legal/regulatory and institutional (lobbying) intermediation	a) Commercial intermediaries	3	18,7	5,9
	b) Governmental intermediaries	5	31,3	
	d) Non-government (collective) intermediaries	5	31,3	
	e) Other civil society organisations acting as intermediaries	2	12,5	
	f) Intercessors	1	6,2	
	Subtotal	16	100	
g) Other intermediation	b) Governmental intermediaries	1	25	1,5
	f) Intercessors	1	25	
	g) Other	2	50	
	Subtotal	4	100	
Total		270		100

The analysis of the intermediary forms is summarised below:

- All forms of intermediations are well represented and distributed across the empirical cases, with a noticeable under-representation for the Legal-Regulatory and institutional (lobbying) intermediations⁸. This underlines that institutional change or lobbying is not much tackled by ENCI cases in general, especially due to

8. No clear-cut explanation can be provided for this underrepresentation of the legal and regulatory intermediation, which might result from various causes: the difficult access to such intermediation, the lack of representation of ENCI interests at the governmental levels, the absence of structuration of ENCI lobbying, etc.

their small size and their high dependency on volunteering work. However, some cases underline the key importance of such intermediation, like in Germany the “*Wir sind nicht Prokons*” campaign against a law project that would have been preventing the *LaVidaVerde* case to come to being. In some other (rare) cases, though, the lobbying task or intermediation is taken on and provided by the ENCI, e.g. when they want to achieve some changes in local or national policies (an example in Hungary would be the *Community Energy Programme of FoE Hungary* case).

- For most of the intermediation forms, a kind of intermediary actor is particularly salient: ‘other civil organisations’ acting as intermediaries for the management and organisational intermediations, ‘non-government collective’ intermediaries for the networking and coordination intermediation, ‘commercial intermediaries’ for the technic and scientific intermediation, ‘governmental intermediaries’ for the financial intermediation (though for this intermediation, the commercial intermediaries play also an important role).
- The various forms of intermediation identified encompass well the empirical observations, since only four intermediations out of 270 were characterised as “others”.


The analysis also revealed that funding intermediation represents a bit more than the fourth of the intermediation (25,5%) and might therefore be possibly slightly over-represented. However, it also underlines the extent to which financial and funding intermediations are quite a constant matter of concern for the ENCI actors of our cases, which explains the focus put on this specific form of intermediation.

Funding and financial assistance is the most often cited as the ‘first’ sort of intermediation needed by the ENCI cases, as found during the qualitative data analysis⁹ phase. Among the conditions for achieving goals, the financial aspects appear to play a critical role in our cases. Financial intermediations were reported to be important for the realisation of specific projects within the cases. For example, funding intermediation helped with getting subsidies and funding in order to secure bank loans for realising renewable energy projects, or for the initial required capital (*SoLocal Energy, Energy Communities Tipperary Cooperative, Loenen Energy, Reindonk Energy, Weert Energy*). In addition, intermediation related to EU funding support have been crucial for the creation of many ENCI cases. See the illustration blurb below.

Management and organisation intermediation was also apparent in many ENCI cases. The analysis shows that civil society organisations were the most common form of intermediary providing this intermediation type (Table I). This type of intermediation

9. Many cases reported financial intermediation to be of crucial importance for their goals, e.g., *Loenen Energy, Reindonk Energy, Weert Energy, SoLocal, LaVidaVerde, From the community energy programme to the community energy services, Som Energia, Galway Energy Cooperative, Energy Communities Tipperary Cooperative, Aran Islands Energy Cooperative, Hauts-de-France Pass Renovation, Bike evolution*.

commonly manifested as the assistance needed in the initial stages of setting up of the case, as well as in developing the case and its projects (see blurb below). While civil society organisations appear to be involved in diverse forms of management and organisation across all stages of ENCI cases, commercial intermediaries appear to have been key primarily for the set-up stage of cases. This is seen in the way cases turned to legal, law firms for legal support and to other commercial actors for assistance in entering the electricity market. Moreover, governmental intermediaries appear to be key for the later, development stages (e.g., obtaining planning permission for projects).

 Six Bulgarian NGOs were involved in the establishment of *Bike Evolution*. They provided consulting on diverse matters from organisational set-up to legal structuring.

Networking intermediation was mostly provided by non-government intermediaries. The function of networking intermediation was mostly to connect ENCI cases with their peers (e.g., energy cooperative to cooperative) for the purpose of knowledge exchange. However, there were other (less frequent) functions, including connecting ENCI cases with citizens, communities, industry actors, youth, schools, European projects, and NGOs. These are illustrated in the blurb below.

Information and communication intermediation was evenly spread across all forms of intermediaries. This intermediation achieved a number of functions including, promoting the ENCI cases to and communicating with citizens/communities/the public, translating communications into accessible languages, broadcasting or publishing materials, facilitating discussions, technical management of website/social media channels. An interesting finding from the analysis was that some cases criticise the communication performed on their behalf by the municipally contracted communication agencies. For instance, *Loenen Energy* describe how the Apeldoorn municipality has a contract with a communications agency, but they argued that the cooperative can communicate within their local community more directly and in a more financial effective way.

Technic and scientific intermediation was mostly performed by commercial intermediaries as Table I shows. The analysis showed that this intermediation was mainly important for the installation/use of energy infrastructure, for marketing purposes, feasibility studies, in conducting energy audits, monitoring and energy efficiency measuring. The analysis also showed that this intermediation varied across the different projects within each ENCI case. Moreover, cases draw on ‘informal’ forms for technic-scientific intermediation, e.g., obtaining technical expertise from within the local community. For instance, a *Loenen Energy* interviewee is quoted as saying: “there’s a lot

of expertise already in the community, and what we don't have ourselves, we hire a company that knows".

Legal/regulatory and institutional intermediation was the least common form. The analysis revealed that this intermediation was mostly in the form of legal consultancy for the purpose of writing/signing contracts and receiving advice on financial/tax matters. This type of intermediation appeared to be most important for ENCI cases which initiate large (often technical complex) projects with large investments. Due to the commitments/risks entailed, these cases often need formal legal expertise, to communicate with tax authorities, and to ensure that their activities comply with legal rules/regulations (i.e., due diligence).

5.2 Intermediaries involved in achieving the goals of ENCI cases

Integral part for understanding what type of intermediation is needed for the case to achieve its goals, are the sorts of actors and organisations that are part of this intermediation. During the detailed data collection phase, we empirically explored the role of the five kinds of intermediaries as summarised during the literature review (see Chapter 2.3 for a detailed description and Figure 6).

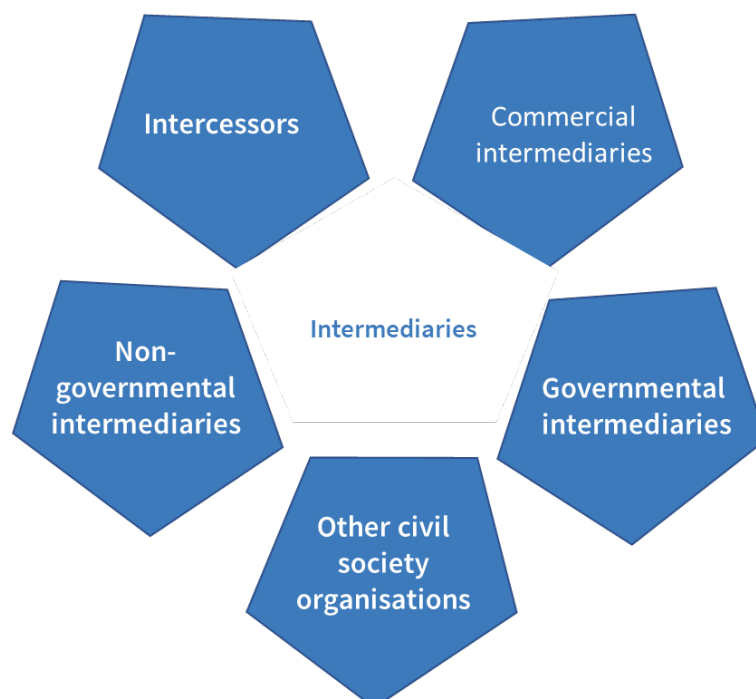


Figure 6: The Five kinds of intermediaries examined in ENCI cases

The Table II below displays the results we obtained by undertaking a symmetric data treatment for the intermediaries i.e., by sorting out the various sorts of intermediation that the five main sorts of intermediaries are exerting.

Table II: Distribution of intermediaries in the ENCI cases

Distribution of intermediaries in the case studies		Quantity	% of intermediary category	% of the total
a) Commercial intermediaries	a) Management and organisation intermediation	6	10,7	20,7
	b) Financial and funding intermediation	16	28,6	
	c) Networking and coordination intermediation	2	3,6	
	d) Information and communication intermediation	11	19,6	
	e) Technic and scientific intermediation	18	32,1	
	f) Legal/regulatory and institutional (lobbying) intermediation	3	5,4	
	Subtotal	56	100	
b) Governmental intermediaries	a) Management and organisation intermediation	6	12	18,5
	b) Financial and funding intermediation	23	46	
	c) Networking and coordination intermediation	7	14	
	d) Information and communication intermediation	6	12	
	e) Technic and scientific intermediation	2	4	
	f) Legal/regulatory and institutional (lobbying) intermediation	5	10	
	g) other	1	2	
	Subtotal	50	100	
c) Educational intermediaries	a) Management and organisation intermediation	1	4,6	8,1
	b) Financial and funding intermediation	1	4,6	
	c) Networking and coordination intermediation	5	22,7	
	d) Information and communication intermediation	5	22,7	
	e) Technic and scientific intermediation	10	45,4	
	f) Legal/regulatory and institutional (lobbying) intermediation	0	0	
	Subtotal	22	100	
d) Non-government (collective) intermediaries	a) Management and organisation intermediation	7	12,3	21,1
	b) Financial and funding intermediation	9	15,8	
	c) Networking and coordination intermediation	23	40,3	
	d) Information and communication intermediation	8	14	
	e) Technic and scientific intermediation	5	8,8	
	f) Legal/regulatory and institutional (lobbying) intermediation	5	8,8	
	Subtotal	57	100	
e) Other civil society organisations acting as intermediaries	a) Management and organisation intermediation	17	40,5	15,6
	b) Financial and funding intermediation	6	14,3	
	c) Networking and coordination intermediation	10	23,8	
	d) Information and communication intermediation	5	11,9	
	e) Technic and scientific intermediation	2	4,75	
	f) Legal/regulatory and institutional (lobbying) intermediation	2	4,75	
	Subtotal	42	100	
f) Intercrossors	a) Management and organisation intermediation	3	16,7	6,7
	b) Financial and funding intermediation	6	33,3	
	c) Networking and coordination intermediation	2	11,1	
	d) Information and communication intermediation	3	16,7	
	e) Technic and scientific intermediation	2	11,1	
	f) Legal/regulatory and institutional (lobbying) intermediation	1	5,55	
	g) other	1	5,55	
	Subtotal	18	100	
g) other	a) Management and organisation intermediation	4	16	9,3
	b) Financial and funding intermediation	8	32	
	c) Networking and coordination intermediation	4	16	
	d) Information and communication intermediation	7	28	
	e) Technic and scientific intermediation	0	0	
	f) Legal/regulatory and institutional (lobbying) intermediation	0	0	
	g) other	2	8	
	Subtotal	25	100	
Total		270		100

Table II shows that the five main sorts of intermediaries categorised for the 34 ENCI cases are well represented. In comparison with the intermediation Table I, the “other” category was significantly more often selected, since it represents more than 9% of the

270 intermediaries mapped for the detailed case studies – which represents a bit more than the 8,1% educational intermediaries and the 6,7% intercessors among the total. Therefore, we analysed in detail the content of the “other” intermediary category, to identify eventual patterns or explanations for the categorisation. The rest of the intermediary categories represent at least 15,6% of the total (for other civil society organisations acting as intermediaries): 18,5% are governmental intermediaries, 20,7% commercial intermediaries and 21,1% non-governmental collective intermediaries.

Table II provides also interesting results, notably with regard to its previous equivalent on the intermediation. Indeed, whilst a specific sort of intermediary tended to be overrepresented in each kind of intermediation, the various sorts of intermediary seem to potentially undertake several kinds of intermediations. This aspect is particularly obvious for **commercial intermediaries**, which may contribute to technic and scientific intermediations, financial intermediations, information and communication intermediations or even to management and organisation intermediations. The summary analysis of the different types of commercial intermediaries (Table III) shows the breadth of what case research reported as commercial intermediaries which might explain why the commercial category can undertake many intermediary functions.

The analysis revealed that ENCI cases turn to **commercial intermediaries** for support in areas such as, funding, legal expertise, marketing, construction, quality control and project realisation. This points to the way in which ENCI cases tended to need outsourced expert assistance in order to professionalise their activities, or when they are in later implementation phases of projects. For example, participating in the renewable electricity market requires ENCI cases to understand and comply with complex legal rules, and commercial entities can help with this, as well as the formulation of business plans, and the construction/installation of energy infrastructure. Moreover, many of our ENCI cases turned to commercial intermediaries for financial loans. This ranged from traditional or ‘green’ banks to commercial entities which are part of the [social and solidarity economy](#) (e.g., *Fiare Ethical Banking*). The benefit of commercial intermediaries was revealed to be their ability to bear risk for ENCI cases’ activities, due to their large financial back-up and/or turnover.

The analysis also underlines the strong linkages already stated and the role played by governmental intermediaries in funding and financial intermediations, that of the non-governmental collective intermediaries in networking and communication intermediations as well as that of the other civil society organisations acting as intermediaries in management and organisation intermediations.

Governmental intermediaries were central for the provision of funding for ENCI cases. For example, the creation of *Loenen Energy* was reliant on local municipal and governmental funding. Moreover, the involvement of government actors in ENCI case

creation can go beyond funding as cases were sometimes formed as a result of government-led programmes. For instance, *Hauts-de-France Pass Renovation* was created out of a legal obligation for regions to introduce an energy efficiency programme combined with a strong-political will of regional elected representatives and support from the French energy agency, ADEME. After the creation of ENCI cases, governmental actors evidently often continue to play a key role, because of the necessary involvement of administrative authorities in establishing, registering, and obtaining planning permissions, for example.

Non-governmental collective intermediaries primarily provided networking and coordination intermediation (see Table III). In this regard, the qualitative analysis revealed that certain non-governmental organisations can help ENCI cases to reach and consult with particular stakeholder groups in society. An example of this networking is the *National Youth Council of Ireland (NYCI)*, which worked with the Irish Public Consultation: *Shaping Our Electricity Future* case to help them in consultation with youth groups. Without the reputation of this intermediary among its stakeholder group, the case would not have been able to achieve a productive and meaningful consultation. A representative of the case said in the interview that they wanted to “work with [NYCI]” “because we didn’t just want them to do it for us and give us the feedback”. This illustrates the embeddedness of networking through a non-governmental intermediary, and the importance of collaborating with them, instead of a simple outsourcing/hiring approach. The value of coordination is also seen in the way ENCI cases use non-governmental intermediaries for the purpose of exchanging visions, knowledge and a shared sense of identity with other ENCI actors (e.g., peer to peer networking). In this way, this type of intermediary can facilitate the building up of a critical mass which may be strategically necessary to achieve transformative aims.

Intercessors also play a key intermediary role in the goals and achievements of the ENCI cases based on our analysis. Although intercessors represent a merely 6,7% of the reported intermediaries, their role was described to be crucial for many cases. These individuals can take various roles within a case. In our empirical data, they were found to be the founders or the creators of the cases, motivators, the individuals behind the ‘original’ case idea, important funders/donators, coordinators, or key individuals who are skilled in networking and bridging different actors together. There are many examples within our ENCI cases:

- Individuals (donators) can be highly helpful for the goals of the ENCI cases. In *SoLocal Energy* especially for the crowdfunding, individual donators organised to equip the association with a new cargo bike to transport the solar panels.
- “Charismatic leaders” can also be key ‘intermediaries’ and motivators, linked to key personal characteristics, e.g., independence, thinking out of the box (*Nagypali: Renewable energy village, SomEnergia*).

- A coordinator, an individual that can act as a boundary spanner between departments and between strategic and operational levels. For the case of *Mission efficience énergétique*, such individual initiates dialogues and organisational learning, launches proposals towards monitoring and evaluation, and seeks to empower the workers immediately responsible for implementation.

Table III: Reported empirical sorts of intermediaries in ENCI cases ¹⁰

Actors and organisations that take on intermediary roles in the cases studied in EnergyPROSPECTS	Kind of intermediaries summarised from the literature
National and Regional based Banks, European Investment Bank, British Council, Energy regulators, Renewable energy installation companies, Building and engineering firms, Agricultural entrepreneurs and farmers, SMEs, Advisory firms, Audio-visual firms, Legal-law firms, Auditors	Commercial
National, Regional and local governments, Municipalities, Municipal directorates, Municipal councils, City councils, Provinces, various Ministries (national gov.), European commission, National energy authorities, National environmental assessment agencies	Governmental
Schools, Erasmus+, Syndicats, educational hubs, educational associations, Universities, Academic and research institutes, research centres	Educational
Non-governmental foundation and associations, National Postcode Lottery, Social enterprises, Non-profit associations, NGOs, Associations of energy communities, Community coalitions, Cooperative unions, village councils, Local cooperative networks, local groups, National Park foundations, Regional energy desks, Architects cooperatives, Water coalitions, Housing associations	Non-governmental
Environmental and sustainable energy NGOs, Volunteers centres, Local and regional energy agencies, social energy services organisations, Academy of champions for energy, Climate movements, Environmental associations, Knowledge based associations	Other civil society organisations
Mayors, teachers, friends that help with the case, case founders-initiators, case-motivators, local volunteers, residents, donators, local farmers, members of the community council	Intercessors

Internal and external intermediaries. During the interviews with some of the ENCI case actors, a distinction was made between 'internal' and 'external' intermediaries which

10. Source: authors compilation.

was not revealed during the literature review or found in the quantitative data analysis. Internal, was defined by the interviewees, as an intermediary actor that is sourced within the case (e.g., a member), whereas external, was defined as an intermediary actor outside the case (e.g., an actor or an organisation not related or outside the network of the case). The results show that in some cases due to their extensive local networks or their embeddedness in the local (often rural) region, the high number of members can have access to local intercessors with diverse skills. Some case actors argued that they can do functions/tasks that in other cases are provided through intermediary work themselves internally as they have well sourced diverse skilled members related to, finance, policy-oriented issues, administration, technical advice, and networking. So, in terms of intermediation, they can manage a large part without external intermediation. It was mentioned however, that although they can do most of their required tasks, the main challenge they face is the time and capacity of people (volunteers) involved (*Loenen Energy, Reindonk Energy, HOSe*).

