

**[WORK IN PROGRESS]**

**The role of intermediaries in supporting local low-carbon energy initiatives  
to build non-traditional capacities;  
An explorative case study of Fryslân, The Netherlands**

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**Abstract:** Next to traditional top-down oriented government strategies that pursue sustainable development, local low carbon energy initiatives (LLCEIs) have emerged. Since these initiatives emerge in a bottom-up fashion, they are typically dependent on their own capacities and resources, which commonly seem to be insufficient to achieve their goals. As a response to this, semi-governmental organizations – or intermediaries – emerged to address the deficiencies of resources and capacities in these LLCEIs. The intermediaries' support is indicated by the LLCEIs as important for their development (Ruggiero et al., 2014; Parag et al., 2013; Hargreaves et al., 2013; Seyfang et al., 2014; Forrest & Wiek, 2014; Hicks & Ison, 2011). The literature that looks into the practices of these intermediaries notes that while on the one hand they manage well with regard to providing practical capacities (i.e. legal and technical advice, guidance, knowledge and expertise sharing), they struggle with providing support for building soft or non-traditional capacities (e.g. confidence, emotional stamina, culture, identity) of LLCEIs. Since the provision of technical and practical expertise and resources is insufficient to effectively support LLCEIs and build internal capacities, it is crucial to understand (i) what capacities and resources LLCEIs exactly require next to traditional practical capacities, (ii) what mechanisms and strategies are relevant for LLCEIs to draw on their non-traditional capacities and lastly, (iii) what role do intermediaries have in addressing the lack of non-traditional resources. In this paper, we draw on endogenous development (Ray, 1999a; 1999b) and Asset-Based Community development (Kretzmann & McKnight, 1996; Mathie & Cunningham, 2003) approaches to provide insights in the mechanisms and dynamics that LLCEIs can put to use to draw on their internal capacities and to highlight the importance for intermediary's strategies to be directed at these capacities. In doing so, we will also point out the importance of actor agency and adaptive capacity in the process. This paper assesses the value of this theoretical elaboration vis-à-vis the status-quo of supporting organizations and policy arrangements in a practical case: we present an explorative case study of the Dutch Fryslân region to illustrate the theoretical framework we developed..

## Introduction

Governments face the challenge how to manage the transition to sustainable economies and societies. Next to traditional top-down oriented government strategies, initiatives have emerged in which groups of citizens want to take matters into their own hands and strive to achieve sustainability objectives in their local environment in a 'bottom-up', grassroots fashion. Not only do these low-carbon energy initiatives (LLCEIs) augment political efforts to diversify the energy supply, these initiatives typically touch upon a wider range of issues related to sustainable and regional development.

LLCEIs emerge from the bottom-up and commonly lack the resources and capacity critical to achieve their goals (Middlemiss & Parish, 2010; Hinshelwood, 2001; Walker, 2008; Seyfang et al., 2013; Barry & Chapman, 2009; Salon et al., 2014; Rogers et al., 2008; Park, 2012; Seyfang et al., 2014; Ruggiero et al., 2014; Shaw & Mazzucchelli, 2008; St. Denis & Parker, 2009). These resources— upfront investment capital, knowledge and (external) expertise, time, skills - are generally recognized in the literature as critical success factors for LLCEIs (Forrest & Wiek, 2014; Seyfang et al., 2013; CSE & CDX, 2007; Seyfang et al., 2014). Park (2012) dubs these types of resources 'practical capacities'.

In response to the deficiencies in LLCEIs' resources, so-called 'intermediaries' emerged to deal with this issue and strive to provide adequate support to LLCEIs. Intermediaries are understood in the literature as semi-governmental organizations (Hicks & Ison, 2011) or actors that because of their actions (e.g. facilitating dialogue, providing guidance, knowledge) are "defined by their 'in-betweenness', cutting across the energy provider, user, and regulator triad" (Moss, 2009, p. 1481). These intermediaries support LLCEIs via various mechanisms and interventions and seek to build these practical capacities. The kind of support intermediaries typically provide involves giving technical and legal advice and guidance on funding sources and applications (Hinshelwood, 2001; Ruggiero et al., 2014), facilitating information flows between LEIs (Parag et al., 2013), functioning as boundary worker (Hargreaves et al., 2013; Ruggiero et al., 2014; Hinshelwood, 2001), sharing best practices (Seyfang et al., 2014; Hargreaves et al., 2013), and conducting feasibility studies (Ruggiero et al., 2014; Hargreaves et al., 2013). These activities in principle address the lack of practical capacities LLCEIs have.

Since knowledge or advice is central among the resources that intermediaries typically mobilize to achieve their goals (supporting the development of LEIs, in linking knowledge to action, they may challenge prevailing notions of what kind of knowledge is relevant and legitimate), Hisschemöller and Sioziou (2013) conceptualized these intermediaries as social movement *boundary organisations* (SMBOs). The resources that these intermediaries or SMBO's transfer, provide, or mobilize are typically non-tangible. Various studies highlight the significant role of the support provided by these intermediaries in the development of LLCEIs (Ruggiero et al., 2014; Parag et al., 2013; Hargreaves et al., 2013; Seyfang et al., 2014; Forrest & Wiek, 2014; Hicks & Ison, 2011).

However, this is but one side of the coin. The literature widely reports and recognizes the role of these practical or 'traditional capacities' for the development of LLCEIs and implicitly the role of intermediaries in providing these capacities. However, there are indications in practice and the literature that LLCEIs are in need of more 'soft' or 'non-traditional' capacities that can often be found within the community and the LLCEI itself. These non-traditional capacities involve inter alia confidence-building, emotional stamina, and also the uses of culture, identity, and social capital. The literature does not yet shed light into how these non-traditional capacities are best build and what roles intermediaries can have in

this.

Therefore in this paper we attempt to provide a theoretical understanding that gives insights into the strategies and mechanisms that could potentially work for LLCEIs to draw on their *non-traditional* capacities and why this is important. Secondly, we theorize to what extent intermediaries are able to support LLCEIs in the way that leaves control and power at the LLCEI itself and safeguards the LLCEIs social innovative nature. Third, we reflect on our theoretical elaborations by exploring what happens in practice, by presenting the case study of the province of Fryslân (the Netherlands).

The central research question of this paper is: *What roles can intermediaries play in supporting LLCEIs in their non-traditional capacities and how does this work in a practical case, in specific the Dutch Fryslân region?*

Sub questions:

1. What additional resources or capacities do LLCEIs require next to the traditional practical capacities?
2. What mechanisms and strategies are relevant for LLCEIs to draw on their non-traditional capacities or resources?
3. What role do intermediaries have in addressing the lack of non-traditional capacities or resources of LLCEIs?
4. How are the roles of intermediaries concerning the support of traditional and non-traditional capacities or resources reflected in a practical case, in specific the province of Fryslân?

To answer these research questions, we will use theoretical notions and concepts stemming from the endogenous development approach (Ray, 1999a; 1999b) and the Asset-Based Community Development approach (Kretzmann & McKnight, 1996; Mathie & Cunningham, 2003). We argue that these theoretical insights will help to further understanding in the role intermediaries have vis-à-vis LLCEIs, adequately safeguard the internal potential of LLCEIs, help LLCEIs to overcome the issues raised in the literature, and builds the internal capacities of LLCEIs in a sustainable manner. Furthermore, we underline the importance of actor agency and adaptive capacity in relation to the development of LLCEIs.

