Community Engagement in Energy Transition

A Qualitative Case Study

Babak Zahraie and André M. Everett

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Abstract

Energy systems and their transition to more sustainable forms of production and consumption are of interest to researchers from multiple disciplines. Community-based enterprises and grassroots innovations play a crucial role in different aspects of these transitions. They possess considerable social capital and are able to assemble a social and/or environmental vision. Some of them seek market opportunities to take action in order to construct the economic basis that will further their vision in broader societal contexts. The collective nature of these entities may add to the effectiveness of their actions. A better understanding of such entities may help foster sustainability transitions in local communities and exploration of their wider influences on national and global scales. This research

B. Zahraie (✉)
Research Management Office, Lincoln University, Lincoln, New Zealand
e-mail: babak.zahraie@lincoln.ac.nz; babak.zahraie@otago.ac.nz

A. M. Everett
Department of Management, University of Otago, Dunedin, New Zealand
e-mail: andre.everett@otago.ac.nz

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extends current literature on community-based entrepreneurship and grassroots innovations by investigating a New Zealand community-based enterprise, which created a network of actions and organizations that used bottom-up innovative ideas to respond to the local energy situation. Although their efforts have been partially unsuccessful to date, much can be learned from their experiences.

Keywords
Community-based entrepreneurship · Grassroots innovation · Evolutionary theory · Energy system transition

Introduction

Entrepreneurship, including social, environmental, and sustainability-driven, is considered a solution for social and environmental degradation (Dean and McMullen 2007; Pacheco et al. 2010; Rastogi and Sharma 2017; Sarkar and Pansera 2017; Zahraie et al. 2016). Entrepreneurs address social and environmental problems in their business environment through their innovative practices and therefore may become a source of variation that initiates wider changes in their business environment (Boro and Sankaran 2017; Seyfang and Longhurst 2016). Among multiple types of entrepreneurship, researchers' attention has been attracted to grassroots innovation (and the accompanying concept of community entrepreneurship), defined as "movements seek[ing] innovation processes that are socially inclusive towards local communities in terms of the knowledge, processes and outcomes involved" (Becker et al. 2017; Smith et al. 2014, p. 114). Yet, their crucial role in processes of wider change in the business environment has not been investigated adequately (Becker et al. 2017; Feola and Butt 2017; Hossain 2016; Pansera and Sarkar 2016; Seyfang and Smith 2007). Recent literature shows that the success of grassroots innovation is an emerging phenomenon that occurs as a result of dynamic interactions among three levels: individual, group, and societal (Grabs et al. 2016). Further investigation of these dynamics may result in a better understanding of these movements and help to address social and environmental degradation that threatens local and global communities (Hargreaves et al. 2013; Hossain 2016; Ornetzeder and Rohracher 2013).

Grassroots innovations are identified as appropriate spaces for experimentation, which is a necessary stage for sustainability innovations to scale up (Antikainen et al. 2017; Feola and Butt 2017; Laakso et al. 2017). They facilitate experimentation with innovations that require a social movement to diffuse and initiate a broader social change (Hossain 2016) and create a learning environment for social, cultural, and ethical values that differ from dominant norms (Monaghan 2009). This learning process creates vision and facilitates the formation of a new niche that may become stable, be adopted by salient actors (Hoppe et al. 2015), and translate to dominant trends in the societal environment at later stages of development (Martin and Upham 2016; Martin et al. 2015). This process is explained through (a) deepening, (b) broadening, and (c) scaling-up stages. Deepening presents higher-order learning

among the people involved in experimenting a radical technology, structure, and/or sociocultural norms; broadening presents the imitation process where the experiment diffuses in a broader community by repetition; and finally, scaling up is when the experiment is embedded in the broader societal context and becomes mainstream (Laakso et al. 2017).