“Other” intermediaries. The category “other” (25 intermediaries) encompasses a variety of actors which case researchers could not assign to one of the five previous categories for multiple reasons. Among those reasons, a narrowed approach of the five categories or a too precise view on a case intermediary that would exclude it from the main categorisations. This is for instance the case for EU funding/subsidies or EU projects, which are fitting to the governmental intermediaries in the broad sense of their definition; the same logic applies for the *Hungarian Two-tailed Dog Party Fund* which has been seen as political but not governmental, though this alternative party could also be considered as governmental as it is financed on public funding for participating to elections since 2014. We kept the researcher views rather than forcing the corresponding intermediaries into one of the five categories, considering that these non-assignments were mostly resulting from unclear roles of 'actors', 'organisations' (notably when 'interviewees' considered them as intermediaries for the success of their cases) or from some ambiguities related to their 'in-between' role or to their 'interaction' with the case that might or not be considered as intermediation. On this basis, for the “other” intermediaries, we conclude that no additional category had to be added and that these 25 “other” intermediaries were not invalidating the five main sorts of intermediaries we identified during our literature review.

5.3 How important are intermediaries in the goal achievements of ENCI cases?

After examining the various intermediation needs and what kind of intermediaries are part of such intermediations in previous Chapters, below we turn to the follow-up question, on the ‘results’ of these intermediations. In other words, how important are/were these intermediations for the goals and achievements of our ENCI cases.

5.3.1 Assessment of the importance of intermediations and intermediaries in the detailed case studies

For each intermediation entered in the detailed case studies survey, the researchers were asked to rank its importance as low, medium or high. Those three categories were defined as such:

- **High:** the intermediation provided is/was determinant for the case setup, operation and goal achievement. In the absence of the intermediation/intermediary, the case would be radically different or it would even not exist as such.
- **Medium:** the intermediation provided played an important role in the case set up and goal achievement, yet it does/did not condition its existence. Alternative intermediation or intermediaries would have been possible without affecting the case.
- **Low:** the intermediation provided is/was helpful in the case set up and goal achievement, yet the intermediation and/or the intermediary cannot be considered as necessary or as conditioning the existence of the case. In the absence of the intermediation/intermediary, the case would have been more or less the same.

We then aggregated the results to analyse the distribution of high, medium and low according to the six (plus one “other”) intermediation forms on the one side, and according to the five (plus one “other”) intermediary categories on the other side. The outputs of this treatment are presented and analysed in this sub-section.

Taken as a whole, the role of intermediation in the goals and achievements of ENCI cases was reported by the case researchers, as predominantly *high with 171 out of 270 classified as high*¹¹. The score already indicates the importance that intermediation can play in assisting and facilitating cases to achieve their goals. Breaking down the overall analysis, in Figure 7 and 8 below we show the distribution of the importance based on the six forms of intermediations in numbers and percentages.

11. Medium scored: 74/270 and low: 25/270.

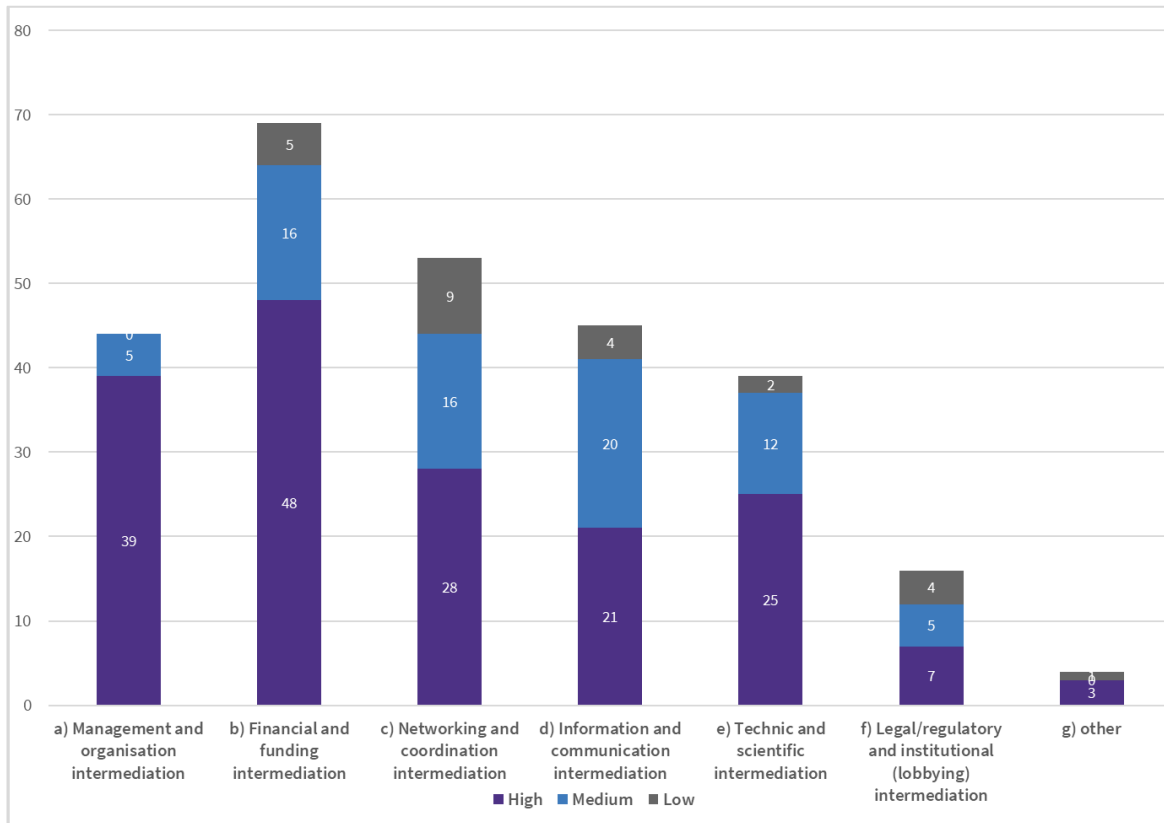


Figure 7: Distribution of importance by kind of intermediation

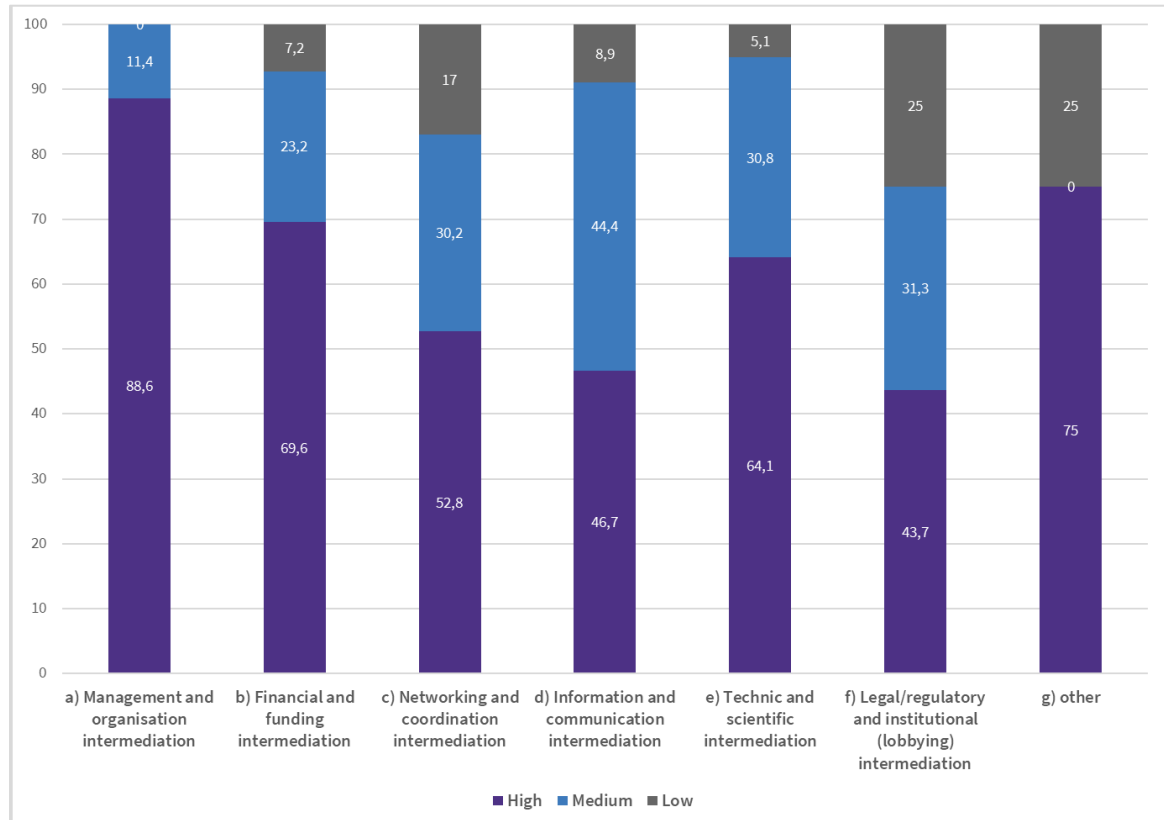


Figure 8: Distribution of importance by kind of intermediation

First, we observe that the score ‘high’ is reported in all forms of intermediations with the top three being (in terms of percentage): 1) management, 2) financial and 3) technic and scientific intermediation. The majority of our ENCI cases seem to need a combination of intermediations across all six forms, as Figure 9 shows very explicitly:

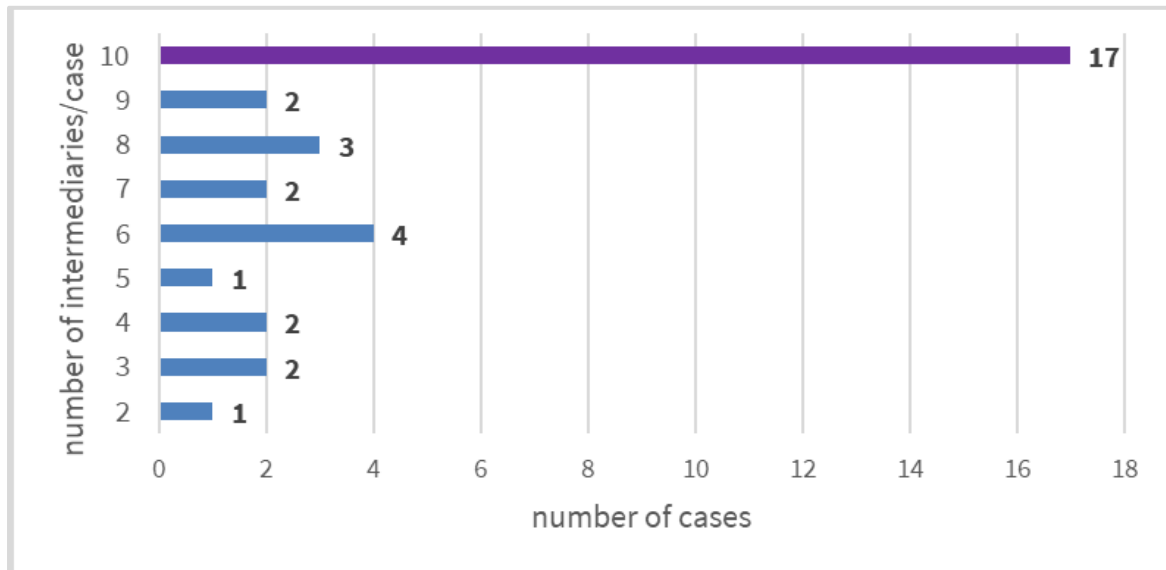


Figure 9: Number of intermediaries per case

Financial intermediation was needed the most, especially in the early stages of the creation of cases and when the cases have projects to realise that need ‘initial’ capital in the form of loans and subsidies to kick-off. In such cases financial intermediation was key to success. For the *Galway Energy Cooperative*, for example, a main success that the cooperative managed to make was enabled by financial support from the national government, namely, to acquire funding for the Energy Master Plan by the Sustainable Energy Authority of Ireland (SEAI). This financial intermediation goes beyond the funding itself but also includes establishing the architecture for Sustainable Energy Communities (SECs) in Ireland, which fosters networking opportunities and mentoring for the participating SECs.

Management intermediation although it comes second in the ‘high’ scoring is also first in terms of percentage (with less ‘Medium’ and none ‘low’ scores than other intermediations), which underlines the decisive role played by this form of intermediation. Management and organisation intermediation during the data analysis appear to be hand-in-hand with the financial intermediation. In many ENCI cases this type of intermediation was considered crucial in the establishment period and the first years of the case activities. According to the *Bike Evolution* case from Bulgaria, intermediaries (mainly NGOs) provided consultation on all matters related to organisational set-up, including the statute, registration and communication with authorities as well as funding organisations (Figure 10).



Figure 10: *Bike Evolution* case ¹²

Financial intermediation was also considered very important for the start of the *Bike Evolution* case and the first decade of its activity, but as the case progressed its importance diminished (reported Medium). Just like the financial intermediation, the importance of the management and organisation intermediation may also vary over time, or it can lay at the very heart of the case identity and its ability to sustain, by contributing directly to some key features of the case, as it does in the *LaVidaVerde* case, for which the *Mietshäuser Syndikat* represents since the very beginning a key intermediation, by allowing the building of the housing project to stay out of reach of speculative interests. The central role of the *Syndikat* is visually shown in the intermediary map where this key intermediary is placed centrally among the other related intermediaries of the case (Figure 19).

Technic and scientific intermediations are not the most important in numbers, yet they seem to have a significant importance considering the percentage of these intermediations that are scoring “high” (64,1%, 3rd rank). This can be found in cases such as *Loenen Energy* for which technical intermediations are crucial given the highly technical and ICT skills needed for the case projects (e.g., community Virtual Power Plant – [cVPP](#) – or the cooperative aggregator, namely [Wattflex](#)) as well as in the energy cooperative *Weert Energy* where they experiment with first pilot project in the Netherlands to combine a cooperative neighbourhood battery with large-scale local generation of sustainable energy via solar panels.

12. Source: <http://velobg.org/gallery>, accessed 03.04.2023.



Figure 11: The Neighbourhood battery and PV farm from Weert Energy in Altweeterheide ¹³

Legal/Regulating and lobbying intermediations scores the lowest in our dataset. That can be partly explained by the fact that legal intermediation appears to often overlap with management intermediation. In some ENCI cases legal support was described together with the importance of management intermediation. This could explain why although legal is an important intermediation, it was underreported as its role was partly described in the management organisation. Legal intermediation, especially in small and voluntary based cases (such as the energy cooperatives, *Weert Energy* and *Reindonk Energy*), the case actors often lack skills related to the legal preparatory works, understanding complex legal frameworks and meeting legal requirements (e.g., statute) for setting a legal company/charity/cooperative. This type of intermediation was instrumental especially in the early stages of the creation of an initiative. In some other cases, the legal and regulatory intermediations might however play a crucial role, such as in the *LaVidaVerde* case, in which the lobbying activities against a planned law made it possible for the case to come into being.

In addition to the importance of intermediation we examined in parallel the role of intermediaries as actors and organisations in the goals and achievements of ENCI cases in Figure 12 and Figure 13 (percentage) below. Key conclusions from these Figures are summarised as follows:

13. Source: [Energy Storage NL](#), accessed 27.03.2023.

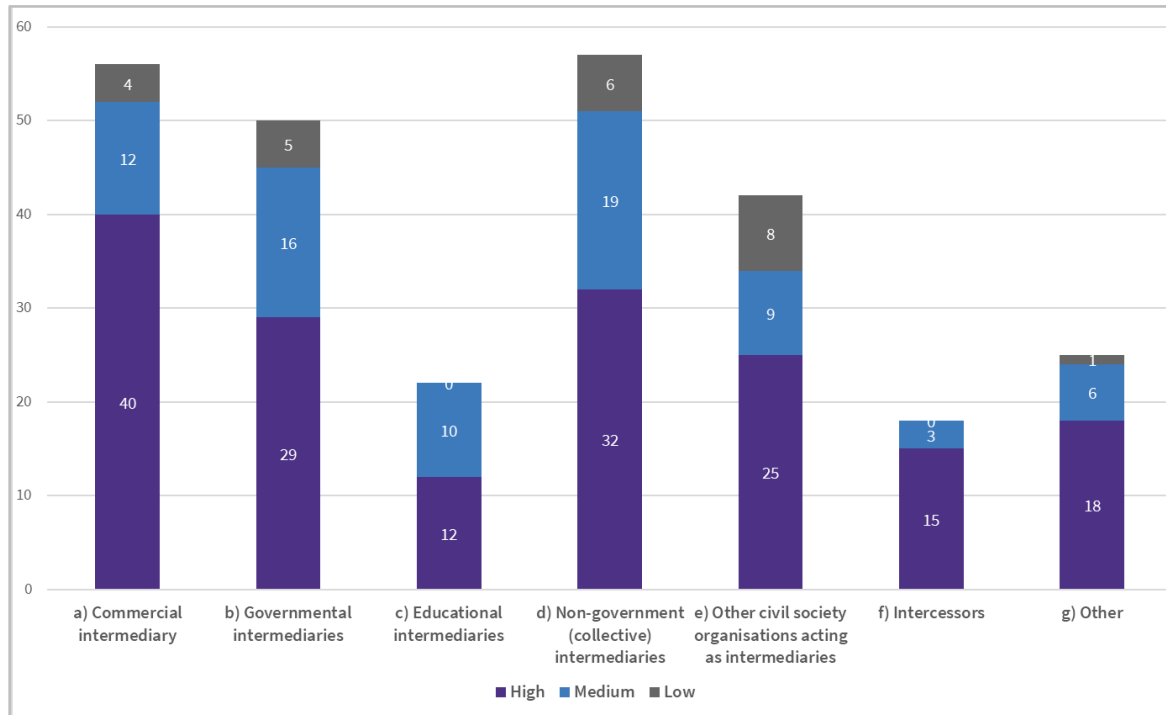


Figure 12: Distribution of importance by kind of intermediary

The top three higher score intermediaries in terms of percentage are: 1) intercessors, 2) others and 3) commercial intermediaries.