This paper is structured as follows. Section 1 addresses what capacities and resources LLCEIs require next to the traditional capacities. Section 2 addresses the theoretical question of what strategies and mechanisms are relevant for LLCEIs for them to draw on their internal capacities and resources. Section 3 looks into what role intermediaries have in addressing the lack of non-traditional capacities or resources of LLCEIs and how can they support LLCEIs in a way that safeguards their social innovative nature and leaves control at the initiative's side. The fourth section addresses the methods used in this paper. Section 5 discusses the Frisian context, section 6 addresses to what extent the theoretical elaborations described are reflected in practice. Section 7 involves the discussion section in which we position the findings and arguments in the literature.

## 1. Capacities and resources that LLCEIs require

While in first instance the capacities required by LLCEIs only seem to be of practical and technical nature, there are indications of other types of capacities and resources that are

crucial for the survival of LLCEIs. Specifically, what additional resources or capacities do LLCEIs require next to the traditional practical capacities?

In first instance there are indications that LLCEIs require confidence and motivational stamina. In this regard, Hargreaves et al. (2013), in their study that involved an assessment of the role of intermediaries for grassroots innovations niche-building learned that these community energy projects are in need of confidence- and capability-building. According to Hargreaves et al., building confidence or capabilities is pivotal for helping LLCEIs to sustain their activities in spite of struggles they encounter in their local vicinity (2013, p. 876) (see also Hinselwood, 2001). Similarly, Feola and Nunes (2014) observed that a highly cited factor for the success of transition initiatives was the “capacity to sustain motivation, enthusiasm and to promote a positive, ambitious approach, as well as vision and leadership” (p. 237)(see also Hoppe et al., 2015). In addition to that, it was also found that tacit knowledge, trust and confidence (cf. Hinselwood, 2001) are essential to the success of community renewable energy (Seyfang et al., 2014). Seyfang et al. (2014) also discovered that LLCEIs require personal and emotional support, which addresses: the need for social skills and competencies, soft skills, emotional stamina to sustain activities in ‘bad weather’, confidence, applying unfamiliar organizational structures, decision-making processes, translating generic models to local contexts (Seyfang et al., 2014, p. 39). This implies that LLCEIs require adaptive capacities. Building on this, Seyfang and colleagues claim that the success of a LLCEI is not on the basis of overall stock or relative flows of different kinds of capital, but rather their configuration (2014, p. 41). In other words, it seems as though there are certain dynamics relevant with concern to a LLCEI’s capital or capacities.

#### *Dynamics in internal, non-traditional capacities*

These dynamics and their relevance are observed in a study by Middlemiss & Parish (2010) who found that grassroots initiatives that have limited resources and power turn out to be able to draw on existing community capacity and also alter this capacity in order to establish/become low-carbon communities. According to the results of their study, the presence or potential of three community capacities (personal, organizational and cultural capacity) is important to create an initiative’s activities. Furthermore, the findings show that infrastructural capacity can be altered with the mobilization of the these capacities. In this regard, personal capacity involves resources for community sustainability held by individuals (e.g. understanding, skills, values, enthusiasm (p. 7561). Cultural capacity denotes the legitimacy of sustainability objectives vis-à-vis the community’s history and values (p. 7562). Organizational capacity refers to values and resources held by formal organizations in the community and to what extent these align with efforts to pursuit sustainability and are available for support to incite change (p. 7562). Lastly, infrastructural capacity involves the provision of facilities for sustainable living by government, business and community groups (p. 7562). Grassroots initiatives then are able to use various combinations of community capacity to help increase the overall capacity of individuals within communities to take responsibility for their ecological impacts.

Furthermore, initiatives can use these internal capacities in their advantage even when the political context is not supportive. In specific, Bomberg & McEwen (2012) found that community action can be mobilized by drawing on *symbolic* resources in spite of the absence of structural resources (see also Hufen & Koppenjan, 2015). These symbolic resources involve the collective community identity and the desire for community autonomy, whereas the structural resources refer to the broader political context that structures and constrains opportunities for community energy mobilization (Bomberg & McEwen, 2012, p. 436). Similar to these symbolic resources, Forrest & Wiek (2014) found

that a substantial solidarity from a shared village identity and sense of pride are critical success factors. Also, they referred to the importance of 'community action capability', understood as strong social capital existent in the community.

Likewise, Walker & McCarthy (2010) also found that resources stemming from the community itself are adding to the survival of community-based organizations. The authors conclude on the basis of their findings: "although cultivating resources is the surest path to survival, organizations that build their legitimacy will be in a better position to compensate for structural resource deficits" (p. 315).

Walker & McCarthy (2010) identified three ways through which this legitimacy can be built. Firstly, by raising funds through grassroots sources. This way, the community members are reminded of the CBO's continued presence and the need for their ongoing financial, voluntary and moral support is reiterated. Moreover, this highlights the level of commitment that the members have to sustaining the CBO (p. 335). Strategies to raise grassroots funds are for instance local markets, sales of ads in newsletters. Secondly, by making an effort to bring together community members with public officials in order to propose policy and governance changes in local institutions (p. 336). Public accountability highlights a CBO's pragmatic legitimacy (see also Hufen & Koppenjan, 2015). This kind of legitimacy is understood as making external actors aware that the CBO's interests are in line with those of its community members (cf. Ashforth and Gibbs 1990), and also points out the benefits that the CBO can deliver to them (p. 335). Lastly, by tying the CBO to regional and national organizing networks.

While in first instance the abovementioned pointed to the deficient 'soft capacities' of LLCEIs, which in general involves lack of confidence and capability, emotional stamina, and adaptive capacity, there is also evidence that LLCEIs can put to use certain dynamics, capacities, and processes to further develop their activities, from within. It appears that LLCEIs can draw on specific *internal* capacities to countervail the lack of resources or other categories of capacities. While it appears that LLCEIs would struggle to survive on the basis of its own internal capacities stemming from the community that typically lacks the resources to provide sustainable support, Walker & McCarthy (2010) found that more than half of the CBO's they studied survived over the span of more than a decade. Furthermore, there seems to be an advantage for LLCEIs that strive to survive on the basis of their internal capacities. However still, this does not negate the importance of external relations.

## 2. Strategies and mechanisms relevant to LLCEIs to draw on internal, non-traditional capacities and resources

Now that we understand that LLCEIs require more soft-skills and that the lack of resources can potentially be addressed by LLCEIs themselves in which certain dynamics come into play, it is important to grasp how capacities can be built from within and why this is significant for the survival of LLCEIs. This brings us to our second research question; *what strategies and mechanisms are relevant for LLCEIs for them to draw on their internal capacities and resources?* This question is of a theoretical disposition and is answered by drawing on relevant research and theoretical notions.

### *Endogenous development and social innovations*

The findings that existent or potential internal capacities and (symbolic) resources are pivotal in bringing about community responsibility for their ecological footprint, in sustaining community mobilization, in the success and survival of transition initiatives/ CBO's (Middlemiss & Parish, 2010; Bomberg & McEwen, 2012; Forrest & Wiek, 2014; Walker & McCarthy, 2010) – can be directed back to the ideas of endogenous development and Ray's

culture economy (1998).