Grassroots innovation and community entrepreneurship are driven by social and environmental concerns and can provide simple solutions to address everyday life issues (Kim 2017; Sarkar and Pansera 2017). These solutions lie within the experience and skills of communities and individuals outside formal organizations and institutions (Reinsberger et al. 2015). Community-based entrepreneurship brings new dimensions relative to conventional approaches of entrepreneurship. These dimensions include, but are not restricted to, cooperation among volunteers, informal groups, and social enterprises (Hossain 2016; Martin et al. 2015). Becker et al. (2017) demonstrate that community-based entrepreneurs, in the European energy sector, usually combine renewable energy production with broader social and environmental objectives. They are collectively owned, which defines their decision-making process through engagement and democratic negotiations, requiring intense civic participation for their survival. Such participation creates their embeddedness in their surrounding social, cultural, and political systems and increases the chance of acceptance of their new practices among the wider population. Community-based entrepreneurs craft new combinations taking advantage of such dimensions and utilizing scarce resources in their communities (Sarkar and Pansera 2017). These efforts usually result in bottom-up changes that are created through nonprofit organizational forms (Blake and Garzon 2012; Ross et al. 2012; Seyfang and Smith 2007). Since the solution is provided by personally involved actors, usually not driven by financial objectives, the outcomes may be more sustainable (Pansera and Sarkar 2016).

Researchers from diverse disciplines including agriculture (Blay-Palmer et al. 2016; Rossi 2017), policy (Hargreaves et al. 2013; Smith and Stirling 2016), technology, and innovation (Sarkar and Pansera 2017) have used different theoretical lenses such as conceptual niche management (Monaghan 2009), sociotechnical transitions theory (Boyer 2014), and multi-level perspective (Ornetzeder and Rohracher 2013) to investigate grassroots innovation and community-based entrepreneurship. These studies have examined movements such as community currency (Michel and Hudon 2015; Seyfang and Longhurst 2013), the people's science movement (Kannan 1990), Honey Bee Network movement (Gupta et al. 2003), and more recently energy (Becker et al. 2017; Ornetzeder and Rohracher 2013; Reinsberger et al. 2015) and transportation (Ross et al. 2012). Research in this area has mostly focused on technical and technological aspects of these entrepreneurial actions, whereas social and cultural aspects of sustainability transitions require further attention (Becker et al. 2017; Brown et al. 2017; Ford et al. 2017; Järvensivu 2017). For example, Brown et al. (2017) in an investigation of rural energy projects in the Global South explain that success and broader influence of grassroots innovation is a result of interplay among three different but complementary types of literacy, focusing on energy systems, community projects, and politics. They placed

less emphasis on technological and financial aspects of these changes. Research shows that cultural complexities related to changes associated with these entrepreneurial actions are very important (Antikainen et al. 2017). The entrepreneurial actions may have inspiring, unfortunate, and threatening aspects for the cultural dimension of societies (Järvensivu 2017). Hence, aspects such as users' involvement in sustainability initiatives are an important factor for upscaling of these entrepreneurial actions, while ability to form cooperation with regional networks and policy instruments from local and regional governments may influence the outcomes (van den Heiligenberg et al. 2017).

Although research in this area has intensified in recent years (Hossain 2016), very little is known about these entrepreneurs (Hargreaves et al. 2013), whether and how their actions may scale up (Feola and Butt 2017; Laakso et al. 2017) and what motivations and outcomes characterize them (Becker et al. 2017). This chapter aims to shed light on some aspects of this phenomenon by investigating a case study of community-based entrepreneurship in New Zealand. This investigation considers the multidimensionality of sustainability transitions and emphasizes social, cultural, and institutional aspects of these coevolutionary changes and the role grassroots innovation plays in this regard. A better understanding of community entrepreneurs, how they emerge and frame their new entities and how the dynamics between these new entities and their business environment work, is the intention of this case study. The evolutionary theory of organizational change (introduced in the following section) is utilized as the theoretical lens to show how this enterprise interacts with its business environment to pursue its communal goals.

Theoretical Lens: Evolutionary Theory of Organizational Change

Evolutionary theory is a general approach for understanding social alterations. It investigates change at different levels (individuals, corporations, and collectives) through the process of variation, selection, retention, and struggle. It is an overarching framework for several well-known organizational theories including institutional theory, resource-based theory, and organizational learning (Aldrich and Martinez 2001; Aldrich and Ruef 2006). This theory investigates the genesis of organizations and clarifies how organizations emerge through populations and communities (Aldrich and Martinez 2001; Aldrich and Ruef 2006). It explains how variations across organizations may scale up to change current populations and communities of organizations or form new ones. This theoretical lens is particularly appropriate for this case study as the main aim is to develop a better understanding of the formation dynamics of a community enterprise, what it does to remain a viable entity, and wider societal changes it may create.