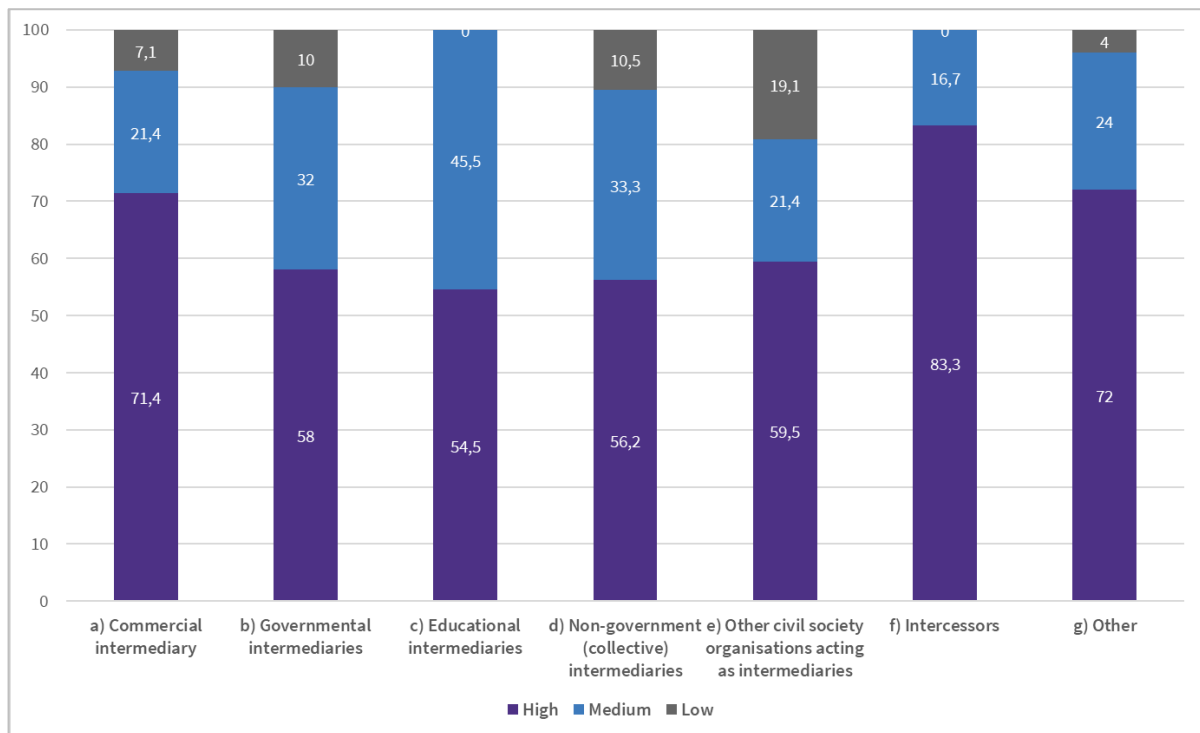



Figure 13: Distribution of importance by kind of intermediary (percentage)

Commercial intermediaries are accountable for the biggest number of “highly” important intermediations in comparison to the other five kinds of intermediaries. However, in Figure 13, intercessors score the highest in percentage importance. Intercessors represent a rather complex combination, since they represent only 6,6% of the intermediaries that have been mapped in the detailed case studies, yet 83,3% of the intermediations they provide are considered as of high importance – which is the highest rate, though not fully representative considering the little number of intercessors. One could thus consider that intercessors are quite seldom to be encountered in ENCI cases, but if so, they play a very decisive intermediation role for the case. A strong example of intermediation through an intercessor is from the *Mission efficience énergétique* case, see blurb below.

 The coordinator/intercessor of the case acts as a boundary spanner between departments and between strategic and operational levels, he initiates dialogue and organisational learning, launches proposals towards monitoring and evaluation, and seeks to empower the workers immediately responsible for implementation. As he also expresses himself, he started (voluntarily) as a matter of civic responsibility within his organisation, and now he is acting as catalyst, as frontrunner, to institutionalise this more broadly in the organisation. *Mission efficience énergétique*

Educational intermediaries score lower in terms of importance of the corresponding intermediations, considering their rather low number (22) and the percentage of those intermediaries that are considered as providing intermediations of high importance (54,5%). According to the case analysis, educational intermediaries (e.g., research institutes, universities, educational hubs schools and teachers) play a less important intermediation role for the development of the cases or for helping securing funds or loans which are linked more closely to their (short term) achievements. They appear often as key partners of a consortium, having an advisory or scientific role in innovative and technically challenging projects or pilots/prototypes (e.g., neighbourhood battery, cVPP, installing solar panels as noise barriers). The importance of the intermediation they undertake is therefore focused towards their ‘educative’ role for learning, knowledge and best-practice sharing. The distribution, density and numbers of educational intermediaries are observed in Chapter 5.5. It is illustrated that this intermediary is underrepresented in comparison with the other five kinds of intermediaries studied across our ENCI cases.

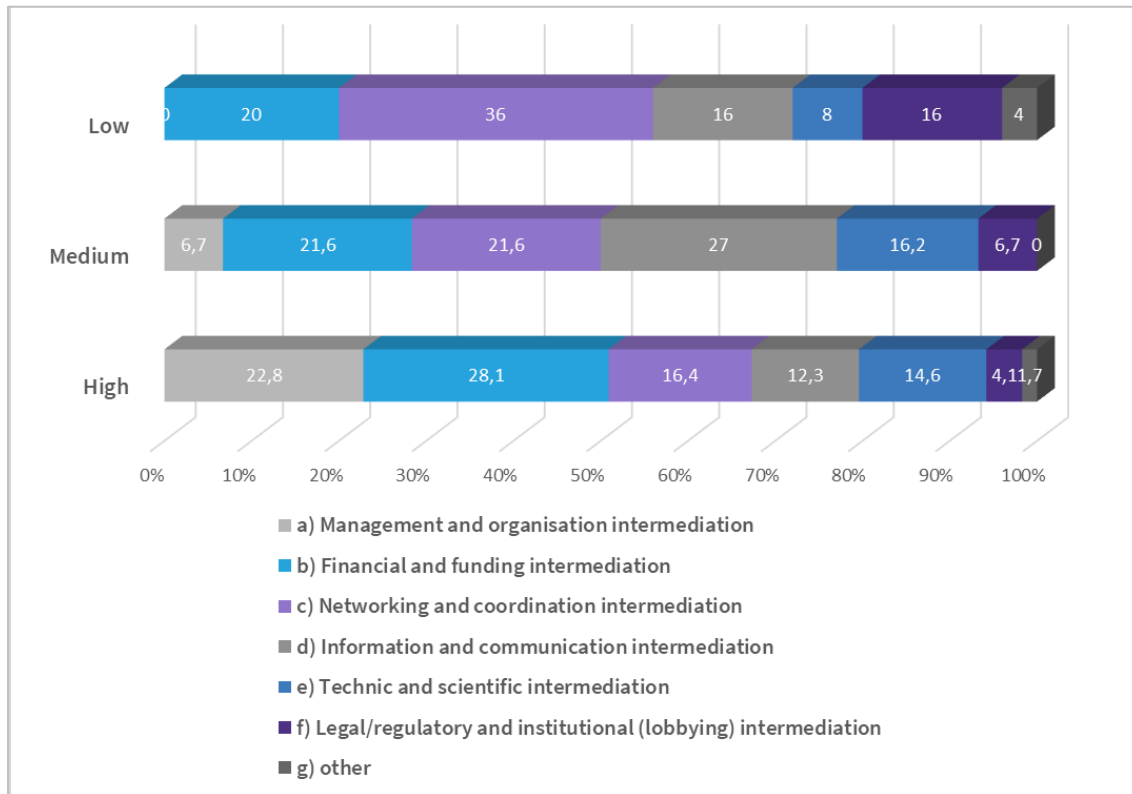


Figure 14: Distribution of intermediations by their importance (Percentage of the low/medium and high categories)

Figure 14 presents another aspect for interpreting the results, by showing how the high, medium and low categories are distributed according to the various sorts of intermediations. It shows that even though all sorts of intermediations are represented in the high importance category, this category is dominated in the first place by the financial intermediations and of the management intermediations – and secondarily the networking, information and technic-scientific ones. The medium category underlines the predominant role of the information and communication intermediations – and secondarily that of the networking and financial intermediations –, whilst in the low category the networking and coordination intermediations occur in the largest proportion. It confirms that some kinds of intermediations are mostly of key importance - such as the management and organisation ones -, and that the importance of some other kinds of intermediations is highly variable.

5.3.2 Intermediation as key condition for the goal achievements

Intermediation has been indicated by the case researchers as one of the key conditions under which ENCI cases can achieve their goals towards the democratisation of the energy system. A common explanation across the majority of the ENCI cases is the **long-term relationships and positive experiences of the case actors with key intermediaries which helped many cases to overcome challenges and achieve their goals** (*Reindonk Energy, SoLocal Energy, Burger Energie Berlin, TreeDependent, HOSe, Trégor*

Energ'éthiques, Aran Islands Energy Cooperative). An illustrative example is from *Reindonk Energy* where the case actors have been experiencing a positive and equally crucial relationship in intermediation with their grid operator. This relationship was built over a long contact between both parties and is guided by transparency and openness. This grid operator has been fundamental to the cooperative as they offer them only the technical help, but the case is also depending on other services such as legal and financial frameworks expertise, to quote the interviewee: 'We have with [grid operator] a quite valuable relationship. That is built during a long and earlier contact with them. So, they are also very open with us and that is quite nice.'

Another explanation given by the case researchers is the fact that the majority of the cases are/were relying on an *extensive and diverse number of partners*, key actors and organisations that assist the cases to realise their renewable energy projects (which are part of their goals and achievements) (*HOSe, Trégor Energ'éthiques, Student energy teams, Weert Energy, Reindonk Energy, Loenen Energy*). In relation to that, the case analysis shows that a wide range of intermediaries that fulfil a variety of functions (e.g., financial, organisational, networking, legal, lobbying, technical) play a decisive role for many cases to achieve their goals in general and with regard to the democratisation of the energy system in particular (*SoLocal Energy, LaVidaVerde, GoiEner Taldea, La Borda, HOSe*).

5.3.3 Intermediation importance varied in different stages of the cases

What is important to note is that intermediations are *considered important in different stages of the development* of the ENCI cases. Some cases actors indicated that intermediation was needed more during the creation of the cases by means of funding and financing, legal support, networking (e.g., via REScoop) and technical support (*Som Energia, La Borda, Loenen Energy, Energy Communities Tipperary Cooperative*). For other cases, intermediation needs were appearing more in an ad-hoc basis. When the cases needed specialised expertise, then they would turn to 'external' experts/professionals for their particular needs (*TreeDependent, Reindonk Energy, Weert Energy, Loenen Energy*). However, intermediation is not only linked at the early stages of the cases but is reported to play a role in different stages/processes of the case (*Citizens' Assembly, "Edgars Fresh" Individual*) and especially when the case involves complex projects in terms of technological pioneering, installation, realisation, maintenance, subsidy regime (*Weert Energy, HOSe*).



Figure 15: Energy Communities Tipperary Cooperative gathering learning about grants available to retrofit homes and ways to reduce energy usage at home ¹⁴

5.3.4 Intermediary cases and the role in intermediation processes

For some intermediary cases (e.g., [National Association of Active Residents](#) - LSA and [Naturstrom](#)), the role of intermediation is argued to be a key condition for achieving goals for a fair energy transition, ‘one organisation cannot achieve these ambitious goals alone’ (LSA interviewee). For example, the Dutch intermediary LSA that represents groups of active citizens is working in partnership with 250 partners across the Netherlands and recently they have developed an intermediary network called the ‘Participation Coalition’ with five main Dutch intermediaries. Through this wide network, the Coalition partners are able to create a stronger position and a joint voice of residents in energy transition and help to build constructive cooperation between various stakeholders, such as the municipalities, national government and energy market parties/sectors. LSA’s intermediary network is illustrated in Figure 16. Its networking and intermediary role is illustrated with the number of arrows which connect the multiple LSA partners.

A key intermediary between consumers and producers of renewable energy in Germany is *Naturstrom*. There are multiple actors and organisations that are part of *Naturstrom* intermediation, namely private consumers, business/organisation customers, local districts, real estate businesses, operators of power plants, as well as the particular units and locations that make up the *Naturstrom AG*. *Naturstrom AG* is cooperating with multiple local governments of smaller towns on renewable energy projects. *Naturstrom* enables them to produce the energy they are needing for electricity and heating in supporting them during the whole process of building and running energy production sites: Project planning, building, maintenance, operation, marketing. Accordingly, local governments are customers or business partners. The solar parks and wind farms are


14. Source: [twitter](#) post @enercooptipp, accessed 27.03.2023.

also possibly producing energy for the wider region, so *Naturstrom* acts as an intermediary between energy consumers in the region and local towns that are producing energy. Thus, *Naturstrom* is providing essential energy-related services to them. *Naturstrom*'s wide national actor networks are also evident in their intermediary map (Figure 16).

5.4 The 'other' side of intermediation

Alongside the importance of intermediaries and their respective intermediations for the goals and the development of ENCI cases, their role has also been portrayed for some cases as challenging with less positive experiences or as some interviewees described as 'failed' intermediation. In literature, similar experiences have also been reported as intermediaries can be portrayed as 'less neutral' due to their own interests (Kivimaa, 2014) or failing to fulfil their roles and blocking rather than facilitating (Sovacool et al., 2020; Zaunbrecher et al., 2021). Below we present some of the experiences reported from our ENCI cases.

Challenging intermediation. Not all intermediation is good intermediation (Sovacool et al., 2020). This was also apparent during our interviews. In particular, relationships with commercial intermediaries (e.g., banks) was found to play a hampering role in securing loans for project development. It was argued that especially business plans of small energy cooperatives did not often fit the requirements from commercial banks and that discouraged case actors for realising renewable energy projects (*Railcoop*, *Reindonk Energy*).

 The *Reindonk Energy cooperative* has experienced challenging intermediation especially with its relationships with what are considered as 'green' banks and their ability to secure a loan. It was argued that small cooperatives, struggle to secure loans and in comparison with more commercial stakeholders such small initiatives cannot compete. 'We have been too small to be receptive from the large banks [...] You are actually hoping that the green banks have been on the lookout for our cooperative. But once we ask them: Can you support us? Then none of that was possible. You don't fit into our system they said'. (Source: Interviewee from *Reindonk Energy*)

In addition, the relationships with governmental intermediaries such as municipalities and regional governments/authorities was also argued to be often a challenge. This is linked to the lack of ‘horizontal support’ (as opposed to ‘vertical’, top-down support from the national government) and to all types of restrictions, state guarantees and permits required from municipalities, which delayed or blocked the start of projects (*Railcoop*, *Aran Islands Energy Cooperative*, *Galway Energy Cooperative*, *Weert Energy*, *Reindonk Energy*, *Loenen Energy*) or funding arriving only when specific work was completed (SEAI funding – Energy Master Plan, *Galway Energy Cooperative*). In many instances a lack of good relationship with local authorities has been identified as a key barrier for the (further) development or the creation of many cases.

Lack of intermediation. Some ENCI cases are reporting missing intermediations or lack of some sorts of intermediation, such as the *Galway Energy Co-operative*, of which actors reported that there has been a lack of intermediation when it comes to support for the management of cooperatives as organisations and start-ups. Registrar of Friendly Societies (the regulating body for cooperative societies in Ireland) usually deals with large-scale cooperatives but is not designed to provide the kind of management and organisation intermediation needed by new small energy cooperatives. In other contexts, the case actors required support from intermediaries, like in the Hungarian case of *Zsuzsanna Hojtsy-Keresztény – Energy Neighbourhoods energy master, local change maker*, however, they were not successful. This case specifically would have needed intermediation related to organisation development and networking, they did make some contacts and trials, but up until our research (conducted February 2023), they were not successful in finding intermediary partners.

5.5 Visualising intermediations and intermediaries

In EnergyPROSPECTS we designed an intermediary mapping tool to supplement the detailed data collection on intermediation (see Annex 4 for a larger size of the intermediary maps presented in this section). Especially because investigating the role of intermediaries in goals and achievements of ENCI cases is often complicated and with blurred boundaries (Kivimaa et al., 2019), a mapping tool can offer a ‘helping hand’ in fleshing out complex relationships between the cases and the multiple intermediaries that link directly to these cases. The mapping tool helped to provide insights on the following topics:

- **Distinguishing and comparing ENCI cases which are intermediaries themselves.**
- **Comparing similar ENCI cases.**
- **Patterns arising from the maps.**

Comparing intermediary cases. *LSA* and *Naturstrom* (Figure 16) are two of our ENCI cases which can be described as intermediaries themselves. The mapping tool allows us to visually compare these cases to others which are not intermediaries. It is evident from the two maps that *Naturstrom* and *LSA* operate at the national level and they both play a key role in connecting with multiple actors, partners or other intermediaries across all levels from local, regional, national, and European. This contrasts with cases, such as e.g., energy cooperatives (Figure 17) which are geographically situated more ‘centrally’ at the local level and connect ‘outwards’ to regional and national-level intermediaries. In addition, the relationships that are mapped through these intermediaries, visually illustrate the more (traditional) role of these intermediaries as connecting, networking, facilitating knowledge and support organisations through various kinds of intermediations (van Lente et al., 2003).