The key theorem of bottom-up or top-down initiated endogenous development is the principle that development will be more successful and sustainable if it (i) starts from a base of local resources and (ii) involves popular participation in the design and implementation of development action (Ray, 1999a, p. 524). The logic of the endogenous approach involves that a territory formulates its own development repertoire (Ray, 1999a). Repertoire in this sense is understood as “a stock of resources or often used practices from which the repertoire possessor can select according to the requirements of a situation” (Ray, 1999a, p. 525). This concept embodies the principles of endogeneity: “the idea of local *ownership* of resources and the sense of *choice* (local, collective agency) in how to employ those resources (physical and intangible) in the pursuit of local objectives” (Ray, 1999a, p. 525). The bottom-up approach to endogenous development commonly involves the reflection on the meaning of development, pursuing change, rejuvenating local economic activity, and finding alternatives to the existent socio-technical regime, including certain traditional modes behavior. This gives an indication of the applicability of the concept ‘social innovation’. Seyfang & Smith (2007) even stress that LLCEIs should be viewed as social innovations. This makes sense because using the concept of social innovation provides relevant insights. Neumeier (2012) on the basis of an extensive literature review defined social innovation as: ‘a change in the attitudes, behaviour or perceptions of a group of people joined in a network of aligned interests that, in relation to the group’s horizon of experiences, leads to new and improved ways of collaborative action in the group and beyond’ (p. 65). Moreover, Kirwan et al. (2013) demonstrate how Moulaert et al.’s (2005) three dimensions of social innovations, and Adams and Hess’ (2008) two dimensions of social innovations when coalesced potentially augment community capacity to respond to local problems and spur more widespread and sustainable change. Moulaert et al. (2005) identified the satisfaction of human needs; changes to social relations through process; and increasing socio-political capability and access to resources as dimensions of social innovations.

Adams and Hess (2008) depicted asset building at an individual and community level; and the community as social agent as fundamentals of social innovations. Building on that, Dax et al. (2013) stressed the importance of understanding the processes of social innovations to effectuate endogenous development. Furthermore, the basic underlying feature of LLCEIs is that they emerge in a bottom-up fashion, pursuing local renewable energy generation in which the process of doing so fosters the re-configuration of social activities in a way that these sprout from local resources and pursuit self-sufficiency. This central feature of LLCEIs embraces the principles of endogenous development in the sense that LLCEIs involve territorial initiatives pursuing development on different terms in their local environment and use resources from within.

### *Culture and identity as forces and assets*

Moreover, according to Ray the potential and role of the cultural-territorial identity is central in the endogenous development approach (1999a). In our case, this assumption is relevant to putting to use the internal capacities of LLCEIs. The primary source of this territorial-identity is culture. Culture is understood as a set of place-specific forms that can be used to animate and define development (Ray, 1999b, p. 263).

In this sense Bomberg & McEwen (2012) showed that community culture, values and identity can sustain community mobilization. Similarly, Forrest & Wiek (2014) noted that a significant solidarity from a common village identity and sense of pride was also a critical success factor. Thus a potential approach that initiatives can take looks inward to discover, recover or invent the identity of the territory from which resources to drive and define, and development can be generated (Ray, 1999b, p. 259).

While Ray states that territorial initiatives can use their cultural markers (or repertoire in that sense) to revalorize place and to localize economic control (= Ray's concept of a culture economy) as one approach to development, Wirth (2014) finds that a community's (understood as a three dimensional neo-institutional sociological construct) institutional features are key in the emergence and constitution of community renewable energy. Specifically, Wirth (2014) notes that the cultural-cognitive (locally shared frames of reference) and normative dimensions (identity and values) of the construct 'community', respectively; '*how things are done around here*' and '*what is right to do around here*' (p. 238) are important (p. 244). Similarly, Ray understands the approach of a culture economy to territorial development as a strategic approach to transform local knowledge into resources available for the local territory, i.e. recognition (or construction) and valorization of local knowledge (Ray, 1998, p. 9).

Reflecting on this, not only can local knowledge, identity or shared history be used as assets (Ray, 1998), Wirth (2014) points out that these principles are key to how a community renewable energy initiative in a specific community will look like. Since Bomberg & McEwen (2012) showed that such assets can sustain community action, it points to the importance of bringing a LLCEI and its history/identity/values of the community directly surrounding it together.

### *Social capital and agency*

Now that it is pointed out that internal cultural-identity markers can be used and are potentially significant in the survival of LLCEIs, there are additional internal capacities that LLCEIs can draw on and again where dynamics come into play. In this regard, Hicks and Ison - on the topic successful LLCEIs - stressed that all forms of social capital are required (bridging, bonding, and linking capital) and strengthened in successful LLCEIs (2011, p. 248). This is indeed similar as to what Kneafsey et al. (2001) dub as a successful culture economy: one that is characterized by bundles of horizontal networks in combination with vertical networks; horizontal networks in sense of relationships between locally based actors, vertical networks in shape of alliances with externally located actors. However, in order to put social capital to use, Newman and Dale (2005) argued for the necessary role of actor agency. However, while Newman and Dale (2005) regard social capital as primary indicator for community capacity, we agree with Middlemiss & Parish (2010) that this is too restrictive. Still, as Forrest & Wiek (2014) noted, strong social capital did add to community action capabilities, critical for the success of the initiative in concern. Therefore, Newman & Dale's (2005) principle of agency is useful for describing how LLCEIs can draw on resources on a network level, or in other words draw on social capital. In this sense, Chaskin (2001) argued that community capacity is engaged through some combination of three levels of social agency; individual/personal (human capital and leadership), organizational (embeddedness and responsiveness of organizations and their relationships within and beyond the community), and network level. While Middlemiss & Parish (2010) did refer to the personal level and organizational level through which community capacity can be engaged or is reflected, they did not do this for the network level. This community capacity on the network level is reflected by social capital (Chaskin, 2001) (see also Putnam, 1993).

But how does this agency work? Onyx and Bullen (2000) define agency as 'the capacity of the individual to plan and initiate action' (p. 29), and the ability to respond to events outside of one's immediate sphere of influence to produce a desired effect. Actor agency allows an individual or group to increase access to other critical forms of capital to overcome barriers and solve problems (Newman & Dale, 2005). According to Newman and Dale (2005) agency

can be achieved through a dynamic mix of bonding and bridging ties, and thus social capital is a necessary component of that agency. Bridging ties provide an actor access to groups beyond the local group and bonding ties provide trust. Too much bonding ties can inhibit change, or adaptive capacity. Subsequently, adaptation is key to maintaining the value of social capital (Gargiulo & Benassi, 2000). Also, Hinselwood (2001) already indicated the need for LLCEIs to seize opportunities when they arise, which can be explained as the necessity of adaptive capacity and agency.

### *Adaptive capacity*

So not only does agency play an important role for LLCEIs to put social capital to use, it has to be productive and also maintain adaptive capacity. Adaptive capacity is defined here as an attribute of LLCEIs that reflects learning, flexibility to experiment and adopt novel solutions, and development of generalized responses to broad classes of challenges and is able to deal with disturbance and change while maintaining critical functions and structures. This definition is derived from adaptive capacity of resource management in social-ecological systems (Walker et al., 2002; Olsson et al. 2004). In similar way, Forrest & Wiek (2014) pointed to the critical importance of adaptability in LLCEIs in order to allow for opportunities to be taken and to encourage innovation.