Since community-based entrepreneurs develop new organizations, they can be categorized as a subgroup of "nascent entrepreneurs" in evolutionary theory (Aldrich and Martinez 2001; Davidsson 2006). A nascent entrepreneur is someone "who initiates serious activities that are intended to culminate in a viable organization" (Aldrich and Ruef 2006, p. 65). They are positioned in a continuum between

reproducers and innovators (Aldrich and Kenworthy 1999; Aldrich and Martinez 2001). While reproducer entrepreneurs adopt currently accepted models of organizations, innovative entrepreneurs make alterations to those legitimate models or create entirely new combinations. The latter group can be categorized into competence-enhancing, competence-extending, and competence-destroying. Competence-enhancing and/or competence-extending improves or builds on the current trends and capabilities, while competence-destroying innovation needs to create knowledge and routines around new practices (Aldrich and Martinez 2010) and fundamentally alters the competencies for an organization (Aldrich and Ruef 2006; Kim 2017). These innovative entrepreneurs are one of the main sources of variation across organizations (Aldrich and Fiol 1994; Aldrich and Martinez 2010, 2015; Aldrich and Ruef 2006; Katz and Gartner 1988; Markard et al. 2012).

This case study, by investigating community-based entrepreneurs and grassroots innovations, is focused on innovative entrepreneurs, rather than reproducers. Moreover, since community-based entrepreneurs need to make fundamental departures from current trends and routines to address sustainability issues in their communities, often they have to utilize competence-destroying activities that may act as a spark for the formation of new organizational forms (Aldrich and Kenworthy 1999; Aldrich and Martinez 2010; Johnson et al. 2006; Tracey et al. 2011; Zeiss 2017; Zhang and White 2016). An organizational form is "a set of rules that patterns social interaction between members, facilitates the appropriation of resources, and provides an internally and externally recognized identity for an organization" (Aldrich and Ruef 2006, p. 114). It "represent classes of organizations that audiences understand to be similar in their core features and distinctive from other classes of organizations" (Fiol and Romanelli 2012, p. 597).

Considering the newness of these organizations, to be successful, nascent entrepreneurs need to create definitions of their new organizational forms and delineate their boundaries to differentiate themselves from other dominant trends (Aldrich and Yang 2014; Khaire 2014; Suchman 1995). Establishing a formal identity is one of the characteristics of emerging organizations and involves determining four properties: intentionality, resources, boundary, and exchange (Aldrich and Martinez 2001; Brush et al. 2008; Katz and Gartner 1988). In this regard Aldrich and Fiol (1994) introduce lack of legitimacy as the main obstacle for formation of new identities. "Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman 1995, p. 574). Two forms of legitimacy are recognized: (1) cognitive, defined as "how taken for granted a new form is," and (2) sociopolitical, defined as "the extent to which a new form conforms to recognized principles or accepted rules and standards" (Aldrich and Fiol 1994, pp. 645–646).

Cognitive legitimacy is about creating and spreading knowledge of new practices. It is about changing the perceptions among people in a sector and what they consider as "taken for granted" (Aldrich and Fiol 1994; Khaire 2014; Markard et al. 2016). Establishing cognitive legitimacy usually occurs during the early stages of development when new practices become accepted as legitimate substitutes to incumbents

(Bergek et al. 2008). The level of cognitive legitimacy around a method can be assessed by the level of public knowledge available on that specific activity. The highest level of cognitive legitimacy would be achieved if an approach or a new practice were to become "taken for granted" (Aldrich and Fiol 1994; Johnson et al. 2006; Suddaby and Greenwood 2005). From the producers' point of view, cognitive legitimation means new entrants may copy those trends, while from the consumers' perspective, cognitive legitimacy means they are knowledgeable about the products and services on offer (Aldrich and Fiol 1994; Khaire 2014). Finding cognitive legitimacy is the most difficult aspect of creating new organizations and organizational populations for innovator entrepreneurs (Aldrich and Martinez 2010).