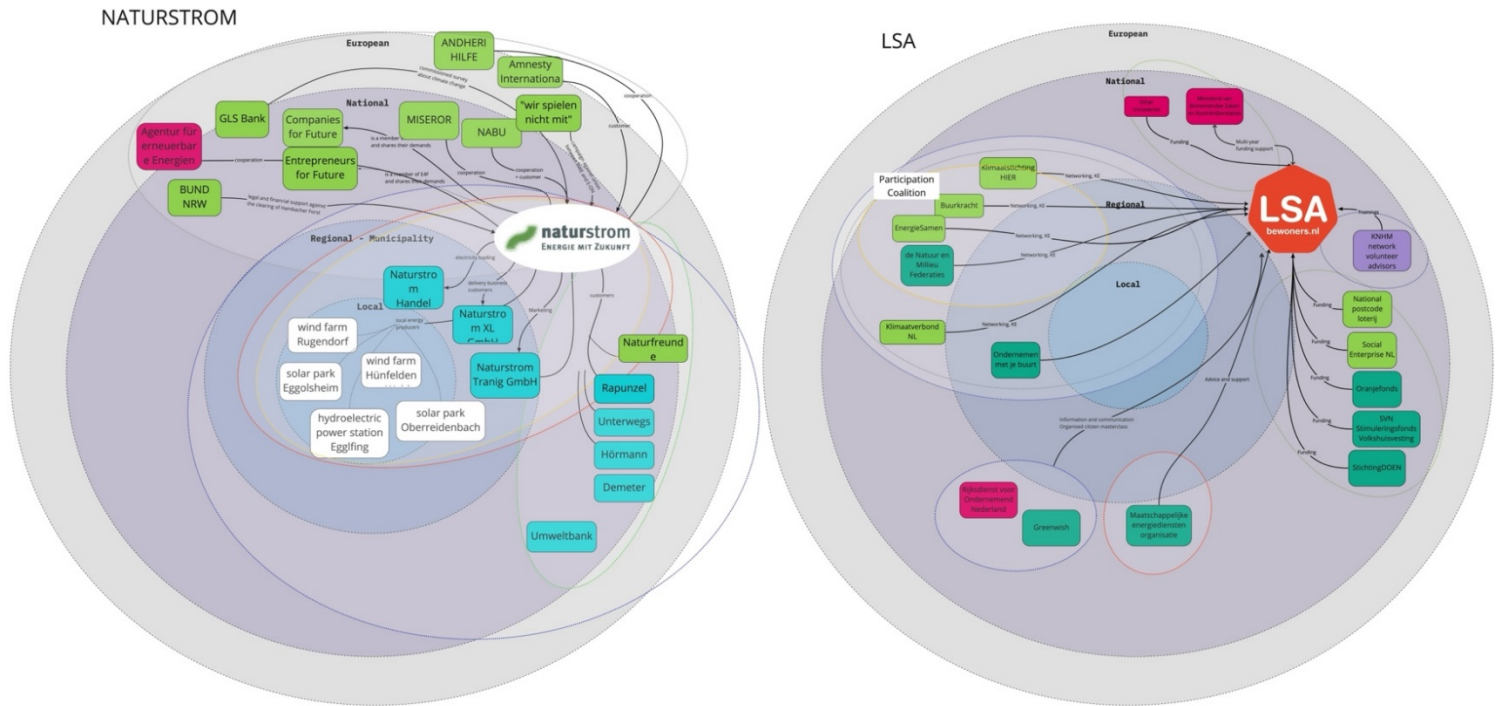


Figure 16: Intermediary maps of *Naturstrom* and *LSA*

Comparing similar ENCI cases. *Goiener*, *SoLocal Energy*, *Weert Energy* and *Reindonk Energy* are all local energy cooperatives with similar intermediary maps (Figure 17). All four cases are ‘centrally’ located in the maps due to their geographical bond and their physical operation in the local area. In terms of the number of intermediaries operating in the direct locality of the cases, these are absent (except for one key intercessor in *Goiener*) showing that intermediary support is often found at more decentralised level. However, a multiplicity of intermediaries (from all five kinds studied) were found across all four cases and in the (intersections of) national, regional/municipal levels. The comparison also reveals that European level intermediations are confined in a) the form of the European Commission, their related funds and b) their connections with *REScoop*. What is interesting to note here is that all cases receive key intermediation support from intercessors (i.e., donors, retired individuals or key motivators of the cases) who are spread across the local and regional level. This complements the results from the detailed case study on the central role of key individuals connected to the ENCI cases.

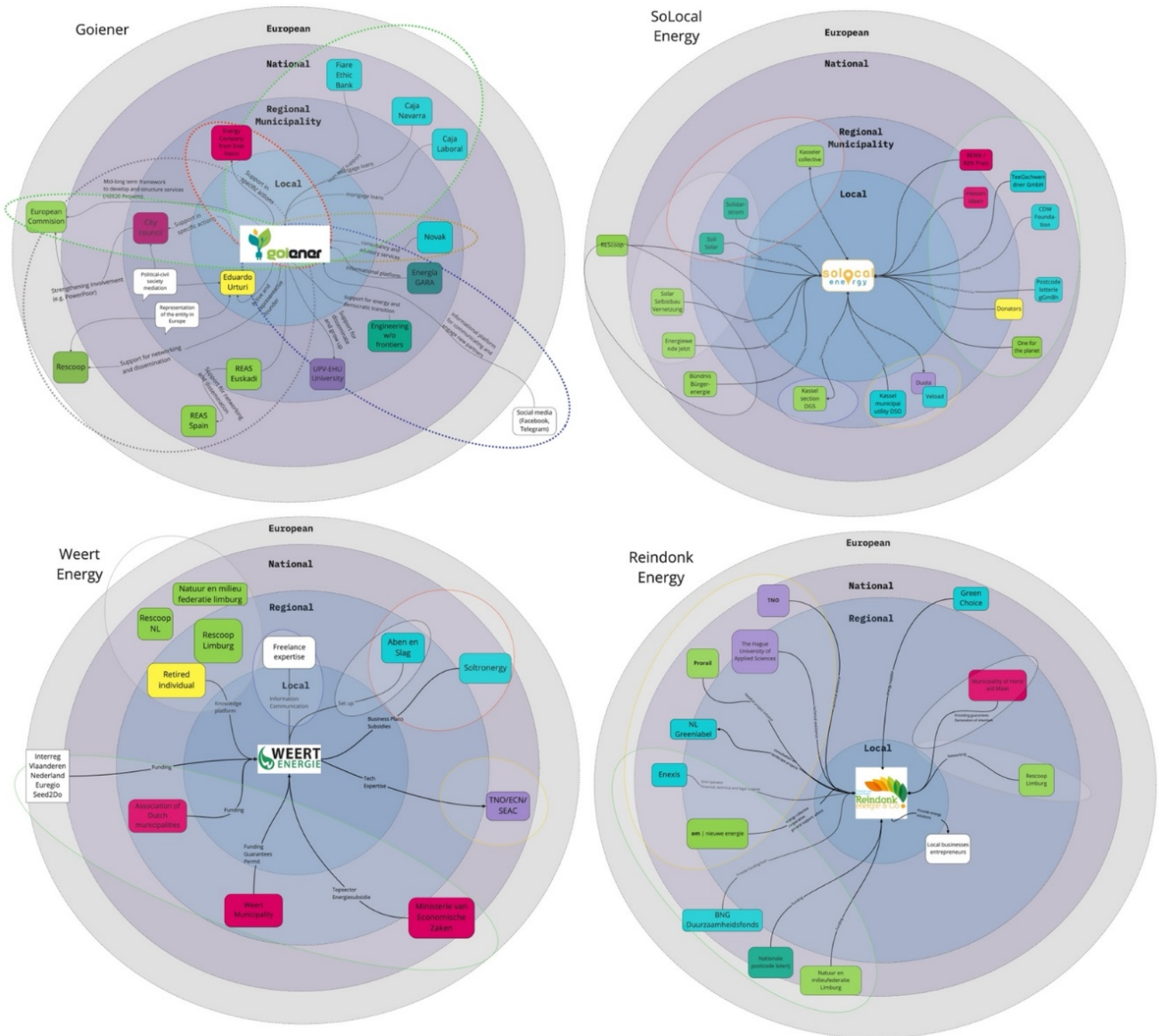


Figure 17: Intermediary maps of Goiener, Solocal Energy, Weert Energy and Reindonk Energy

A different type of energy cooperative map from Energy Communities Tipperary Cooperative. A distinctive different intermediary map is the *Energy Communities Tipperary Cooperative (ECTC)*, which assists homeowners in leveraging grants under government schemes to retrofit their homes and improve energy efficiency (Figure 18). ECTC is placed at the regional level, in contrast with other more traditional local-based energy cooperatives (Figure 17) but links with its 14 member communities at the local level. We also observed that due to the character of the ECTC and its dependency on the support schemes from the Sustainable Energy Authority of Ireland (SEAI) and Just Transition Funds, the type of intermediaries linked with the case are more connected with governmental intermediaries as well as commercial intermediaries (i.e. credit unions) which were deemed important as they offer Green Loans to assist homeowners

to cover their part of grant funded Retrofit works as part of the new National Housing Retrofit Scheme and Communities Scheme 2021 with SEAI (ECTC, 2023) ¹⁵.

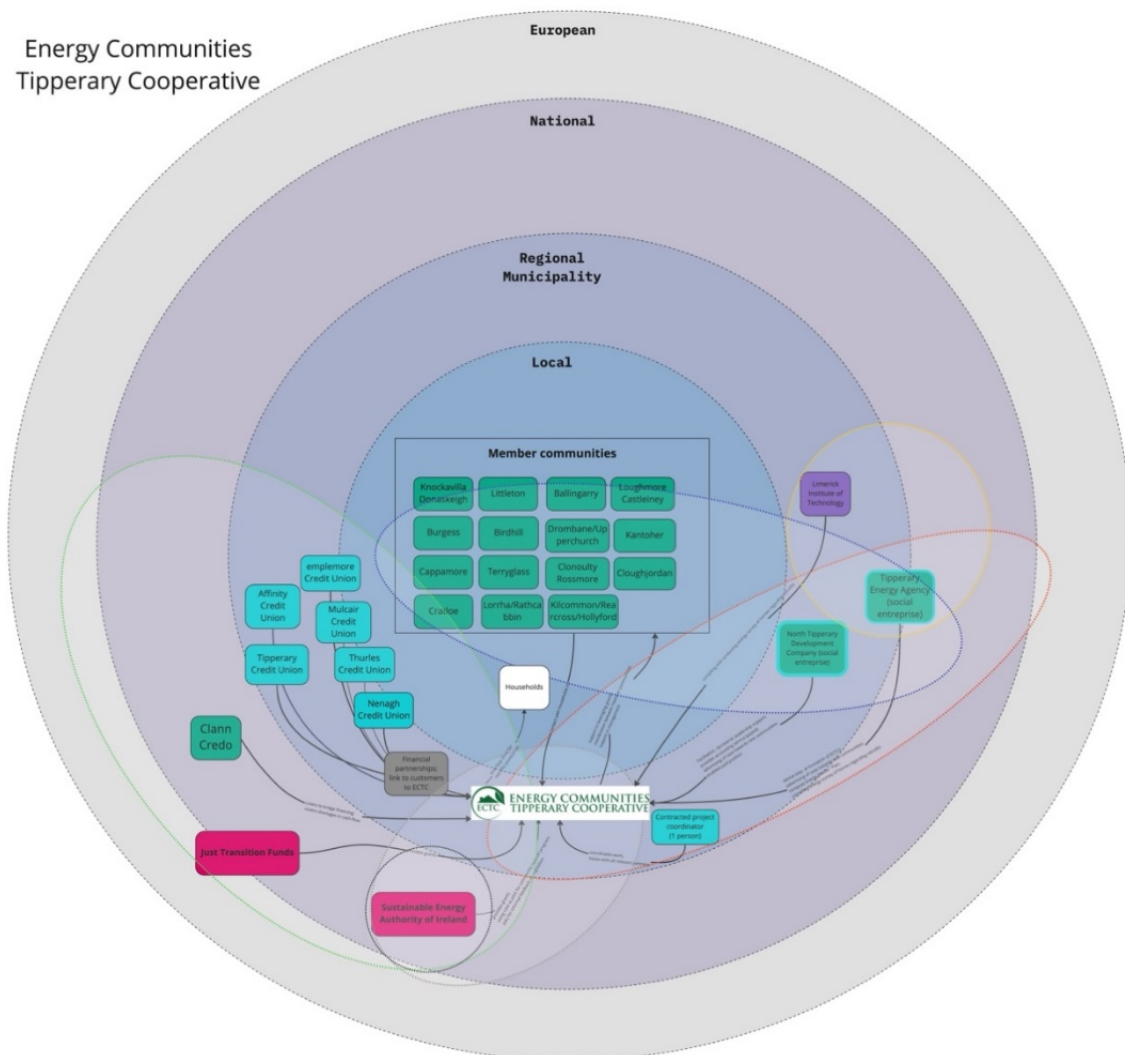


Figure 18: Intermediary map of *Energy Communities Tipperary Cooperative*

Mapping patterns. First, we need to acknowledge that every ENCI case is unique with its distinctive character and networks of intermediaries at various geographical levels. That is linked to the phenomenon of intermediation as inheritable complex and the multiplicity of intermediaries as important for the various functions and developmental stages of each case (Kivimaa et al., 2019; Moss, 2009; Van Veelen, 2020) ¹⁶. This complexity and the rich mosaic of intermediaries is evident from the illustrative maps. Acknowledging the unique character of the cases, we are summarising below some general patterns that we observed from the mapping analysis.

15. Energy Communities Tipperary Cooperative (2023): Website Energy Communities Tipperary Cooperative. URL: <https://energycommunitiestipp.ie/> (Accessed 11.03.2023).

16. Note: the intermediary maps are snapshots of the cases at the time of the data collection, and they do not show how these intermediaries or forms of intermediation developed over time.

- A variety of intermediaries, across the five studied kinds, are engaged in all the mapped ENCI cases. The number and the density of intermediaries however varies from e.g., 11 (*Weert Energy*) to 24 (*Naturstrom*). It appears that intermediary cases, like *LSA* and *Naturstrom*, have higher number and density of intermediaries that are connected with and this can be explained due to their ‘official’ role as connectors, networkers, facilitators, and bridge builders.
- The geographical spread of the intermediaries depends on the goals and ambitions of each ENCI case. For example, the cases that are intermediary themselves have a ‘national starting point’ in the maps, representing the interests of their members at a national scale, whereas cases such as local energy cooperatives have a ‘local starting point’. As explained earlier, this can be explained due to their physical/geographical connection with their direct locality. As Germes et al. (2021) indicate, these local connections and bonds in their local area, in the form of support social networks from intermediaries can be an important factor for the successes of the ENCI cases.
- Intercessors and charismatic individuals are found to be present in most of the mappings. For example, some cases make reference to one key individual (e.g., *Goiener*, Eduardo Urturi) while other cases crucially depended on a number of intercessors such as in the *LaVidaVerde* case where the case got support from friends, as well as from the project planner, the architect and the project engineer of the project (Figure 19).

LaVidaVerde in Berlin

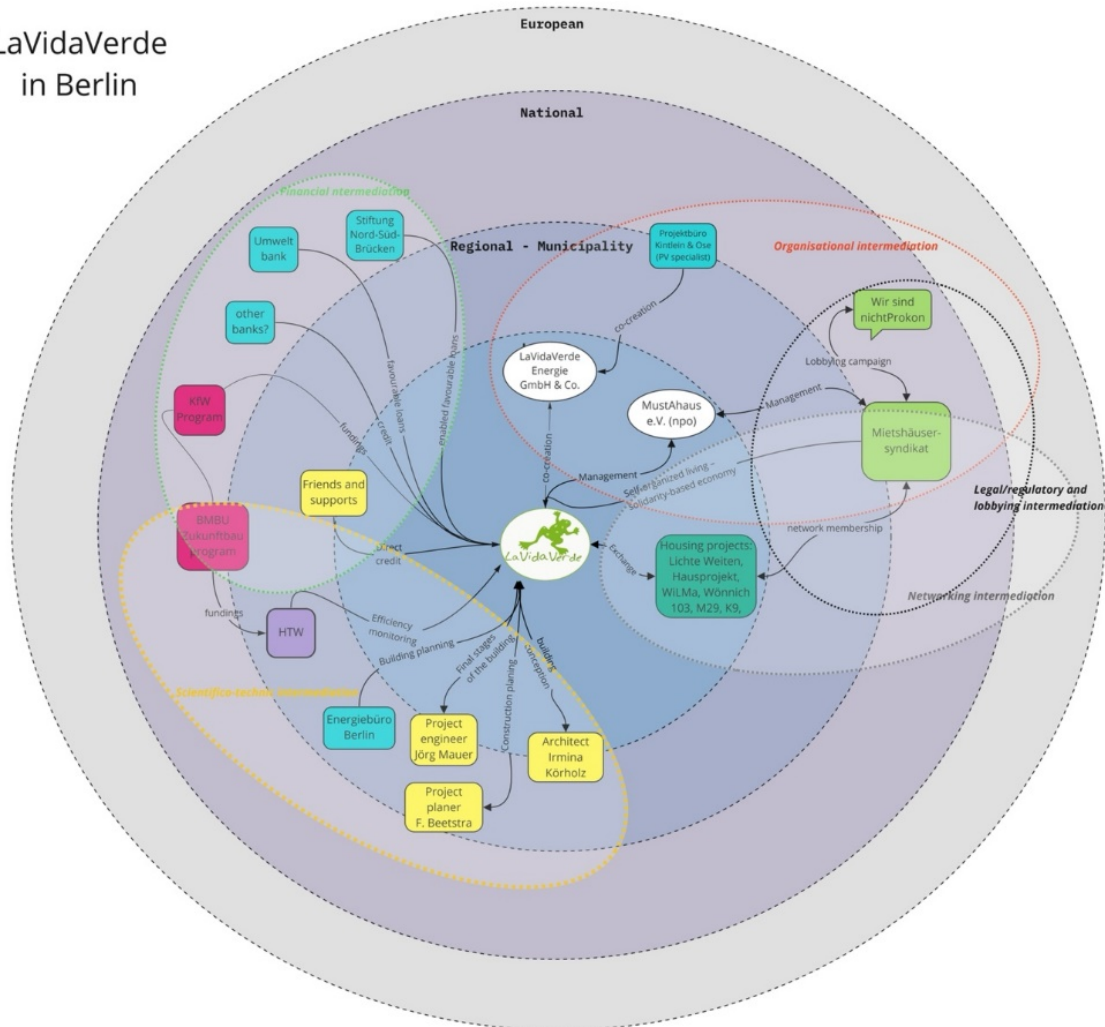


Figure 19: LaVidaVerde Berlin intermediary map

- In terms of the representativeness of the five kinds of intermediaries we observe a great variation. Taking as a whole, top three intermediaries in terms of numbers and density, illustrated in the mapping are: 1) governmental, 2) non-governmental, and 3) commercial intermediaries. Other civil society intermediaries are also present but in less density. These results support the findings from the detailed case analysis. It confirms visually how important are governmental intermediaries in the various developmental stages for the cases including, funding, providing guarantees, or granting planning permissions for projects. In addition, commercial intermediaries are also visually confirmed in the mapping as key intermediaries for all sorts of intermediations related to technic and scientific intermediations, financial intermediations, information and communication intermediations and management and organisation intermediations.
- Educational intermediaries appear less frequent and in terms of numbers in the maps and they are mainly linked to scientific and technical expertise that is linked to complex and new/innovative projects or pilots. Examples include: 1) the

neighbourhood battery from *Weert Energy* where there is a close collaboration with TNO (research institute) providing scientific expertise, 2) *Energy* for its cVPP project where the Technological University Eindhoven is the EU consortium lead and 3) *Reindonk Energy* for the PRORAIL project where the Hague University of Applied Sciences and TNO are the key scientific partners. As concluded in the detailed case analysis, educational intermediaries often appear as key partners of a consortium or as having an advisory or scientific role in technically challenging projects or prototypes. Another reason for the relatively small numbers of education intermediaries is partly due to the fact that the majority of our ENCI initiatives primarily adopt tested technologies and they do not engage in new types of technological development themselves and partly due to the fact that they are mostly oriented towards members and not towards commercialisations or expanding their clientele.

- At the European level, two recurring intermediaries appear to have an influence in the goals and achievement of our ENCI cases, the EU commission via the funds and subsidies and *REScoop* as a networking and knowledge exchange intermediary. This illustrates the predominance of the EU funds and their importance for both the creation of cases by providing initial capital as well for the development of the cases, for example, being partners in EU projects consortiums. There were however some cases like, the *Energy Communities Tipperary Cooperative* and *Reindonk Energy* which did not seem to depend on EU funding. Nevertheless, to be engaged in an EU consortium or apply for EU funds, according to the study participants, often requires dedicated work and the capacity of individuals from the cases. It was argued from some interviewees that the bureaucratic/paperwork and amount of preparation for EU subsidies made it difficult for many cases to engage and that such processes can act as discouragement.