Adaptive capacity refers to simultaneously harnessing stability and flexibility. This entails that LLCEI performance will depend (similarly or analogically as community-based natural resource management): “on innovative communities and community-based organizations learning through uncertainty and crises, learning from mistakes in practice, maintaining a collective memory of experiences with resource management, linking different knowledge systems to support learning and adaptation, and collaborating and power sharing in order to promote tight feedback loops and maintain institutional and organizational diversity and redundancy” (Armitage, 2005, p. 707).

This exactly points to the core of endogenous development as well. Endogenous development pursues to develop sustainable structures and establishing a form of balance that, on the one hand enables innovation, creativity, new ideas and visions in action; and, on the other hand, maintains the necessary stability (Magel 2000, in Neumeier, 2012, p. 49).

In sum, LLCEIs adaptive capacity and agency are useful in drawing on LLCEIs internal, non-traditional capacities (e.g. identity, culture, social capital). But what kind of external support will harness these capacities and will harness the social innovative nature of LLCEIs?

## 3. Modes of support by intermediaries

On the basis of the abovementioned, LLCEIs have several mechanisms and strategies that they can apply to draw on their internal capacities. This brings us to the third research question: What role do intermediaries have in addressing the lack of non-traditional capacities or resources of LLCEIs *and how can they support LLCEIs in a way that safeguards their social innovative nature and leaves control at the initiative's side?*

### *Conceptualizing intermediaries*

Geels & Deuten (2006) take intermediary actors as inter alia professional societies, industry associations, and standardization organizations (p. 267). Geels & Deuten then argue that these intermediaries are created when actors perceive themselves as part of an emerging community with shared interests. While Moss (2009) argues that these intermediaries are characterized by their ‘in-betweenness’ because their actions intersect at energy providers, users, and regulators, empirical evidence shows that ‘regulators’ can also function as



intermediaries (e.g. Hoppe et al., 2015; Hufen & Koppenjan, 2015). In Saerbeck (Germany) and Lochem (The Netherlands), local public officials functioned as managerial agents that incentivized successful LLCEIs by taking account of the local situation and strategically going about the development process, making sure the community in concern backed the initiative and mutual trust was safeguarded (Hoppe et al., 2015, p. 1925). Therefore it needs to be stressed that although intermediaries typically materialize in shape of actors characterized by their in-betweenness, municipal or provincial governments and public officials can function as intermediaries and assume their roles as well.

Geels and Deuten (2006) made an attempt to theorize the important roles that intermediaries have in developing niches and making them more robust. In this sense, Geels & Deuten (2006) they identified three roles:

1. Aggregation: process of transforming local knowledge into robust knowledge that is sufficiently general, abstracted, packaged and subtracted from its local context. This knowledge can be shared between local practices on a niche-level (Geels and Deuten, 2006, p. 266–267).
2. Creation of institutional infrastructure: consists of forms or platform that allows and draws actors to network and interact, exchange experiences and the organization of collective action. These platforms involve workshops, seminars, and networking events (Geels & Deuten, 2006, p. 267-268).
3. Reversal in relationship and knowledge-flows between local projects and an emerging global niche: intermediaries guide the development of local activities and assume a more coordinating role (providing advice, guidelines, templates) (Geels & Deuten, 2006; p. 268).

Geels & Deuten (2006) as well seem to focus on practical capacities, and in specific the importance of knowledge in building robust niches.

In order to see whether Geels & Deuten's (2006) ideas were relevant for the field of LLCEIs as well, Hargreaves et al. (2013) researched to what extent these roles were observed in practice. They identified that intermediaries have difficulties fulfilling these roles because of the inability of generalized and abstracted lessons to account for all of the context-specific learning that also embraces the diversity of local projects as such and their differences concerning the goals they pursuit. This subsequently prevents intermediaries from standardizing practices of success. In addition to that, Hargreaves and colleagues identified a fourth role; that of brokering and managing partnerships between local community energy projects and other actors from outside the community energy sector, in particular major energy companies. This role indeed can have beneficial effects with regard to the role of social capital in LLCEIs.

Furthermore, Hargreaves et al. (2013) also point out that Geels & Deuten's (2006) theorization of intermediaries' roles missed out on the importance of confidence- and capability-building. Geels & Deuten (2006) focused on flows of knowledge, and not on supporting initiatives by other means. In this regard, Hinselwood (2001) already indicated that external organizations could support LEIs with moral support, constructive criticism and practical assistance (p. 109) in order to maintain the LLCEIs confidence and motivation in the process. Seyfang et al. (2014) too found that intermediaries struggle with standardizing the resources that are critical to the success of community renewable energy (i.e. tacit knowledge, trust, and confidence).

Seyfang et al. (2014) indicate (on the basis of their understanding that the initiatives they studied are in the second stage of niche development) that peer-to-peer shared learning is

most significant for projects, and niche-level actors (or intermediaries) are emerging but are not critical in the process of aggregating shared learning. Both Seyfang et al. (2014) and Hargreaves et al. (2013) point out that face-to-face networking and mentoring activities can be of particular help in addressing the deficiencies they mentioned (see also Hicks & Ison, 2011). Furthermore, two interviewees in the study of Hicks & Ison (2011) mentioned that an intermediary's strategy of individualized attention had effectively increased the confidence and capacity of project champions (Hicks & Ison, 2011, p. 248). In this regard, Hinselwood (2001) indicated that it is important for external organizations to maintain the LLCEIs' confidence and motivation in the process.

This subsequently explains why it is impossible, undesirable or even counter-productive to mainstream support interventions or to de-contextualize local knowledge to support LLCEIs (see also Hufen & Koppenjan, 2015). Dax et al. (2013) specifically noted that mainstreaming endogenous development policies or strategies will not pay sufficient attention to the core of these initiatives, which is that they are social innovations and therefore require tailored support and understanding. Hufen & Koppenjan (2015) in their study to determine whether LLCEIs are radical innovations or constitute an energy transition and to what extent they contribute to system change, also noted that the most successful cases in their selection achieved the results they did in such unique and distinctive ways that it prevents to reproduce the success mechanisms (p. 13). And why thus approaches and concepts of up-scaling these LLCEIs experiences and practices are often considered as too simplistic (Hufen & Koppenjan, 2015) (cf. van den Bosch & Rotmans, 2008).

This highlights the challenges and difficulties faced by intermediaries in their efforts to support LLCEIs in a way that makes sense. Even more so, if intermediaries take over the LLCEI by means of the support they provide, this will result in a loss of confidence at the LLCEI in concern and ignores the potential endogenous capacities present in the LLCEI. Warren (1972 in Bridger and Luloff, 1999) pointed out that in communities, historical developments, such as increasing contact with, and reliance on, extra-local institutions and sources of income and employment, have eroded local autonomy. Similarly, Hinselwood (2001) stated that external agencies that support LLCEIs, ought to support community ideas without importing their own agenda and control into the community.

This also becomes apparent in the case of financial support. It is widely recognized in the literature that financial support is crucial in the development of LLCEIs (i.e. Walker et al., 2007; Bomberg & McEwen, 2012; Nolden, 2013; Hoppe et al., 2015; Oteman et al. 2014). Since these LLCEIs commonly lack the financial capacity, the common perspective is that financial support has to come from government or semi-governmental organizations. Sometimes local governments pitch in to deliver financial support (Oteman et al., 2014) and given the decreased budgetary support from the Dutch central government (Hoppe et al., 2014), local governments have more reasons to facilitate LLCEIs to champion policy objectives related to sustainable development.