On the other hand, sociopolitical legitimacy indicates that "key stakeholders, general public, key opinion leaders, or governmental officials accept a venture as appropriate and right, given existing norms and laws" (Aldrich and Fiol 1994, p. 648). New activities may not be able to rely on existing institutions for external legitimacy (Aldrich and Fiol 1994; Gustafsson et al. 2015; Markard et al. 2016), inducing entrepreneurs to either modify those institutions or create new ones better aligned with their objectives. Social context may also create windows of opportunity, eventually resulting in a change in knowledge, rules, and institutions through the process of social construction (Aldrich and Fiol 1994; Gustafsson et al. 2015; Hargreaves et al. 2013). Considering actors as individuals with "bounded rationality," who make decisions under uncertainty, emotional influence, and local information (Breslin 2008; Foster and Potts 2006; Geels 2004), highlights the crucial roles of local cognitive and social norms (Bergek et al. 2008; Powell and Sandholtz 2012) in both the strategic choices made by entrepreneurs and their efforts to gain legitimacy in their social settings. A significant transition in terms of building legitimacy – and a foundation of the decisions that create an entrepreneur – is the shift from recognizing social responsibility to actually acting on those beliefs (Marques 2017, chapter ► "Moving Forward with Social Responsibility").

Entrepreneurs learn and develop knowledge about their new practices by doing (Aldrich and Martinez 2010; Aldrich and Yang 2014). They need to develop knowledge of how, what, and who for different processes in their businesses, which eventually form the organization's procedural, declarative, and transactive memory (Aldrich and Yang 2014). This results in internal legitimacy, which can be defined as "the acceptance or normative validation of an organizational strategy through the consensus of its participants, which acts as a tool that reinforces organizational practices and mobilizes organizational members around a common ethical, strategic or ideological vision" (Drori and Honig 2013, p. 347). Nascent entrepreneurs have a crucial role in creating trust about their new practices among other stakeholders in their business environment (Drori and Honig 2013). The process of trust-building occurs through a self-reinforcing loop by creating a sense of self-satisfaction for founders (Gambetta 2000), which helps them to overcome social barriers to their innovative actions (Aldrich and Fiol 1994, p. 663). After this gestation period, entrepreneurs have to persuade and convince other actors in the business environment in order to find cognitive and sociopolitical legitimacy and gain access to more resources (Aldrich and Fiol 1994; Suchman 1995). They may

use symbolic tools to affiliate with legitimate established institutions in their business environment so as to legitimize their new practices (Suddaby and Greenwood 2005).

Entrepreneurs, correspondingly, play an important role in shaping their desired populations by their strategic choices. They believe that the collective actions of powerful actors may allow them to take the lead regarding access to resources required to achieve their goal of system change. Collective actions may not be conducted intentionally; the cumulative effects of independent actions by self-aware individuals acting in parallel can be substantial enough to bring about systemic changes (Aldrich and Ruef 2006). Initial collective actions and networking happen, in an informal way, among the network of entrepreneurs and likeminded people and later may formalize in the guise of strategic alliances such as trade associations (Aldrich and Fiol 1994). Forming collective actions strongly influences the process of gaining sociopolitical legitimacy (McKendrick and Carroll 2001). Industry champions who step in as volunteers to form these collective actions may act as catalysts (Aldrich and Fiol 1994; Fiol and Romanelli 2012), becoming involved in institutional entrepreneurship to change the rules and regulations (Bergek et al. 2008; DiMaggio and Powell 1983). Several conditions may hamper the effort to form collective actions for new practices, including (1) divergence in design and knowledge of new practices (which may result in different competitive groups) or (2) conflicts among subgroups, which may cause confusion and uncertainty. These conditions would reduce the chance for champions to form a coalition (Aldrich and Fiol 1994; McKendrick and Carroll 2001).