6 DISCUSSION

This Deliverable sets out to find what types of intermediations are (or have been) needed so that cases of ENCI can achieve their goals. As our literature review revealed, the role and work of intermediaries in promoting or establishing ENCI remains largely understudied. Below we thus provide the first detailed, empirically grounded results of the activities of intermediaries in cases of ENCI and we aim to shed more light on what it means to be an intermediary in the context of ENCI.

6.1 Kinds of intermediations and intermediaries in ENCI cases

First, in exploring what kinds of intermediation(s) was/is needed for the case actors to achieve their goals, our analysis reveals that all six forms of intermediations were well distributed across the empirical cases. What is interesting to note is that the **funding and financial assistance** was the main form of intermediation that was reported during the data analysis, showing its critical role in helping ENCI cases achieving their goals especially when these goals are linked with being awarded subsidies, funding, helping securing loans and the necessary capitals for ENCI projects.

Hand-in-hand with funding, was **management and organisational intermediation** which was commonly manifested across the cases. This form of intermediation was found to be important not only for the initial stages of setting up cases with legal support (e.g., statutes) but also for assistance in entering the electricity market and at later developments stages, for example by obtaining planning permissions for projects or by getting guarantees from the local authorities (see also Germes et al., 2021).

In further investigating what sorts of actors and organisations are part of ENCI intermediations, our analysis revealed that all five kinds of intermediaries can perform all the six sorts of intermediations by combining the required skills and knowledge. This is in line with the literature that shows a significant variety of actors that take on multiple intermediary roles (Hodson et al., 2013; Kivimaa et al., 2014). Zooming into the data, we found that in particular two sorts of intermediaries, the **'commercial'** and **'governmental'** intermediaries undertake several kinds of intermediations for our ENCI cases. Commercial intermediaries for example were found to contribute to a wide range



of ENCI needs, namely, financial, technic and scientific, information and communication and management intermediation.

A salient intermediary that was found to be of crucial importance for the development of our ENCI cases, were the **intercessors**, individuals acting as connectors who are viewed as competent and fair. Intercessors often performed multiple roles within the cases. One role is to make other individuals ‘think out of the box’ and going an ‘extra mile’¹⁷, without which the case would not have been the same (or even not existent).

Related to the role of intercessors, were, what was cited during some of the interviews, the role of **the internal** (sourced within the case) **and external** (sourced outwith the case) intermediaries. Especially when the case is well embedded in the local (often rural) region, then it can have a more extensive web of local networks and that offers or creates more opportunities to have easy access to local and ‘internal’ intercessors.

6.2 Intermediations/ries role in goals and achievements

Following up the kinds of intermediations and intermediaries needed, the issue addressed in this deliverable was to find out the results of all different sorts of intermediations and, in other words, to help understand the importance of intermediation for the goals and achievements of ENCI cases. First and foremost, the results show that the overall **intermediation importance was scored as ‘high’** (171 out of 270). Supporting the quantitative results, the in-depth interviews with the case actors also confirmed that intermediation is considered one of the key conditions under which ENCI cases can achieve their goals. Common explanations reported are: a) the positive experiences, the long-term relationships of the case actors with key intermediaries, as well as the local embeddedness of the case and b) the extensive, diverse and rich network of (local) partners, actors and organisations that help during the different stages of the development of the cases.

Overall, we observe that ENCI cases seem to **need a combination of intermediations across all six forms that varies over the time** and the different stages of the case development. The picture is however more diverse when we break down the results into the specific importance of intermediary/tion forms. **Management and organisation** intermediation was found to be of higher importance (in both numbers and percentages), underlying the decisive role especially in the establishment period and the first years of the case activities. **Financial intermediation** was also considered important

17. This seems to underline the importance of individuals empowering each other into ENCI, thinking and ENCI motivations, as developed further in analyses on 'empowerment'.

for the kick-off the case, however, as the cases are further developing, this kind of intermediation importance seems to diminish over time.

Legal/regulating and lobbying intermediation scored the lowest in our dataset. That can be partly explained by the fact that legal intermediation in our ENCI cases seem to overlap with activities related to management intermediation, so there is an overlay with no clear-cut intermediary roles. That does not mean however that legal/lobbying intermediation was not important. In some other cases, the legal and regulatory intermediations played a crucial role and made it possible for some cases to come into being.

Together with the importance of various forms of intermediation, we examined which category of actors and organisations make ‘things’ happen in an ENCI context. The top two intermediaries linked with ‘high’ importance across the other five kinds of intermediaries are, the **commercial intermediaries and intercessors**. The commercial intermediaries seem to cover a wide variety of actors/organisations that span across all the six forms of intermediations and were reported as having a big influence in the development of many ENCI cases. Similarly, intercessors, when relevant for the case, were considered of highest importance and of playing a very decisive role for the ENCI cases.

Alongside the relative ‘positive’ portrayal of intermediaries for the development of the empirical cases, some case actors discussed about their **less positive experiences** with intermediaries or even the lack of intermediation. A hampering impact for the development of the cases was reported to be the relationships with mainly the governmental intermediaries (mainly local authorities). Especially when this relationship was linked to all kinds of restrictions such as planning permissions, state guarantees or lack of horizontal support as opposed to top-down/vertical.

7 WIDER CONCLUSIONS

What does it mean to be an intermediary in cases of ENCI? This is not a straightforward or a linear answer based on our results. The observed intermediary practices in the 34 ENCI cases, demonstrate a rich mosaic of types of intermediaries, the multiple functions that they fulfil, the activities they conduct and the various levels of their importance in achieving their goals and achievements.

The findings demonstrate, *inter alia*, that the roles performed by the ENCI intermediaries are dynamic and not static. An intermediary in the context of ENCI can have multiple roles spanning across different intermediations and changing shapes over time (to fit the needs of the case actors during various developmental stages). This stems from the multiple interactions and the ‘in-between’ nature of intermediaries (Hodson et al., 2013:1481) as they are often found in the sphere between different institutional domains and interests cutting across case actors, individuals, communities, the private, public, third organisations, the state, and the market (Huntjens and Kemp, 2022). For example, our empirics show that a commercial intermediary can perform a variety of tasks (not confining to a commercial intermediary) around funding facilitation, providing legal support, helping with the creation and the set-up, negotiating with other intermediaries such as local authorities and banks. Such an intermediary can give a (more or less) decisive impulsion, by contributing to giving shape to the cases over time. Within this ENCI context, intermediation can thus be understood as a very dynamic space (van Veelen, 2020).

We also found that intermediaries contribute to the goals and achievements of ENCI cases with varying degrees of intensity, influence and longevity. While some intermediaries can be catalysts that bring solutions to key challenges that hamper the further development of ENCI cases, other intermediaries seem to contribute to the endurance of the case across time and eventually space. And intermediaries may even facilitate, disburden, or take over the ENCI agency from citizens almost completely – in these cases, the intermediary becomes the focal ENCI actor.

Revisiting the EnergyPROSPECTS definition on what is an ENCI intermediary, our empirics show that intermediaries are found to take on multiple roles as, mediators, bridge builders, boundary crossers, advisors or facilitators and their in-betweenness (blurred boundaries) was found to play a predominant role for helping cases to achieve their goals and overcome barriers. In line with the study of Warbroek et al. (2018), strategies employed by intermediaries can encourage the (further) development of ENCI



cases by successfully addressing their needs regarding a fair and sustainable energy production, consumption and governance.

We conclude that as energy citizenship as a concept continues to develop, both in theoretical/conceptual and practical terms, so does the intermediation spaces around it. As part of this research, ENCI intermediaries were found to be part of the wider local/regional/national contexts and multiple cultures which in turn can influence their roles, functions, activities and importance. As energy citizenship, and the related cases that examined in the deliverable, operate in an ever-changing social and geopolitical context¹⁸, so does the intermediary spaces and boundaries around them - ideally to help ENCI initiatives adapt, but the intermediary spaces may also keep ENCI initiatives locked up in no longer fruitful relations.

We conclude that ENCI intermediation can be part of the solution in accelerating the development and wider impact of energy citizen's initiatives (see also, Hargreaves et al., 2013; Warbroek et al., 2017; Warbroek et al., 2018). Intermediary actors operating in an ENCI context, especially due to their in-betweenness, can cut across multiple interests, alleviate barriers, bridge needs and catalyse the much-needed transformational change for a fair and just energy system.

18. This links with upcoming work in WP5 and the National/Local PESTEL analyses.

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APPENDICES



APPENDIX 1: Overview of the ENCI cases selected for detailed analysis

Case no.	Title of case in English	Partner	Country	Main focus	Special focus	Criterion 1 GEN:Outcome orientation	Criterion 2 GEN:WP4 relevance	Criterion 1 QCA: Citizen power	Criterion 2 QCA: ideal-type	Criterion 3 QCA:Level of operation	Criterion 4 QCA: When did it start to operate?
				As in mapping survey: Energy Mobility Holistic	Disadvantaged/ Gender/ None	Reformative/ Transformative	Intermediary (INT)/ Business model (BM)/ ICT	Must be: * Low/ *Medium (negative) * High (positive)	Must be: citizen-based and hybrid (Type7 or Type 8 in typology, see D2.2)	Must be: * Local or * Municipal or * Regional	Must be: no later than 2020
1 - QCA	Bike Evolution	ARC Fund	BG	Mobility	None	Reformative	INT, ICT	Medium	Type 7	Municipal	2007
2 - QCA	Energy Transition of City of Burgas: Going Smart and Sustainable	ARC Fund	BG	Holistic	None	Reformative	INT, BM	Medium	Type 7	Municipal	2006
3 - QCA	Biobriquettes for the energy poor	GDI	HU	Energy	Disadvantaged	Transformative	INT, BM	High	Type 8	Local	2011-2015
4 - QCA	Nagypáli, the renewable energy village	GDI	HU	Holistic	None	Transformative	INT, BM	High	Type 8	Municipal	1997
5 - QCA	TreeDependent	GDI	HU	Holistic	None	Reformative	INT, BM	Medium	Type 7	Regional	2011
6 - QCA	Tregor Energ'ethic	JDI	FR	Energy	None	Transformative	INT (BM?)	High	Type 8	Local	2016-2020
7 - QCA	Energy Community Tipperary Cooperative ECTC	NUIG	IRL	Energy	None	Transformative	INT, BM	High	Type 8	Regional	2011-2015
8 - QCA	Ringsend Irishtown Sustainable Energy Community	NUIG	IRL	Holistic	None	Transformative	BM	High	Type 8	Local	2016-2020

9 - QCA	Galway Energy Co-operative	NUIG	IRL	Energy	None	Transformative	BM	High*	Type 8	Local/Regional	2016-2020
10 - QCA	Solocal Energy	TUB	DE	Holistic	Disadvantaged	Transformative	INT, BM	High	Type 8	Municipal, Regional	2020
11 - QCA	Berlin Citizen Energy (BEB)	TUB	DE	Energy	None	Transformative	BM, INT	High	Type 8	Municipal	2011
12 - QCA	GoiEner	UDC	SP	Energy	Disadvantaged	Transformative	INT, BM	High	Type 8	Regional	2011-2015
13 - QCA	Couso's Project	UDC	SP	holistic	None	Reformative	BM	low	Type 7 and Type 9	Regional	2011-2015
14 - QCA	La Borda. Housing cooperative in transfer of use	UDC	SP	Holistic	None	Reformative/Transformative	BM	High	Type 7 and Type 8	Local	2011-2015
15 - QCA	Solar heat panels in multi-apartment buildings	UL	LV	Energy	None	Reformative	BM	High	Type 7	Municipal	2016-2020
16 - QCA	HOSe (hydroelectric project: enterprise + cooperatives)	ULB	BE	Energy	None	Reformative	INT, BM,	low	Type 7	Regional	2016-2020
17 - QCA	Corenove	ULB	BE	Energy	None	Reformative	INT	Medium	Type 7	Regional	2018
18 - QCA	Weert Energy	UM	NL	Energy	None	Transformative	BM/ICT	High	Type 8	Municipal	2016-2020
19 - QCA	Reindonk Energy & Co: Energy from your own region	UM	NL	Energy	None	Transformative	BM	High	Type 8	Municipal	2016-2020
20 - QCA	The Drechtsteden cooperative	UM	NL	Energy	Disadvantaged	Reformative	BM	Medium	Type 7	Regional	2016-2020

Case no.	Title of case in English	Partner	Country	Main focus	Special focus	Criterion 1 GEN:Outcome orientation	Criterion 2 GEN:WP4 relevance	Criterion 1 QCA: Citizen power	Criterion 2 QCA: ideal-type	Criterion 3 QCA:Level of operation	Criterion 4 QCA: When did it start to operate?
				As in mapping survey: Energy Mobility Holistic	Disadvantaged/ Gender/ None	Reformative/ Transformative	Intermediary (INT)/ Business model (BM)/ ICT	Must be: * Low/ *Medium (negative) * High (positive)	Must be: citizen-based and hybrid (Type7 or Type 8 in typology, see D2.2)	Must be: * Local or * Municipal or * Regional	Must be: no later than 2020
21	Student Switch Off campaigns in Bulgaria	ARC Fund	BG	Energy	Disadvantaged - partially	Reformative	INT		Type 3 and Type 1	Organisational	2016-2020
22	Student Energy Teams	ARC Fund	BG	Energy	None	Reformative	INT		Type 1	Local	2018
23	Zsuzsanna Hojtsy-Keresztény, EnergyNeighbourhoods energy master	GDI	HU	Holistic	None	Transformative	N/A		Type 8 and Type 2	Local	2011-2015
24	Cargonomia	GDI	HU	Holistic	Gender - partially	Transformative	INT, BM		Type 8 and Type 10	Local, Regional	2021
25	Community Energy Service Company	GDI	HU	Energy	None	Transformative	INT, BM		Type 8	Local, Regional	2021
26	Energie Partagée	JDI	FR	Energy	Disadvantaged	Transformative	INT		Type 8 and Type 10	National (but also Regional and Local)	2006-2010
27	Railcoop	JDI	FR	Mobility	Disadvantaged	Transformative	BM		Type 8 and Type 10	National	2016-2020
28	Hauts de France Pass Renovation	JDI	FR	Energy	None	Reformative	INT		Type 1 and Type 9	Regional	2011-2015
29	Citizens' Assembly on "How the state can make Ireland a leader in tackling climate change"	NUIG	IRL	Holistic	Disadvantaged	Reformative	INT		Type 5	national	2016-2020

30	Public Consultation: Shaping Our Electricity Future	NUIG	IRL	Energy	None	Reformative	ICT		Type 5	national	2021
31	LaVidaVerde	TUB	DE	Holistic	Disadvantaged	Transformative	BM		Type 8	Local	2011
32	NATURSTROM AG	TUB	DE	Energy	None	Transformative	INT/BM		Type 8 and Type 4	National	1998
33	SomEnergia	UDC	SP	Energy	None	Transformative	INT, BM		Type 8	National	2011-2015
34	Association “city for people”	UL	LV	Mobility	None	Transformative	ICT		Type 10	Regional	2016-2020
35	OFF-GRID: Renewable energy DIY (do it yourself) for rural development	UL	LV	Energy	Partially	Reformative	BM		Type 1	Local	2016-2020
36	Edgars Fresh	UL	LV	Holistic	None	Transformative	N/A		Type 6	National	2016-2020
37	Jeasy	ULB	BE	Mobility	None	Reformative	ICT		Type 1	Regional	2016-2020
38	Energy efficiency mission ULB	ULB	BE	Energy	None	Reformative	INT		Type 7 and 8	Local	2019-
39	Loenen Energy - community virtual power plant (cVPP)	UM	NL	Energy	Disadvantaged	Transformative	BM/ICT		Type 8	Local/Regional but also multi-country	2016-2020
40	National Association of Active Residents - Landelijk Samenwerkingsverband Actieve bewoners (LSA)	UM	NL	Holistic	Disadvantaged and gender	Transformative	INT		Type 10 and Type 8	National but also local and neighbourhood level	2016-2020

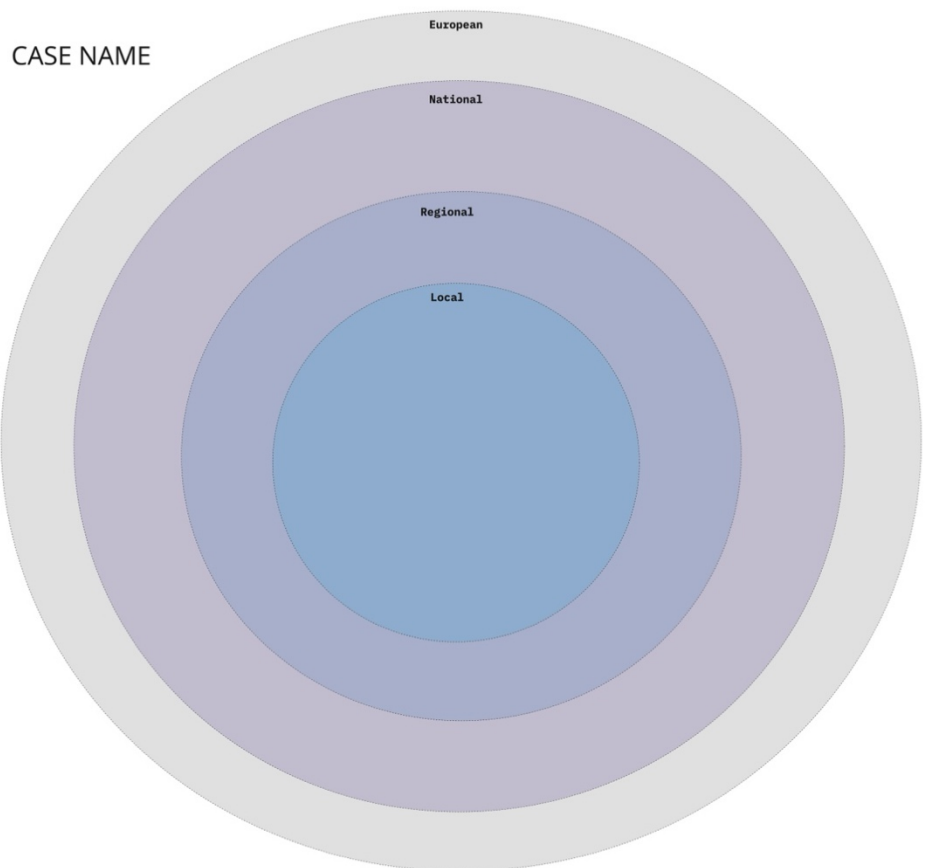
In light grey: detailed cases that were not yet available for this deliverable.