However, Creamer (2014) finds that grant funding functions as a double-edged sword. If the goal of the funding is to support LLCEIs with their activities and to also strengthen local networks and to alter social norms to incentivize community-wide pro-environmental behavior and sustainable communities, grant funding ought to not focus on short-term outcomes. Since if it does, potential issues arise. One of these is that, if a LLCEI gets a subsidy to start up but needs more funds (or renew its subsidy) to continue but does not have access to this, it will not be able to maintain its operations and people will start believing it will not last and will refrain from buying-in (points to the downside of extra-local dependency). Additionally, according to Creamer (2014) fundraising inherently involves deskwork. This focus on fundraising will impede on the time initiators can spend to embed their initiative in the community: raising awareness, interacting with the community and the

overall focus on their mission (see also (Centre for Sustainable Energy, 2009; De Vita, Fleming, & Twombly, 2001; Kirwan, Ilbery, Maye, & Carey, 2013; Newman, Waldron, Dale, & Carriere, 2008; O'Toole & Burdess, 2004). Lastly, subsidies made available by competition can lead to initiatives becoming unwilling to share information and transparent about their plans (Creamer, 2014). These contests involve that communities formulate innovative projects and ideas to increase sustainability in their village and to become eligible for a subsidy (cf. Sanders, et al. 2014).

### *Asset-based Community Development*

Following this, it is crucial to understand how to adequately support the potential of LLCEIs' internal capacities without taking over the initiative. It is crucial even more so because the propositions above indicated that support provided from 'the outside' to bolster the development of a LLCEI is not unambiguous and can have negative consequences. The Asset-Based Community Development (ABCD) provides useful insights for a suitable strategy to enable communities to draw on their capacities and allows for a personalized approach that still harnesses the social innovative nature of LLCEIs.

One of the first proponents of the ABCD approach were Kretzmann and McKnight (1996). Their main argument was that in order to revitalize a troubled community, one ought to discover the assets and capacities of the community in concern to rebuild it, instead of focusing on a community's needs, deficiencies and problems. Kretzmann & McKnight (1996) stated that external institutions that strive to support communities by addressing their needs dismantles a community's own problem-solving capacities (which is one of the characteristics of capacity) and results in a loss of self-confidence. The ABCD approach addresses the deficiencies mentioned above because it instills confidence and increases capacity (Hicks & Ison, 2011, p. 248). Furthermore, it leaves the control with the initiators themselves (Mathie & Cunningham, 2003, p. 474).

Because the ABCD-approach is asset-based, the primary focus is on the community internally. This in turn speaks for the relevance of using ABCD as an approach to spark the internal capacities of LLCEIs. Kretzmann and McKnight mention that this internal focus is intended to "stress the primacy of local definition, investment, creativity, hope and control" (1996, p. 27) and not to downplay the role of external forces.

Building on this, proponents of ABCD advocate that the community development process should be relationship driven, between and among local residents, associations and institutions and that these formal and informal associations and networks are treated as assets and also as the means to mobilize other assets of the community (Kretzmann and McKnight, 1996; Mathie & Cunningham, 2003).

Since ABCD takes relationships as assets, it functions as a 'practical application of the concept of social capital' (Mathie & Cunningham, 2003, p. 479). Indeed, Hicks & Ison (2011) observed the importance of bridging, bonding and linking capital in successful LLCEIs. In a similar vein, van der Schoor & Scholtens (2015) indicate that relations with external networks are important for LLCEIs to be successful. Relations on the local level determine to a certain extent the local support of the local government, local economic actors, schools and other local groups of actors. They further point out that "the embeddedness of the local organization in regional and national energy networks gives inspiration, information, and support" (van der Schoor & Scholtens, 2015, p. 674).

### *Practical implications*

In this sense, one of the interviewees in Hicks and Ison's (2011) mentioned that 'with the right support, communities have the *ability* to establish successful renewable energy projects' (2011, p. 247). Building on this, by providing personalized advice and support, and

creating networking and learning opportunities (Hicks & Ison, 2011), the intermediary does not takeover the initiative, and the social innovative nature of the LLCEI is safeguarded. This *ability* is referred to by Middlemiss & Parish (2010) as the capacity of the community in question and its members to make changes by drawing on the resources available to them individually and collectively. Thus, ABCD harnesses the existent or potential capacities of a community/LLCEI.

On the basis of this understanding, Mathie & Cunningham (2003) rightfully point out that intermediaries' primary task is one of group capacity building, which can be observed empirically in Lochemer Energie, in which an intermediary agent was hired by the municipality to build local capacity for the initiative (Hoppe et al., 2015, p. 1917). Mathie and Cunningham (2003) continue and state that it is key to safeguard that the initiative follows the community's vision and that local assets and resources are identified and mobilized to support this vision. Building on this, the role of intermediaries in the preliminary stages of the process is facilitative and as one of the actors in the community's widening network. Furthermore, the intermediary ought to avoid that the initiative becomes dependent on its support.

In other words, the challenge - as also noted by Mathie & Cunningham (2003) - is to foster an endogenous process. In this regard, Neumeier identified several factors for successful endogenous development strategies, which involve inter alia: collective learning, co-ordination and communication processes between different actors in teams, actor networks and other means of co-operation, that are new in relation to the horizon of experiences of the people concerned (2012, p. 59). Building on this, Neumeier (2012) argued that (rural) development building by means of endogenous strategies can solely be effective if it builds upon, spurs and supports the development of social innovations (Neumeier, 2012, p. 59).

In sum, endogenous development strategies and the ABCD approach when performed successfully harness the social innovative nature of LLCEIs and allow them to draw on internal, non-traditional capacities. By spurring LLCEIs to use non-traditional, internal capacities and resources their development becomes sustainable and issues such as a lack of confidence, social competences or adaptive capacity are overcome. Table 1 gives an overview of the relevant concepts discussed in the theoretical section and shows how they interrelate.