New methods may expand across other populations and form organizational communities, which are defined as *"a set of coevolving organizational populations joined by ties of commensalism and symbiosis through their orientation to a common technology, normative order, or legal-regulatory regime" [all italic in the source]* (Aldrich and Martinez 2010, p. 408). The feasibility of developing communities depends on their cognitive and sociopolitical legitimacy. Perceived value arising from the core products and services of a community also influences its viability. Government agencies may evaluate the perceived legitimacy and value of new communities in their roles as potential supporters or as overseers. Dependency among different actors and organizations across communities enhances legitimacy and fosters learning processes. Mutual dependency of actors would give these activities a collective spirit, which makes them more influential on standards and regulations than isolated efforts of individual actors. Collective actions of entrepreneurs facilitate the learning process at a community level, enabling sustainability transitions (Koistinen et al. 2017, chapter ► "Agent-Based Change in Facilitating Sustainability Transitions"). While individual entrepreneurs may find legitimacy based on their own actions, legitimacy at population and community levels is highly dependent on the collective actions of actors. Hence, entering into a fully competitive relationship may cause problems regarding population and community level legitimacy. Governmental support plays an important role in the formation of new communities in (1) support for research and (2) enforcement of new laws (Aldrich and Ruef 2006).

The literature shows that development of sociopolitical and cognitive legitimacy occurs at different levels. Legitimate practices create positive feedback and foster double-loop learning among actors; if contextual factors nurture the adoption of these legitimate practices, they may scale up to change the dominant norms and form new populations and communities of organizations. The question of how sociopolitical and cognitive legitimacy can be accurately measured constitutes a fascinating question beyond the scope of this case study and is left for future research. The following section shows how the community-based enterprise in this case study was investigated and how the findings clarify some aspects of the aforementioned dynamics.

The Case

The community-based enterprise investigated in this research was founded in 2006 in the Blueskin Bay area of the Waitati region of New Zealand's South Island. Located approximately 20 km north of the city of Dunedin, as shown in Fig. 1, the area has a number of small settlements including Waitati, Doctors Point, Evansdale, Warrington, and Seacliff that together include around 1000 homes (Willis et al. 2012). Politically, Blueskin is part of the Waikouaiti Coast/ Chalmers Wards and is within the Dunedin City boundary (Millar et al. 2015).

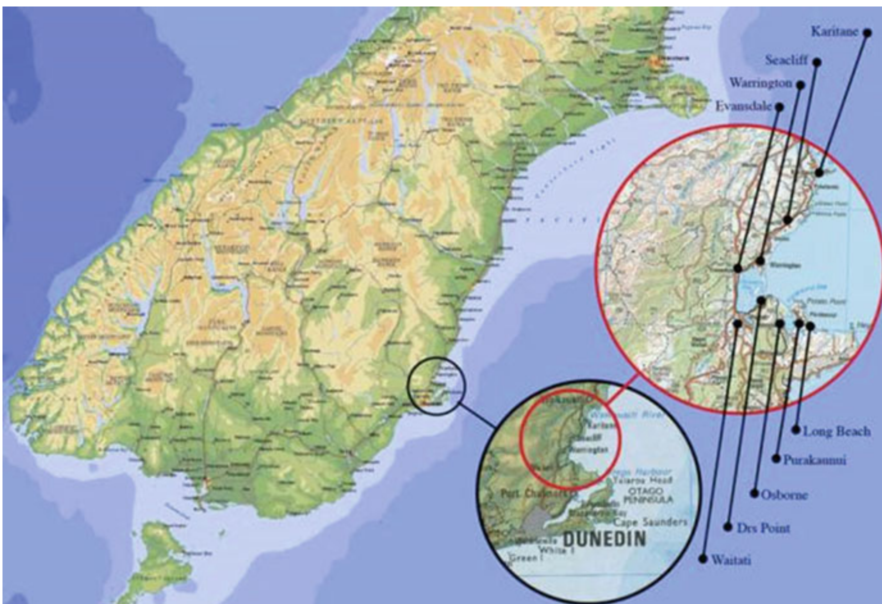

Fig. 1 Geographical location of the case study (BRCT 2017)

The community is very engaged in volunteer activities and has a rich background in social and environmental activism. This was emphasized by all the interviewees in this case study.