APPENDIX 2: Visualisation Mapping Tool

2.1 Template Frame

Legend

Sorts of Intermediary actors	
	Commercial intermediaries: for knowledge-intensive business services; banks who offer loans, mortgage, consultants, business lawyers etc.;
	Governmental intermediaries (i.e. created by government): agencies that manage programmes with loans and technical assistance;
	Educational intermediaries: independent research and education organisation or networks
	Non-government intermediaries: Civil society umbrella organisations (for transition towns, ...) collective actors such as cooperative networks (e.g., REScoop).
	Other civil society organisations: not created explicitly to be intermediaries, non-sector or umbrella organisations
	Intercessors: Individuals who talk to different actors with the aim of learning about possibilities for collective action, cooperation, partnerships, institutional change ... by learning about the beliefs, material interests, mandates, responsibilities, capabilities and resources of specific actors.
	Others: Please specify
	Event/specific situation of limited occurrence in time and scale
Kinds of intermediation	
	Organisational intermediation: Structuration and organisation of the functioning of the case: entities composing the case, legal status, coordination of the various activities (capacity building, energy production retail), negotiating with administrative authorities
	Financial intermediation: Capitalisation and resource mobilisation required for the case to build up and sustain/grow
	Scientifico-technic intermediation: Technical and scientific expertise activities for concretising the project: ICT conception, planners, architects, PV or wind power specialists, monitoring of the project, facilitating experimentation and pilots, facilitate/support adoption and implementation of innovations
	Networking intermediation: All networking activities with actors that present similarities with the case, enabling cooperation between actors, building and managing networks of multiple stakeholders, exchange of knowledge and visions
	Information/communication intermediation: Communication activities making the case public: consult demand-side for implementation, mediation activities, put suppliers in contact with end users
	Legal/regulatory and lobbying intermediation: Lobbying activities, protest against law projects
	Other kind of intermediation: please specify



2.2 Visualisation Mapping Tool Tutorial

Visualisation Mapping Tool Guidance

General Rule for researchers

Stay focused on Research Template questions and do not deviate from the main research question: ‘Is intermediation needed for an ENCI case to achieve its goals?’ We want to know the direct relationship of the intermediaries to the ENCI case and how it helped to achieve its goals. Note: Please always provide an explanation. Why did you make a certain decision in answering the research questions? Add concrete evidence, e.g., interview quotes, links etc.

Intermediary EP definition

‘Intermediaries are actors, organisations, individuals/intercessors that mediate, work in-between, make connections, and enable a relationship between different persons or things’ (Hodson et al., 2013:1408).

Intermediaries also bridge between actors and their related activities, skills and resources in situations where direct interaction is difficult due to high transaction costs, information asymmetry or communication problems. They can operate as ‘boundary organisations’ to connect up and bridge between different actors or can be the ‘glue’ that binds together e.g., actors, organisations, communities, individuals.

Q&A

- What is an intermediary?

‘Intermediaries are actors, organisations, individuals/intercessors that mediate, work in-between, make connections, and enable a relationship between different persons or things’ (Hodson et al., 2013:1408). Intermediary actors are basically individual(s) and organisation(s) that are interacting with the case in a significant way.

- Can a grant, a document (e.g., Declaration, Policy or Energy strategy) or a project, be an intermediary?

In EP, we do not consider a grant, a project or a document as an intermediary in its restrictive definition sense. For example, if there is a grant or policy document involved in the case to help achieve its goals (e.g., contributing to the success of the case), then the intermediary will be the organisation or actor behind that grant or the specific document. In other words, we are interested in the concrete organisation, actor or individual that helped and contributed in a significant way to the goal achievements of the case.

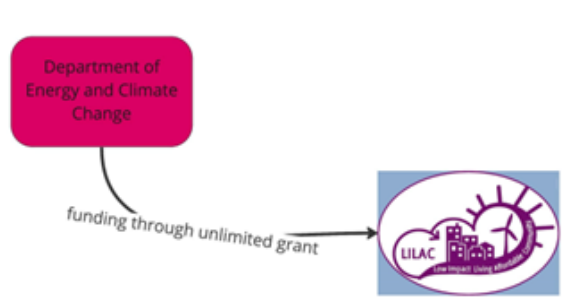
As an overall approach, we suggest that if your case involves, for example a grant, you need to explore the ‘activity’ behind this grant to get the funding and get access to it. This ‘activity’ is the form of intermediation that we are interested. That intermediation activity could involve something very simple such as filling-in a form or it can be a conversation or the building of trust. This activity can also involve helping different parties to speak the same language, provide assurances, and take away concerns.

However, the success of some ENCI cases might depend significantly on e.g., a specific grant. If this grant is fundamental for the case we suggest to map it as a ‘binding issue’ and explain in the text/arrows the relationship with the case. See also the explanation and definition below of the ‘binding issue’. If you are still not sure how to map some actors, please do get in touch with us and we will help you.

- What is a ‘binding issue’ and how can we present and describe it in the miro map?

In most of the cases it will be clear what or who is an intermediary. However, in a (very) small number of cases, there will be intermediary activities or intermediary ‘things’ that can play a key role to the success of the case. In such cases we are defining these activities or things that are not ‘actors or organisations’ as the ‘binding issues’ of that specific case.

Binding issues are defined as: grants, documents (i.e. declarations, policies, strategies), projects, funding programmes etc. These are not intermediary actors in the restrictive sense of our definition. If in your case, you come across these types of binding issues, then you need to add them in the explanation arrows between the case and the intermediary behind that binding issue. Do not add these binding issues as separate boxes in the map. See the illustration example in the Figure below. The Department of Energy and Climate Change (DECC) provided a grant to LILAC. The intermediary actor in this case is the DECC and the binding issue is the grant.



- How do I know if an actor is an intermediary in my case?

As a first step, it is recommended to map all the related actors of your case that you think are intermediaries. During your desk research, and in most cases, it will be clear if a specific actor is an intermediary. However, there might be actors for which it is not self-evident if they are an intermediary. In that case, you can explore that specific actor in more detail, searching online, in their respective websites, or any evidence you can find

from your case. If it is still not clear, during your interviews, you can ask to confirm your assumptions. Please keep in mind that if you cannot specify the connection between a supposed intermediary actor and the case, then you might have to remove this actor from the mapping.

- How do I know what type of intermediary each actor is?

It is not always clear what type of intermediary/ies the actor(s) in your case is/are. We recommend that you search online for the dedicated website of the actors and find their specific roles and activities. This is often described in their website on the 'About us' section. From this description you can find the main activities and roles of the actors that will help you select its type.

- Who is an intercessor intermediary actor?

Intermediaries are not only organisations, gov. institutions, commercial companies etc. Intermediation can also be undertaken by knowledgeable and self-confident people with capabilities for: listening, understanding frames of others, trusted for being fair and interested in the greater good. In this mapping, we define them as 'intercessors'.

- How do I plot the intermediary actors in the template according to the kinds of intermediation?

Step 1. Start with plotting all the intermediary actors at first in the various levels (local, regional, national, EU). Step 2. Identify the relationships of the actors with your case and describe shortly these relationships into the arrows. Step 3. After you have identified the relationships of your actors to your case, group your actors per kind of intermediation e.g., organisational intermediation, financial intermediation, scientific-technic intermediation, networking intermediation and information/communication intermediation.

- What if an intermediary has many different roles/relationships within my case? What do I choose? What do I add in the arrows?

It is possible that an intermediary actor might have multiple relationships with your case (e.g., offering more than one service). If that is the case, add up to 3 maximum relationships of this intermediary with your case. For example, an actor can offer (1) funding, (2) technical support and (3) assist with networking activities. In such cases, we recommend adding these main relationships (up to max 3) into the arrows. You can explain these relationships in more detail in the Research Template.

- What is an intermediary relationship?

The aim of this mapping is to identify only the direct relationship of the intermediary actors with the case. This relationship can be found from the official role of the intermediary actor as described in their respective websites. Sometimes you can also

identify this direct relationship during the desk-based research. An intermediary relationship can be described in many different ways. Some examples are: funding and financing assistance, legal representation/support, networking moderation, technical support, translating policy into practice, linking community groups with politicians, etc. This is not an exhaustive list. The type of relationship can be very different from case to case. Don't forget each case is unique.

- What is not an intermediary relationship?

Intermediary relationship is (or was) an active relationship that contributes(d) to shape the case. Conversely, passive relationships or rather inactive relationships that do not affect the case are out of the scope of intermediation. Some examples of a non-intermediation relationship are: 1) a membership, or actors of the case that are members of something; 2) partnership in a project, e.g., (EU) project consortium, when it does not imply any active relationship for the case.

- My intermediary actor does not fit in any category, what do I do?

Every case is different and in every country there are different types of intermediary actors. In case your intermediary actor does not fit in any of the categories provided in the legend, you can mark it as 'other'. If your actor falls under the 'other' category, try to describe as much as you can what this other means and what is the direct relationship with your case.

- How to depict actors for which the case itself is an intermediary actor?

If the ENCI case is an intermediary, then the same procedure applies as with the non-intermediary cases. You should proceed in the same way and the same steps of the mapping. An intermediary case also has/needs intermediation for its goal achievements.

- How to judge the result of intermediation? For example, the intermediation can be very successful and help the case achieve its goals but the wider goals of the case might not be satisfactory achieved. Where to put the line and focus in evaluating the success of intermediation?

First of all, the results of intermediation highly depend on the case. Our suggestion for this specific example is to: 1) collect as much information as you can from the desk research about the intermediary relationship; 2) use the mapping tool to understand/explore the direct relationships between the intermediary and the case; 3) during the interviews you can ask more details about this direct relationship and get some clarifications. Based on all the data collected you can make a judgment if the intermediation has helped the case achieve or not its goals.

- Intermediation was successful to win a specific project (for a case) but overall the case did not manage to build on that success. For example, in an ENCI case,

intermediation helped to win a grant for a project. This grant was granted successfully and the project was delivered but somewhere along the lines the implementation of the project was not fully realised. Does that mean that intermediation was successful because it achieved its goal to win the grant? Or was intermediation not successful because the case failed to build on this successful intermediation over time?

In this example, we suggest further exploring and investigating the precise role and impact of intermediation in the case. If the intermediation was needed in writing the project proposal and then winning the project, then we would judge this as ‘successful intermediation.’ If however, the intermediation included project management elements then we suggest to differentiate between the different stages of the intermediation. In your answer, you should specify what the intermediation is focusing on, was it about writing the project proposal and getting the money, or did it include other aspects such as project management? If you come across similar cases, we strongly recommend to make a timeline of the intermediation in your case and distinguish how intermediation worked in different phases of the case.

- How to judge the success of the case in general and in light of intermediation?

As a general comment, and in order to judge and explain the ‘case success’ or goal achievement, successful or unsuccessful intermediation might not be the only explanatory factor. The case researchers in a situation like in the example above should provide a more thorough explanation why exactly the intermediation wasn't enough for the "full case success". Yet, this explanation means that the case researchers might link the success or non-success factors with other conditions e.g., the type of business and social innovation model of the case, the political support, geographical or other restrictions etc. Overall, this type of explanation can provide support to answer the respective questions in the Research Template.

Geographical scales

- In which geographical scale do we place an intermediary actor/organisation that has branches in many countries but has played a key role for the locally based ENCI case but it is an international organisation with a wider global reach?

If an intermediary is an international organisation then this should be added in the map beyond the EU circle. In that case add an extra outer circle to your map under the name international and explain why. We haven't added an international circle to our template because we did not want to complicate it by adding extra geographical layers, as not all cases will need the international circle. For example, Triodos bank, has many local branches operating at the local level however, because it is an international bank we would then consider it as an actor with international reach, even if it helped the case from its local branch. So we would map it at the international circle.

- What if an intermediary operates online? How do I map this?

If an intermediary operates across scales or is not applicable to any geographical scales e.g., a crypto company, then add an extra outer layer in your map explaining why this is the case.

- In which geographical level do we map municipalities and city councils?

That depends on the municipality/city council structures in each of the partners' countries. Here we are not restrictive. When you map the respective municipality it needs to reflect the specificity of the case in question. The researcher should consider how the municipality is operating in each country.

- How to deal with indirect intermediation in my case?

This mapping exercise is about the intermediary actors and the intermediation around the case. If an intermediary actor has an indirect relationship with the case, then it shouldn't be included unless this indirect intermediation entails something critical about the case's environment and the case success.

APPENDIX 3: Data collection Template for intermediaries

Research topic 2: Conditioning factors and Intermediation

The central research question of this research topic is:

Why (and under which conditions⁵) do cases of energy citizenship achieve their goals and make achievements towards the democratisation of the energy system?

Please summarise your findings in no more than 30-40 lines about this main research question once you have answered all the questions in this section:

[Text box]

Intermediation and intermediaries

16. *What type of intermediation is (or has been) needed so that the case can achieve its goals, and what sorts of intermediary actors/organisations are (have been) part of (or conveying) this intermediation?*

To answer these questions, please fill in the Table provided. It is entirely possible that your case will not have all the different types of intermediation listed: just fill in the rows that are relevant to your case.

This question will possibly require expansion/elaboration through an interview.

Type of intermediation	1. Was this type of intermediation needed in the case? If yes, please name the intermediary that provided it ¹⁹	2. If yes to 1., what kind of intermediary provided it? Please refer to the Table below this one for categories.	3. If yes to 1., how important was the intermediation ²⁰ ?	4. Brief description of intermediation and its results (e.g., was it satisfactory?)
a) Management and organisation intermediation (Structuration and organisation of the functioning of the case: entities composing the case, legal status, coordination of the various activities (capacity building, energy production retail, etc.), negotiating with administrative authorities, etc.)			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	
b) Financial and funding intermediation (Capitalisation and resource mobilisation required for the case to build up and sustain/grow)			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	
c) Networking and coordination intermediation (All networking activities with actors that present similarities with the case, enabling cooperation between actors, building and managing			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	

19. If this type of intermediation would have been needed but has not been actually provided (potentially as a factor preventing the case from being more successful), please note this as well in your answer to this question.

20. **High:** the intermediation provided is/was determinant for the case setup, operation and goal achievement. In the absence of the intermediation/intermediary, the case would be radically different or it would even not exist as such.

Medium: the intermediation provided played an important role in the case set up and goal achievement, yet it does/did not condition its existence. Alternative intermediation or intermediaries would have been possible without affecting the case.

Low: the intermediation provided is/was helpful in the case set up and goal achievement, yet the intermediation and/or the intermediary cannot be considered as necessary or as conditioning the existence of the case. In the absence of the intermediation/intermediary, the case would have been more or less the same.

networks of multiple stakeholders, exchange of knowledge and visions)				
d) Information and communication intermediation (Communication activities making the case public: consult demand-side for implementation, mediation activities, put suppliers in contact with end users)			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	
e) Technic and scientific intermediation (Technical and scientific expertise activities for concretising the project: ICT conception, planers, architects, PV or wind power specialists, monitoring of the project, facilitating experimentation and pilots, facilitate/support adoption and implementation of innovations etc.)			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	
f) Legal/regulatory and institutional (lobbying) intermediation (Lobbying activities, protest against law projects)			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	
g) other: please specify			<input type="checkbox"/> high <input type="checkbox"/> Medium <input type="checkbox"/> low	



APPENDIX 4: Visualisations of intermediations and intermediaries for selected cases

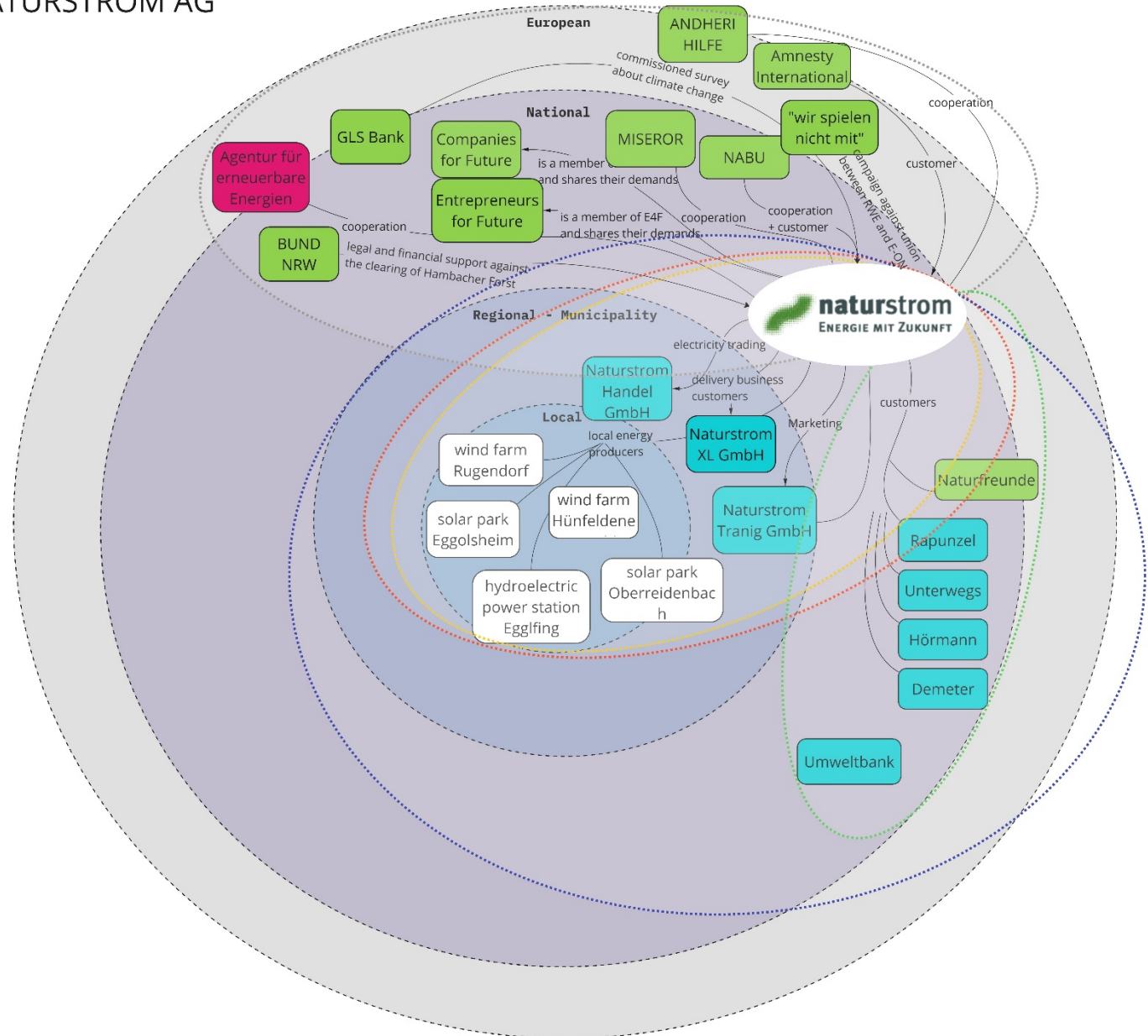
This appendix displays the visualisation tools mentioned in Chapter 5.5 in a more convenient format. The related cases are:

- Naturstrom AG (Germany)
- LSA (The Netherlands)
- Goiener (Spain)
- Solocal Energy (Germany)
- Weert Energy (The Netherlands)
- Reindonk Energy (The Netherlands)
- Energy Communities Tipperary Cooperative (Ireland)
- Couso ´ s Project (Spain)
- LaVidaVerde housing project (Germany)
- Som energia
- La Borda

Legend

Sorts of Intermediary actors	
X	Commercial intermediaries: for knowledge-intensive business services: banks who offer loans, mortgage, consultants, business lawyers etc.;
X	Governmental intermediaries (i.e. created by government): agencies that manage programmes with loans and technical assistance;
X	Educational intermediaries: independant research and education organisation or networks
X	Non-government intermediaries: collective actors such as cooperative networks (e.g., REScoop), Civil society umbrella organisations (for transition towns, ...)
X	Other civil society organisations: not created explicitly to be intermediaries, non-sector or umbrella organisations
X	Intercissors: Individuals who talk to different actors with the aim of learning about possibilities for collective action, cooperation, partnerships, institutional change ... by learning about the beliefs, material interests, mandates, responsibilities, capabilities and resources of specific actors.
X	Others: Please specify
	Event/specific situation of limited occurence in time and scale
Kinds of of intermediation	
	Organisational intermediation
	Financial intermediation
	Scientifico-technic intermediation
	Networking intermediation
	Information/communication intermediation
	Legal/regulatory and lobbying intermediation
	Other kind of intermediation: please specify

NATURSTROM AG



Intermediary case

National Association of Active Citizens

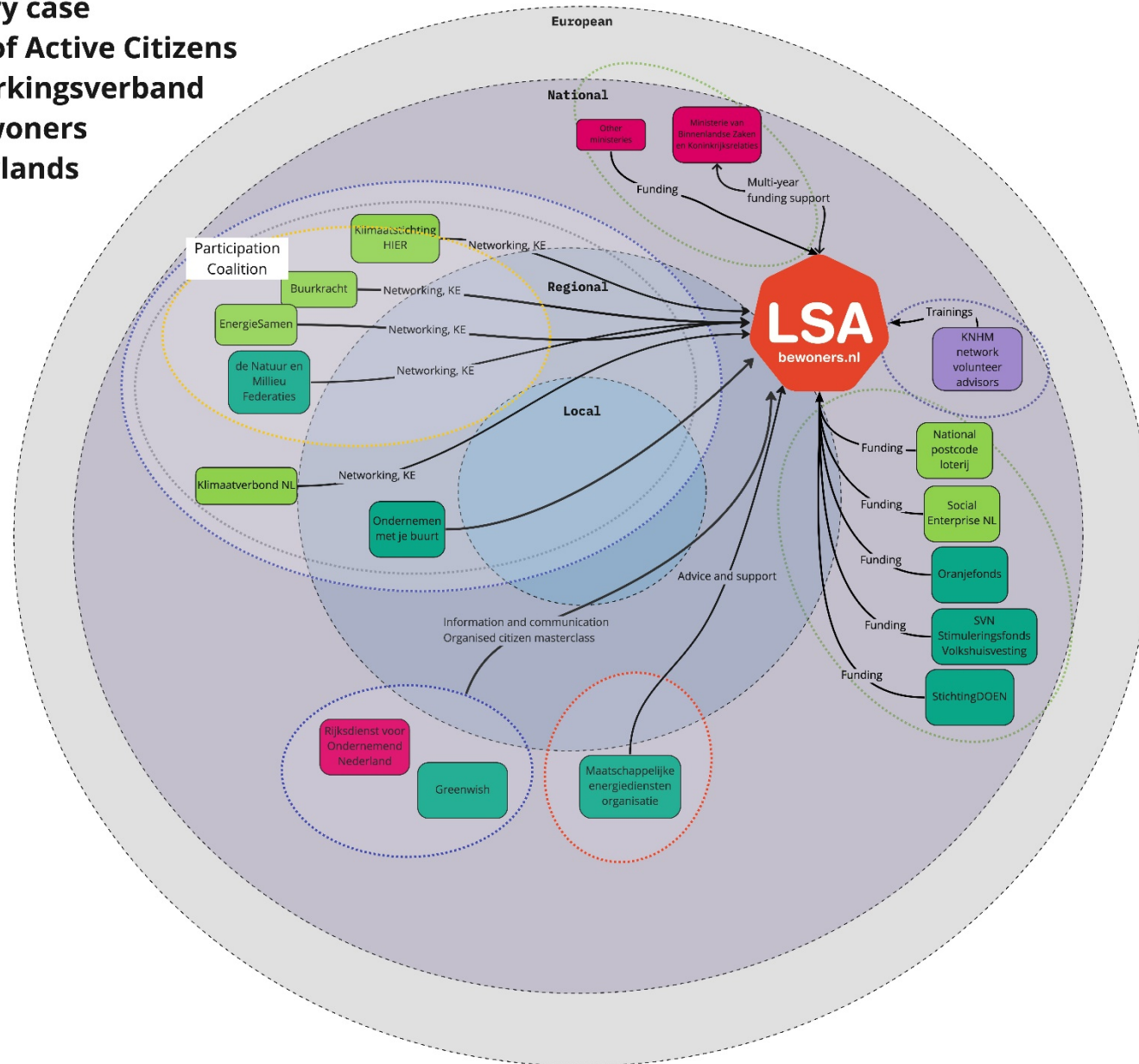
Landelijk Samenwerkingsverband

Actieve Bewoners

The Netherlands

Legend

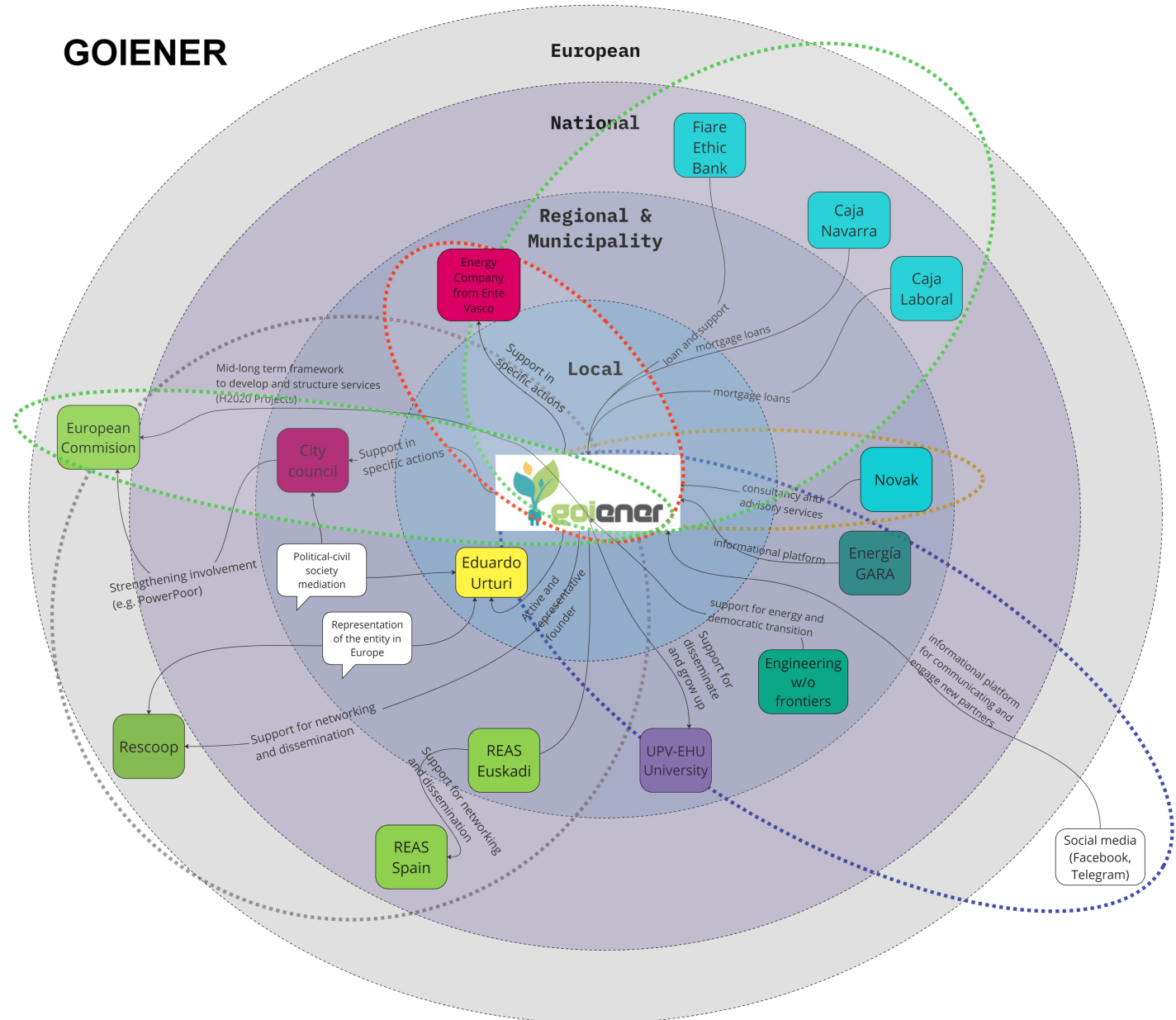
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	Information/communication intermediation
	Legal/regulatory and lobbying intermediation



Legend

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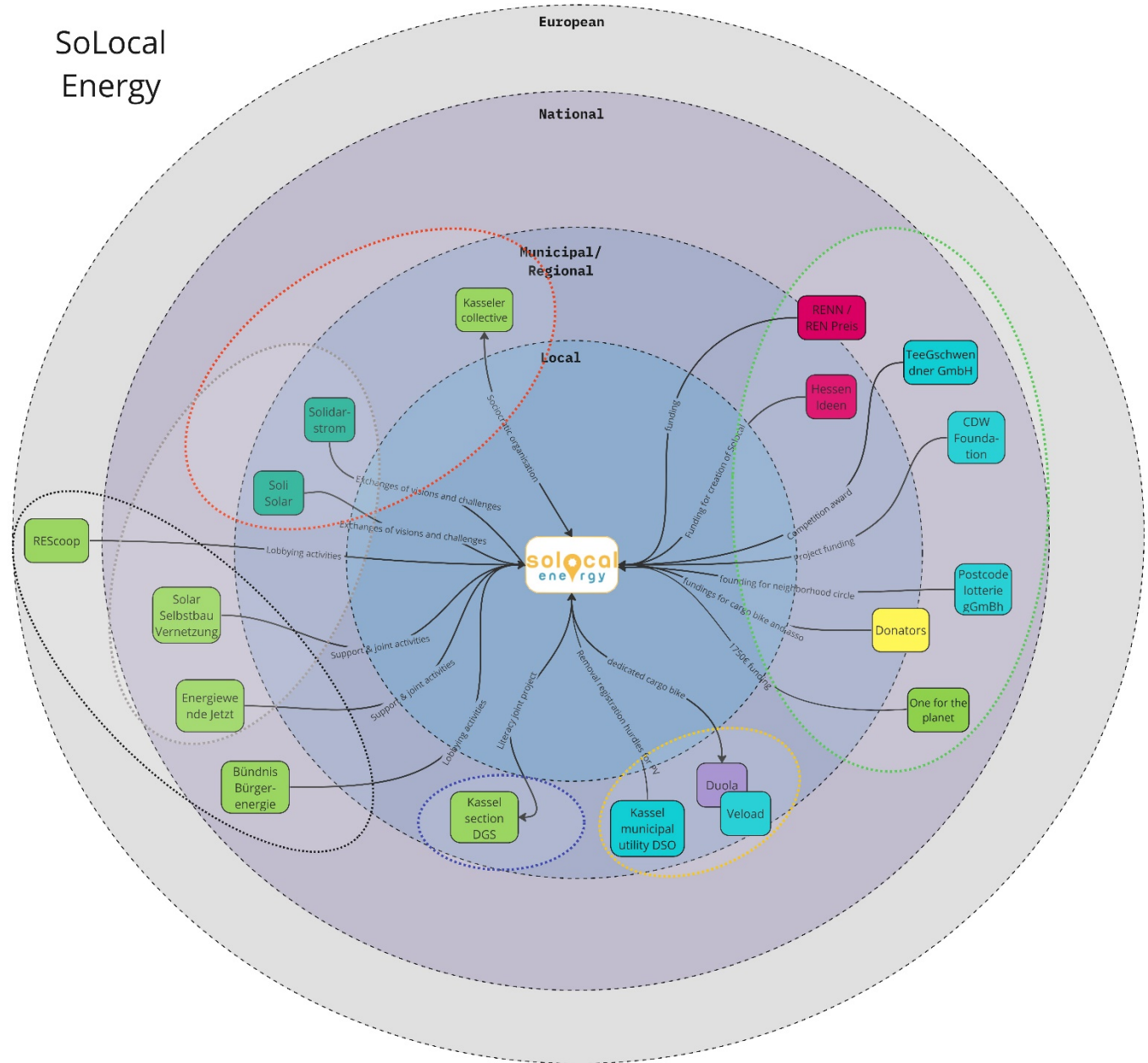
GOIENER



Legend

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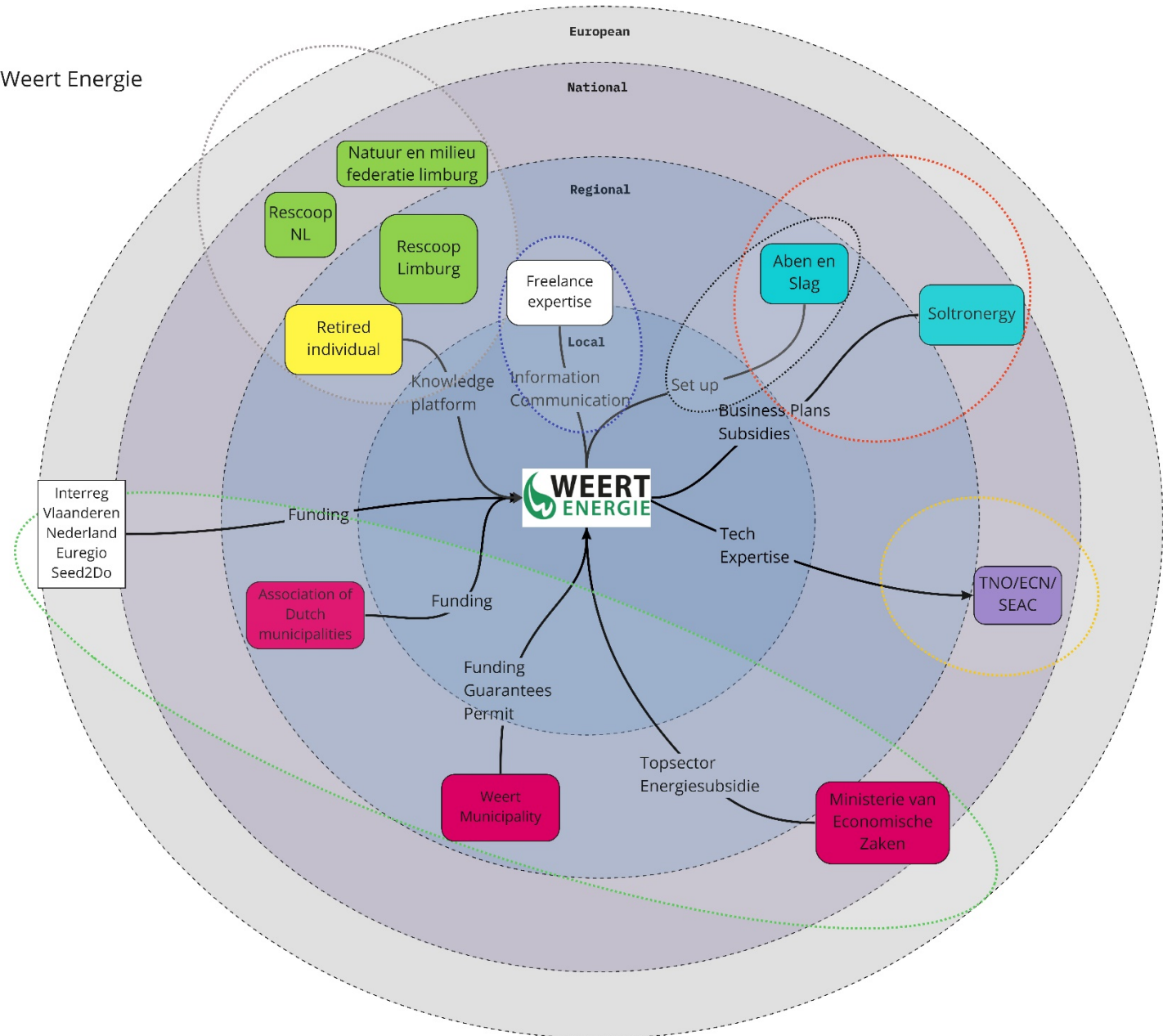
SoLocal Energy