**Table 1 Overview of theoretical concepts and relations in between**

Theoretical concept	Description/relevance	Relates to
<b>Practical/traditional capacities and resources</b>	Non-tangible capacities and resources commonly referred to in the literature as crucial for LLCEI success, i.e. upfront investment capital; knowledge and (external) expertise; time; skills. These resources are typically provided for by intermediaries and governments and are transferable and to a certain extent suitable for mainstreaming.	
<b>Non-traditional capacities and resources</b>	Difficult to transfer capacities and resources that are internal to the LLCEI or the community and have potential to overcome issues that LLCEI face mentioned in the literature (e.g. lack of confidence and emotional stamina). These non-traditional capacities and resources involve in general 'soft-skills' such as culture and identity (Ray, 1999a;1999b; Middlemiss & Parish, 2010; Bomberg & McEwen, 2012), legitimacy (Walker & McCarthy, 2010), social capital (Newman & Dale, 2005).	
<b>Internal capacities and resources</b>		
<b>Endogenous development</b>	An approach for revitalizing rural territories (not necessarily rural regions). Endogenous development is an approach that assumes that development will be more successful and sustainable if it (i) starts from a base of local resources and (ii) involves popular participation in the design and implementation of development action. (Ray, 1999a, p. 524)	ABCD; using assets existent in community
<b>Culture economy</b>	The culture economy approach to rural development involves the attempt by rural areas to localize economic control; to (re) valorize place through its cultural identity by means of using cultural markers (e.g. regional language, historical landscape, crafts) (Ray, 1998, p. 3).	ABCD; using assets existent in community
<b>Social capital</b>	Relationships are assumed to be valuable assets. Putnam (1993): features of social organizations, such as, networks, norms, and trust, that facilitate action and cooperation for mutual benefit  Dimensions of social capital: bridging, bonding and linking social capital: Bridging ties provide an actor access to groups beyond the local group, bonding ties provide trust (Newman & Dale, 2005). Linking social capital involves the links between a community and other communities or external organisations (Hicks & Ison, 2011).	<ul style="list-style-type: none"> <li>• Social capital as <u>one</u> indicator for community capacity (Middlemiss &amp; Parish, 2010), as only indicator for community capacity (Newman &amp; Dale, 2005).</li> <li>• By Forrest &amp; Wiek (2014) understood as community action capability</li> <li>• Community capacity on the network level is engaged or reflected by social capital (Chaskin, 2001)</li> <li>• Bridging, bonding and linking capital, or vertical and horizontal network as indicator for a successful culture economy (Kneafsey et al., 2001)</li> <li>• ABCD-approach is practical application of social capital (Mathie &amp; Cunningham, 2003)</li> <li>• Necessary component of agency (Newman &amp; Dale, 2005)</li> <li>• Adaptive capacity is key in maintaining value of social capital (Gargiulo &amp; Benassi, 2000)</li> </ul>
<b>Agency</b>	Actor agency allows an individual or group to increase access to other critical forms of capital to overcome barriers and solve problems (Newman & Dale, 2005). Agency can be achieved through a dynamic mix of bonding and bridging ties.	<ul style="list-style-type: none"> <li>• Social capital is a necessary component of agency (Newman &amp; Dale, 2005)</li> <li>• Agency is necessary to draw on social capital (Newman &amp; Dale, 2005)</li> <li>• Community capacity is according to Chaskin (2001) engaged through a combination of three levels of agency; individual/personal, organizational, and network level. Social capital refers to the network level.</li> <li>• Development repertoire of endogenous development, in which agency means that the repertoire possessor has a sense of choice of which resources to put to use (Ray, 1999a)</li> <li>• Adams &amp; Hess' (2008): community as social agent, one of the two fundamental principles of social innovations.</li> </ul>
<b>Adaptive capacity</b>	Adaptive capacity is an attribute of LLCEIs that reflects learning, flexibility to experiment and adopt novel solutions, and development of generalized responses to broad classes of challenges and is able to deal with disturbance and change while maintaining critical functions and structures (cf. Walker et al., 2002; Olsson et al. 2004).	<ul style="list-style-type: none"> <li>• Adaptive capacity is inhibited by excessive bonding ties</li> <li>• Endogenous development too pursuits to develop sustainable structures that allow for on the one hand innovation, and flexibility, and on the other hand stability (Magel 2000, in Neumeier, 2012, p. 49).</li> </ul>

	Adaptive capacities helps to overcome issues mentioned by Seyfang et al. (2014).	
<b>Asset-based community development</b>	<p>The assumption of ACBD is that in order to revitalize a troubled community, one ought to discover the assets and capacities of the community in concern to rebuild it, instead of focusing on a community's needs, deficiencies and problems. This ABCD focuses on the community internally.</p> <p>this focus is intended to "stress the primacy of local definition, investment, creativity, hope and control" (1996, p. 27) and not to downplay the role of external forces.</p> <p>Community development process should be relationship driven, informal associations and networks are treated as assets and also as the means to mobilize other assets of the community (Kretzmann and McKnight, 1996; Mathie &amp; Cunningham, 2003).</p>	<ul style="list-style-type: none"> <li>• Since ABCD takes relationships as assets, it functions as a 'practical application of the concept of social capital' (Mathie &amp; Cunningham, 2003)</li> <li>• Harnessing internal capacities of LLCEIs, leaving control and power at the LLCEI.</li> </ul>
<b>Social innovation</b>	<p>A social innovation is understood as a change in the attitudes, behaviour or perceptions of a group of people joined in a network of aligned interests that, in relation to the group's horizon of experiences, leads to new and improved ways of collaborative action in the group and beyond (Neumeier, 2012, p. 65)</p>	<ul style="list-style-type: none"> <li>• Has implications for the ability to mainstream endogenous development strategies (Dax et al., 2013; Hufen &amp; Koppenjan, 2015)</li> <li>• Adam and Hess' (2008) dimensions of social innovation relate to ABCD and agency, and Mouleart et al. (2005) dimension of increased socio-political capability and access to resources as well.</li> <li>• Endogenous development strategies can be effective under condition that processes of social innovations are understood (Neumeier, 2012).</li> </ul>
<b>Community capacity</b>	<p>Middlemiss &amp; Parish (2010): capacity refers to the ability of the community in question and its members to make changes by drawing on the resources available to them individually and collectively.</p> <p>Dimensions: personal, infrastructural, organizational and cultural capacity</p> <p>Chaskin (2001) refers to community capacity as involving four characteristics; sense of community, level of commitment, ability to solve problems, and access to resources</p> <p>Compared to middlemiss &amp; Parish (2011), Chaskin (2001) holds that community capacity is engaged through some combination of social agency on personal, organizational and network level.</p>	<ul style="list-style-type: none"> <li>• ABDC focuses on capacity building, instills confidence, safeguards problem solving capacity.</li> <li>• Kirwan et al. (2013) pointed out that social innovations contribute to community capacity.</li> <li>• Seyfang et al. (2014) mention that configuration of a LLCEIs capital is important.</li> <li>• Ray's (1999a) development repertoire: a stock of resources or often used practices from which the repertoire possessor can select according to the requirements of a situation</li> </ul>
<b>Community</b>	<p>Community is understood as an aggregate of people who share common activities and/or beliefs and who are bound together principally by relations of affect, shared geography, loyalty, common values, and/or personal concern (cf. Brint, 2001, cited by Wirth, 2014 p. 238)</p> <p>Wirth (2014) conceptualized 'community' as an order from which cultural-cognitive, normative and/or regulative forces originate (cf. Marquis et al., 2007; Scott, 2008).</p>	<ul style="list-style-type: none"> <li>• These forces influence the emergence and constitution of LLCEIs (Wirth, 2014)</li> <li>• In turn, cultural-cognitive and normative forces can be used as assets (Ray, 1998)</li> <li>• Subsequently, these assets can contribute to sustaining community mobilization (Bomberg &amp; McEwen, 2012)</li> </ul>

## 4. Methods

This paper follows an explorative case-study approach. The intermediaries in the province of Fryslân are scrutinized to answer our research questions. The Frisian context is chosen as a case because the province is home to over 60 LLCEIs on a total of around 300-400 in the Netherlands. Furthermore, the LLCEIs in Fryslân greatly vary in scope, size, and organizational status. Moreover, there is significant variation in the intermediaries and their roles in the Frisian context. In addition to that, as a rural province, Fryslân experiences issues related to regional shrinkage, which evidently impacts on local socio-economic conditions. Enhancing the livability of Fryslân and tackling the issues inherent to shrinkage are at the top of the political agenda. The province sees LLCEIs as one mean to spur regional development and augment livability. Therefore the Frisian context represents a unique case that suits the theoretical conditions that we excerpt. Empirical data is collected by means of 17 in-depth interviews with experts and stakeholders in the field. This data is augmented with secondary document analysis.