The community movement was started by a small number of passionate volunteers and grew over time. Severe flooding of the area in September 2006 restricted access to and from the community, resulting in strong informal support networks being formed. These informal networks continued after that event, forming the initiative for the idea of community resilience. Several community visioning exercises and forums resulted in the Waitati Edible Gardeners group (the WEGgies) and, in 2007, the Blueskin Energy Project (initially named "Waitati Energy Project"). In October 2008, these developments were formalized as the Blueskin Resilient Communities Trust (BRCT 2017; Millar et al. 2015). This official entity governs collective activities and enables the community to sign agreements/contracts and apply for funding. Moreover, it facilitates collaboration between the community and industry, local government, NGOs, universities, businesses, and landowners. In general, the enterprise focuses on enhancing the resilience of the community in response to challenges of climate change and food and energy insecurity. One of their objectives is to improve energy efficiency across different usages in their community and generate their energy locally, aligning with the growing international trend to develop localized low-carbon economies (Gingerich 2017, chapter ▶ "Low-Carbon Economies (LCEs)"). The BRCT's vision, mission, and objectives are shown in Table 1.

By September 2017, the main activities of the enterprise were defined as (BRCT 2017):

Table 1 Vision, mission, and objectives of the community-based enterprise (BRCT 2017)

Vision
We will facilitate a positive, healthy, secure and resilient future for Blueskin Bay and linked communities and promote sustainable resource use
Mission
The Trust will act to strengthen our communities in the immediate, mid and long-term future, with emphasis on energy, food, water and community resilience
Objectives
1. To develop and administer projects that provide education, support and resources to maximise locally based sustainable provision of energy, food, and water 2. To develop and administer projects that provide education, support and resources to minimise energy use, encourage healthy homes and encourage sustainable households 3. To secure and manage funding to achieve the stated goals of the Trust, and to stimulate local sustainable economic activity 4. To develop and maintain relationships to achieve the stated goals of the Trust 5. To ensure community partnership in any enterprises initiated by the Trust and to aim for the most equitable use of resources 6. To foster linkages between organisations with objectives similar to, or complementary to, the Trust's own Vision and Objectives 7. The Trust's goals and activity will always remain charitable

1. Blueskin Turbine: working toward developing a wind farm embedded in the local grid
2. Cosy Energy Advice Line: offering free independent advice regarding energy efficiency and household energy uses such as heating, lighting, and insulation
3. Firewood program: offering bulk sales of firewood for the community at a lower price
4. Affordable insulation: offering discounted insulation for residents willing and able to install it themselves
5. Cosy Home Assessments: offering independent assessments and reports on home performance for Dunedin residents and working with the Cosy Homes Trust to improve the energy efficiency of homes in Dunedin
6. Healthy Rental Certification: providing information to landlords ensuring their rental properties comply with tenancies rules
7. Community Office: a drop-in center for advice that supports community actions and remains a local hub for connecting individuals and diffusing information

The most important business dimension of the trust is intended to become electricity production via the operation of wind turbines. This project would be the first of its kind in New Zealand, if they can achieve the objectives. An exploratory case study research method was used to investigate the situation, as discussed in the following section.

Methodology

This case study is exploratory in nature as it seeks to clarify some aspects of community-based entrepreneurship. Usage of qualitative data, collected by interviewing, added to the depth of findings and enabled the researchers to narrate the story by the voice of the actors involved in the process of entrepreneurship. The objective of the interviews was to ask questions that "are sufficiently general to cover a wide range of experiences and narrow enough to elicit and elaborate the participant's specific experience" (Charmaz 2006, p. 29). The selection of interviewees commenced with purposeful sampling among the individuals who were directly involved in the core of the enterprise and continued with theoretical sampling among the actors who were identified as relevant in the previous interviews (Coyne 1997). The emerging results from the initial interviews indicated which sources to pursue next. The selection was based on the relevance of actors to the emerging themes and whether they could add details or new information. While interviews with sustainability-driven entrepreneurs and other actors in their business environment were the main source of data, other published information such as related academic literature; websites of the organizations, NGOs, or related institutes; reports; and media reports were used as secondary sources of data.