Legend

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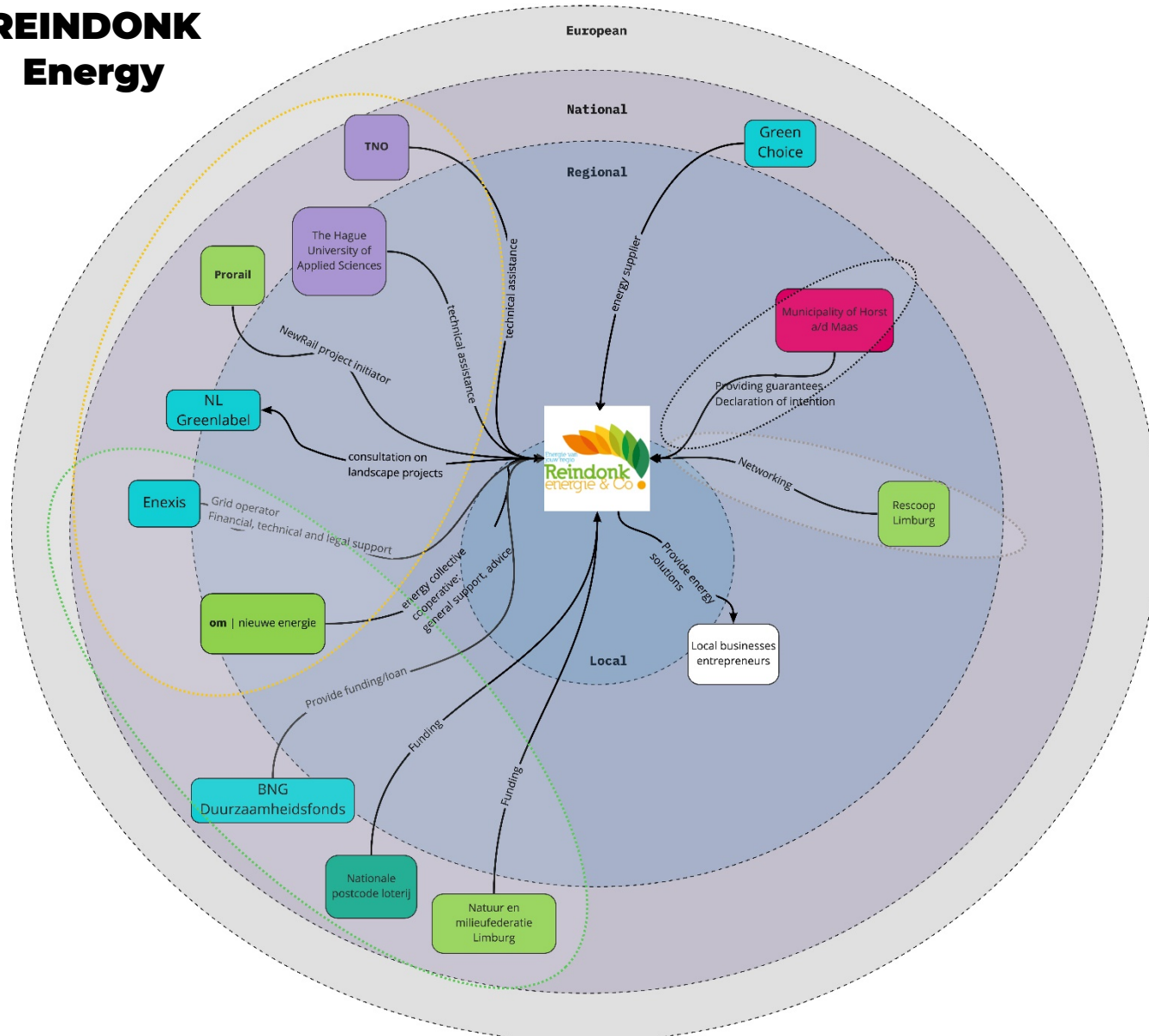
Weert Energie



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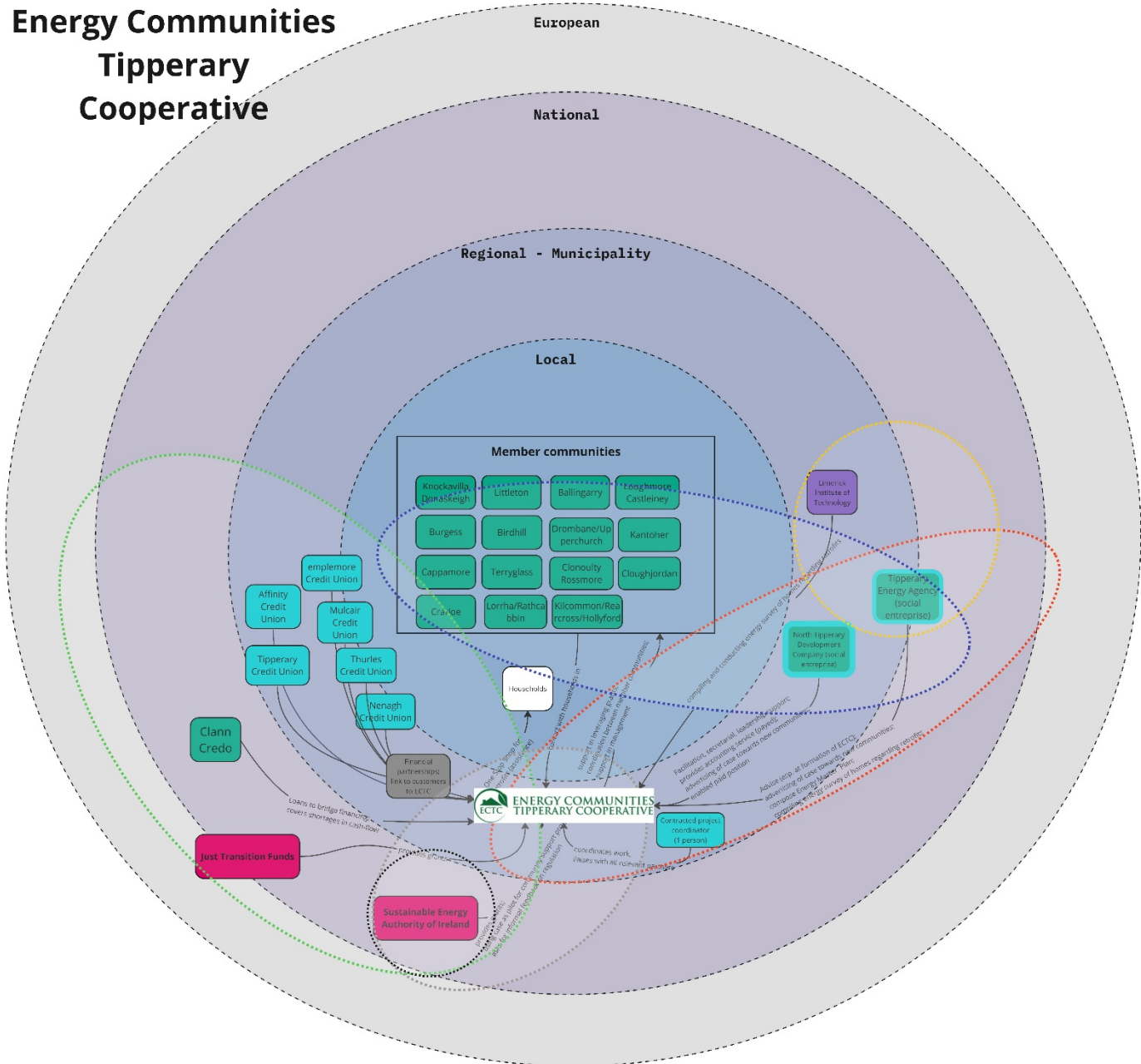
REINDONK Energy



Legend

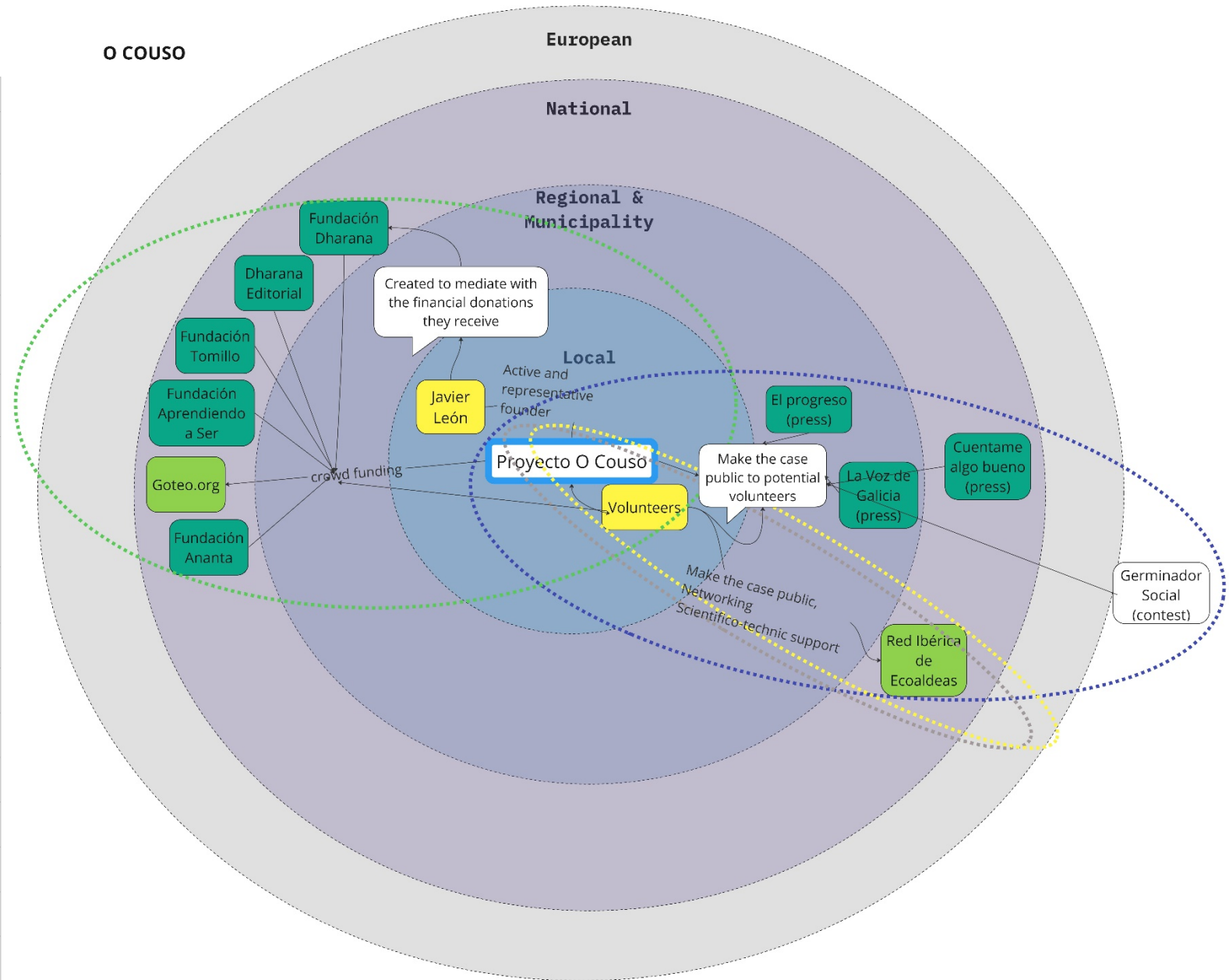
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Energy Communities Tipperary Cooperative



Legend

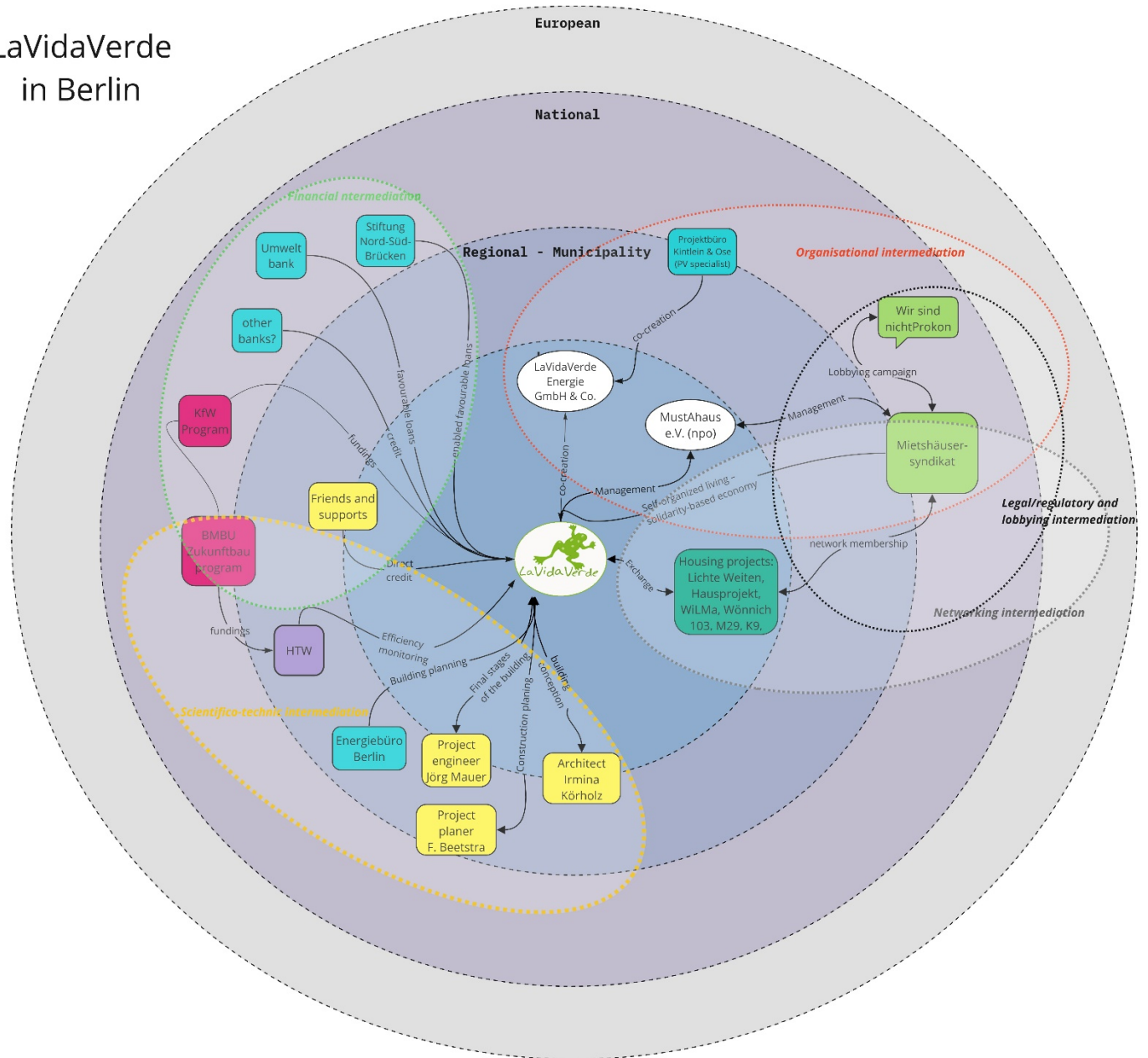
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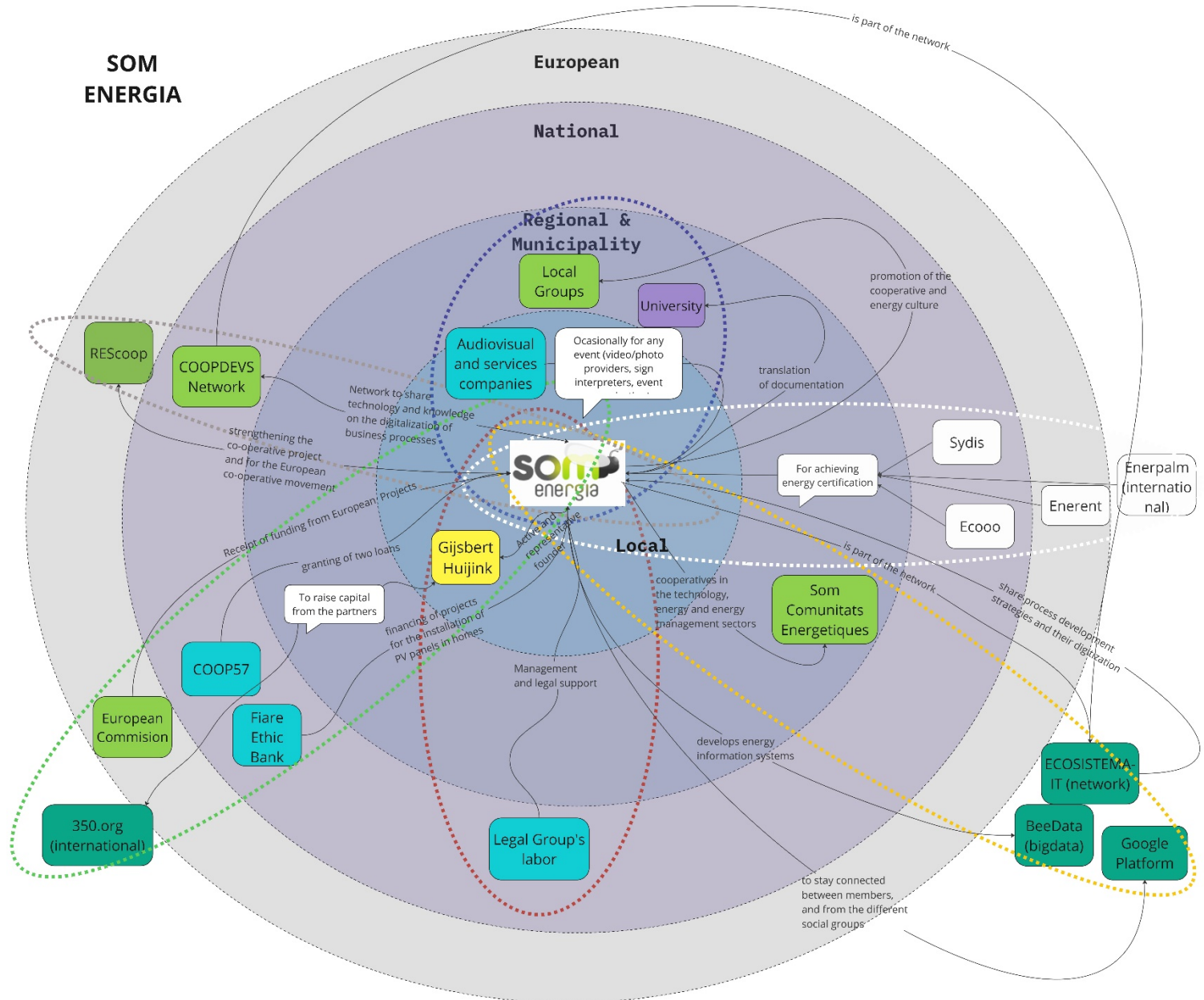
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LaVidaVerde in Berlin



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X	Commercial intermediaries: for knowledge-intensive business services: banks who offer loans, mortgage, consultants, business lawyers etc.;
X	Governmental intermediaries (i.e. created by government): agencies that manage programmes with loans and technical assistance;
X	Educational intermediaries: independant research and education organisation or networks
X	Non-government intermediaries: Civil society umbrella organisations (for transition towns, ...), collective actors such as cooperative networks (e.g., REScoop),
X	Other civil society organisations: not created explicitly to be intermediaries, non-sector or umbrella organisations
X	Intersessors: Individuals who talk to different actors with the aim of learning about possibilities for collective action, cooperation, partnerships, institutional change ... by learning about the beliefs, material interests, mandates, responsibilities, capabilities and resources of specific actors.
X	Others: Please specify
	Event/specific situation of limited occurrence in time and scale
Kinds of of intermediation	
	Organisational intermediation
	Financial intermediation
	Scientifico-technic intermediation
	Networking intermediation
	Information/communication intermediation
	Legal/regulatory and lobbying intermediation
	Other kind of intermediation: please specify