## 5. Description of the Frisian case

The province of Fryslân is characterized by its rural landscape, dairy farms, and is home to numerous rural townships and small villages that commonly have around 500 to 1500 residents. The LLCEIs in Fryslân typically evolve in these small villages and townships. This is, however, not only for reasons of sustainability: the province of Fryslân is a shrinkage region and has to deal with a demographic and economic decline. Much of Fryslân's political attention is directed to tackling the issues involved with shrinkage and enhancing (rural) livability.

In the Netherlands alone, LLCEIs are increasing significantly and at present there are over three hundred of these initiatives with approximately sixty LLCEIs in the province of Fryslân. Whereas the majority of the Frisian LLCEIs were established no more than 3 to 4 years ago, some of them have existed since the 90's. The LLCEIs in Fryslân show a large variety in size, scope, and type of organization. On the one hand it is home to initiatives such as the Amelander Energy Cooperative which has over 250 members, while Sustainable Heeg as 32 members.

The province of Fryslân has - next to its own policy mechanisms- several intermediaries that strive to support the LLCEIs in the Frisian region. Next to this, municipalities such as Leeuwarden are highly involved in spurring the development of LLCEIs in Fryslân. The Leeuwarden municipality even was responsible for the initiation of a Frisian intermediary; Ús Koöperaasje.

In this section we will firstly describe what is happening in the Frisian context. Subsequently we will analyze in section 6 to what extent the theoretical elaborations mentioned above occur in the Frisian context. Specifically, we are interested in: *How are the roles of intermediaries concerning the support of traditional and non-traditional capacities or resources reflected in a practical case, in specific the province of Fryslân?*

### *Province of Fryslân*

One of the primary policy instruments of the province of Fryslân designed to support bottom-up initiatives is the '*Iepen Mienskipfûns*' (Open Community Fund; authors' translation) (Province of Fryslân, 2015a). The Open Community Fund involves a financial instrument that supports bottom-up initiatives that contribute to the livability of their local vicinity. For an initiative to become eligible for the subsidy, an activity should contribute to at least one of the following aspects: enhancing social cohesion, connecting people,

initiating or enhancing partnerships, creating involvement or public support. Also, the activity should address on or more of the following themes; public transport, social policy, livability, demographic developments, local energy initiatives, culture, housing projects on the basis of collective initiation (Province of Fryslân, 2015b). Interestingly, the majority of the provincial budget used for this fund stems from its rural policy budget (Province of Fryslân, 2015a, p. 59). The province appropriated € 10 million for the period 2015-2018 for this instrument (Province of Fryslân, 2015a).

The Province of Fryslân and *Doarpswurk* collaborate in managing and implementing this policy.

A second cornerstone of the province's instruments to support LLCEIs is a € 2 500,- subsidy that LLCEIs that are in their start-up phase can make use to cover a part of the costs involved with starting up an initiative. The province made available € 65 000 for 2014 and 2015.

### *Doarpswurk*

*Doarpswurk* (village work; authors' translation) was established in 2008 to support Frisian villages in transition processes regarding the overall livability of rural villages. This means that sustainability or renewable energy is seen as but one way - or a vehicle - to stimulate the livability and social cohesion of rural areas. *Doarpswurk* places responsibility and ownership at the village itself (*Doarpswurk*, 2015b) and supports villages and citizen initiatives that contribute to a sense of community and social cohesion in the villages by means of offering pro-active, innovative and accessible support (*Doarpswurk*, 2015b). On their website, *Doarpswurk* specifically mentions in light of the support they provide that they guide initiatives in their process, but do not take over the process itself (*Doarpswurk*, 2015c) and conduct peer-to-peer benchmarking. This way, the ideas and developments remain in the hands of the initiators and therefore find a fit in the community itself. They link and bundle initiatives and bring together initiatives that go through the same processes (*Doarpswurk*, 2015c). The Province of Fryslân is their primary partner and wherefrom *Doarpswurk* is commissioned to support bottom-up initiatives (*Doarpswurk*, 2015d).

In collaboration with the Frisian Environmental Agency, *Doarpswurk* initiated a platform to support LLCEIs, dubbed the 'energy-workshop'. This platform not only fosters network opportunities for initiators of LEIs, but both organizations also provide support in various ways. The kind of support involves inter alia; substantive and organizational support, performing feasibility studies, formulating project- and business cases, assisting with finding financial sources for the preparation and realization of projects, identifying and fostering collaboration with stakeholders (e.g. municipality, province, firms, knowledge institutes) (Frisian Environmental Agency, 2014).

In a 2015 energy-workshop seminar that exhibited the energizer 'Do you want to make your village energy-neutral?', the platform assisted the interested initiatives with tailored advice (*Doarpswurk*, 2015a). The platform firstly gathered information to clarify the necessary steps to make a village energy-neutral. Subsequently, all responding villages were approached individually to make sure the plans and activities matched the possibilities in the village.

### *Ús Koöperaasje*

*Ús Koöperaasje* (Our Cooperative; authors' translation) is an overarching regional/provincial cooperative of which local renewable energy cooperatives can become a member. It functions as a representative body for its members. *Ús Koöperaasje* fosters support in shape of legal documents, business plans, and help with applying for subsidies. On their website, they distinctly mention their approach that resembles that of social innovation: 'because in the current market economy there is no room for honesty and openness, we are going to do it ourselves.' (*Ús Koöperaasje*, 2015a).



### *Informal role of local government in establishing Ús Koöperaasje*

The original idea of an overarching cooperative came from the energy coordinator of the Municipality of Leeuwarden that on the basis of a number of visits to LLCEIs came to the conclusion that these initiatives typically face similar problems. The Municipality of Leeuwarden facilitated the establishment of *Enerzjy Koöperaasje Fryslân*, by allowing its official energy coordinator to work on the project one day a week and granting a subsidy in the start-up phase of the cooperative. However, the municipality of Leeuwarden was not formally involved in the development process of the cooperative. Still, it was in the interest of the Municipality of Leeuwarden to establish this cooperative since at the time two LLCEIs were emerging in the municipality itself. The cooperative took the Ameland Cooperative as benchmark for a successful LLCEI and asked the chair of this cooperative to assist in facilitating the organization. Around 20 people in 2012 helped to initiate the cooperative. *Ús Koöperaasje* holds 2 member meetings each year, in which the cooperative's members set the agenda for discussion.

### *Noordelijk Lokaal Duurzaam and the role of Fryslân*

In turn, *Ús Koöperaasje* is member of the overarching *Noordelijk Lokaal Duurzaam* (NLD)(North Local Sustainable; authors' translation) cooperative. This cooperative consists of three regional/provincial cooperatives; *Ús Koöperaasje*, *Drentse Kei* (province of Drenthe), and *Groninger Energie Koepel* (province of Groningen). NLD resells renewable energy and CO2 compensated natural gas. NLD was made possible due to a € 300 000,- loan, of which the Province of Fryslân was the primary initiator, but also on behalf of the Province of Drenthe. The Groningen province issued a subsidy of € 100 000,-. This collaboration of provinces thus initiated and financially facilitated the cooperative (Interprovinciale Samenwerking Energietransitie & Economie, 2014).

### *Netwerk Duurzame Dorpen*

*Netwerk Duurzame Dorpen* (Network Sustainable Villages: authors' translation) (NSW) was initiated by *Doarpswurk* and grew out to be a national online platform on which villages share ideas, knowledge, and experiences. Next to the platform offering opportunities for villages to network with one another, (local and regional) experts are also involved which give advice for no charge. Each Dutch province has its own regional NSW support location.

## 6. Results of the analysis

The intermediaries in the province of Fryslân clearly differ with regard to their approaches in supporting LLCEIs.

The foundation *Doarpswurk* represents a distinctive practical case of an intermediary that applies principles of endogenous development and asset-based community development. This finding in itself is not surprising since *Doarpswurk* initial mission is to maintain and enhance social cohesion and livability of rural villages in the province. Since the central financial mechanism of the province is directed at bottom-up initiatives that pursue societal issues not limited to local generation of renewable energy, *Doarpswurk* logically sees the renewable energy aspect of LLCEIs as but one of the initiatives potentials to enhance local livability. To support LLCEIs, *Doarpswurk* and the Frisian Environmental Agency as well adequately safeguard the social innovative nature of the LLCEIs by offering tailored support and leaves control and power at the initiative itself. This support materializes specifically for LLCEIs in the energy workshop.

This is different in case of Ús Koöperaasje. While members of Ús Koöperaasje receive legitimacy because of their affiliation with a regional cooperative enjoying publicity (cf. McCarthy & Wolfson, 1996), Ús Koöperaasje potentially harms the social innovative nature of LLCEIs by instigating certain organizational and institutional forms. Also, the cooperative uses a successful practical case as thumb of reference for developing LLCEIs. This up-scaling of experiences and practices or reproduction of success is considered as too simplistic, undesirable and perhaps even impossible (Hufen & Koppenjan, 2015; Dax et al., 2013). Furthermore, the local government as such in this practical case was not the intermediary, but the energy coordinator spurring the development of Ús Koöperaasje functioned as an intermediary agent (Hoppe et al., 2015) (cf. Smith, 2012).

Lastly, the Network Sustainable Villages potentially functions as a platform for collective learning, which adds to the agency of LLCEIs to draw on social capital at the network level. However, this opportunity is provided for by frequent workshops organized by Ús Koöperaasje and the energy workshop as well.

## 7. Discussion

The Province of Fryslân adheres to the facilitative and collaborative role that the Dutch government preaches (Ministry Internal Affairs and Kingdom relations, 2010; 2013). The province explicitly mentions in its framework bill 2015 that in light of *devolved governance* and the more pro-active role of the community it established the Open Community Fund. The trend of devolution that involves government programs to be managed by indirect partnerships has implications for governance (Kettl, 2000). What we witness in the Frisian context is innovation under networked governance, in which the role of civil society is that of co-producers and resources are provided for experiments (Hartley, 2005). In specific innovation is here understood in a shift of focus to grassroots forms and at arm's length governance. However, this is not so far-reaching as reforms of empowered deliberative democracy in which mechanisms of state power are sought to be transformed into permanently mobilized deliberative-democratic, grassroots forms (Fung & Wright, 2001, p. 23).

In this setting, Duncan and Thomas (2000) contend that existing networks of intermediary bodies – that are under-resourced - need to be strengthened. Furthermore, intermediaries such as Doarpswurk and the Frisian Environmental Agency function at arm's length of the provincial government, which puts them in a dilemma. Hisschemöller and Siozou (2013) described this dilemma as one that leaves intermediaries with two options. They can emphasize their boundary role as resource for mobilizing end users, but then they may lose access to networks of influence because they advocate different types of knowledge contrasting with prevalent knowledge. Or they can avoid this knowledge conflict by focusing on unambiguous projects to safeguard access to policy networks as resource for their clientele. This points to why intermediaries are to a certain degree characterized by their in-betweenness (cf. Moss, 2009). But still, local governments can function as intermediary agents.

While it is observed that the major part of the province's financial reserves appropriated for supporting bottom-up initiatives is found in the Open Community Fund, it is clear that the province uses these initiatives as vehicles to champion various societal and public administrative concerns. Evidently in this sense, LLCEIs are but one of the foci that the province is interested in.

While it may in first instance seems to be useful for LLCEIs to become a member of Us Koöperaasje because they provide them with guidelines and standardized procedures, a

study looking into the factors that influence the types and amount of resources local social movement organizations are able to mobilize provides interesting insights (McCarthy & Wolfson, 1996). The authors found that affiliation with a highly visible and highly legitimated national organization appears to function as a double-edged sword. On the one hand, it has an energizing effect on local leaders. On the other hand it reduces the effects of agency, strategy and organizational structure. Agency is in their study conceptualized as the sheer amount of effort activists invest in collective action. Similarly, Hinselwood (2001) stated that external agencies that support LLCEIs, ought to support community ideas without importing their own agenda and control into the community, which to a certain extent can be seen in the way Ús Koöperaasje instigates certain organizational and institutional standards.

## Conclusion

In conclusion, “What roles can intermediaries play in supporting LLCEIs in their non-traditional capacities and how does this work in a practical case, in specific the Dutch Fryslân region?”

Firstly, this research question is answered by illuminating what additional resources or capacities LLCEIs require next to the traditional practical capacities commonly referred to in the literature. LLCEIs require capacities that are in principle difficult to transfer. These capacities and resources are internal to the LLCEI or the community and have potential to overcome issues that LLCEI face mentioned in the literature (e.g. lack of confidence and emotional stamina). These non-traditional capacities and resources involve in general ‘soft-skills’ such as culture and identity (Ray, 1999a;1999b; Middlemiss & Parish, 2010; Bomberg & McEwen, 2012), legitimacy (Walker & McCarthy, 2010), social capital (Newman & Dale, 2005).

Second, we strived to gain insights into what mechanisms and strategies are relevant for LLCEIs to draw on these internal capacities and came to the conclusion that the endogenous development approach, the culture economy, actor agency and adaptive capacity provide for useful mechanisms and principles that LLCEIs can draw upon in order to bring their non-traditional capacities to action.

Third, we explored what role intermediaries have in addressing the lack of non-traditional capacities or resources of LLCEIs and argued that LLCEIs are in need of an approach akin to the Asset-Based Community Development approach. Such a strategy for supporting LLCEIs adequately harnesses the social innovative nature of LLCEIs, spurs LLCEIs to identify and mobilize their internal capacities, and leaves power and control at the initiative.

Lastly, we reflected on our theoretical contributions by exploring a practical case; the Frisian region. On the basis of the in-depth interviews and secondary data, we found that the Frisian context is representative of the arguments put forward in this paper. Doarpswurk’s intervention instruments resemble a successful approach to supporting LLCEIs in a way that addresses the LLCEIs internal capacities and awakens their non-traditional capacities. The Frisian context also pointed to the potential of local government officials that on personal account support LLCEIs in shape of an intermediary agent. The outcome of this support was an overarching cooperative that on the one hand is a visible organization that enjoys high legitimacy, but on the other hand has ambiguous implications for its constituency.

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