This information was used to find a deeper insight about situations under study, connect information from other sources, triangulate the previous findings, and gain detailed information about various dimensions of emerging themes. Using

Table 2 Information about the interviewees in this case study

Pseudonyms	Group	Interview time (Min)
M-I-1 Leanne	First Group	45
M-I-2 Michelle		69
M-I-3 Michael		69
M-I-4 Bruce		60
M-I-5 Sue		74
M-I-6 Kevin		70
R-I-1 Liz	Second Group	45
R-I-2 George		40
R-I-3 Christopher		50

different sources of data is aligned with theoretical sampling employed in this research (Charmaz 2006), and similar logic was used to find appropriate sources of information. This process continued until reasonable details of the emerging themes and categories were obtained (O'Reilly and Parker 2012). This was evaluated by asking questions such as when, how, and why to clarify aspects such as who was involved and what were the results/consequences. In total nine individuals were interviewed. The details of these participants are shown in Table 2 where they are categorized in two groups: main and secondary actors. In order to maintain the anonymity of the interviewees, detailed information of the participants is not provided.

Grounded theory was used to analyze the collected data. An important aspect of grounded theory coding is the bottom-up discovery of categories, themes, concepts, properties, and dimensions of the phenomenon under study that emerge from the interview data (Charmaz 2006; Corbin and Strauss 2008). This process started by initial coding. Initial coding can be conducted through word-by-word, line-by-line, or incident-to-incident analysis. With all of these methods, data will be compared with data, and codes with data and other codes, to find similarities and differences (Charmaz 2006; Goulding 2002). This research employed incident-by-incident coding, at the initial stage. This approach was appropriate for this study as the main purpose of the research is to generate an in-depth understanding of entrepreneurial actions. As such, using incident-by-incident coding retained the integrity of information about particular actions taken by actors while allowing the researcher to classify them into categories.

During the initial coding, the main goal was to stay open to emergent ideas and directions led by inductive reasoning. This was followed by focus coding and finding connections between emerging patterns, which resulted in themes that were categories of interconnected codes (Charmaz 2006; Goulding 2002). Charmaz (2006, p. 59) defines focus coding as "using the most significant and/or frequent earlier codes to sift through large amounts of data." Comparing emerging themes with new data, and themes with other themes, refined the findings and evaluated the construct of the research (Eisenhardt 1989). Finally theoretical coding was used to gain new theoretical insights. At this stage, evolutionary theory of organizational

change is used to explain the findings and connect the emerging themes to relevant literature. The following sections presents the findings in this case study.

Findings

Two distinct themes emerged from the collected data. These themes are (1) forming a new entity and (2) wider cognitive and sociopolitical legitimacy.

Forming a New Entity

The participants in the case study presented their recollection of the historical events that resulted in the formation of the new community enterprise. Almost all of the participants emphasized the flooding in 2006 as a turning point in this regard. This event raised concern among individuals in the community regarding their readiness to deal with similar situations in future. This was enhanced by a rising awareness within the community regarding issues related to climate change and its consequences such as sea level rise and severe weather conditions. They discussed their isolated geographical location and how they did not receive an adequate response from governmental bodies at the time of the event. This resulted in a shared vision within the community, highlighting a gap in their surrounding environmental and societal system. Two of the participants explained this as follows:

> In 2006 there was a large flood that went through the community, and there was an understanding that these sorts of flood events will happen much more frequently in a world where climate change is accelerating. And so even though there's a risk of sea-level rise, the much more immediate threat is from the one in 50-year flood event becoming a one in 20-year flood event, becoming a one in five-year flood event, and the effect it would have on the community. And so that was a kind of a touchstone, crystallizing point for all of these other conversations to come together, and as a result of that the Blueskin Communities Trust was formed, and that has then been able to take those conversations and formalize them and run that agenda forward in a much more structured way, and probably as a result, there's been more traction with that than there has been in other places. [M-I-3 Michael]
>
> Blueskin Resilient Communities Trust is a community trust that was set up. Back in 2008, it became a charitable trust. The idea came after the Waitati floods occurred and the residents of Waitati pulled together in order to work together and try stop their homes from being completely devastated by floodwater. They had spent the early hours of the morning and into the lunchtime period working hard to try and rescue animals that were trapped behind fences, that were getting – were drowning. Working hard to stop water coming into homes, by around late afternoon or afternoon I think it was – maybe early afternoon – [The governmental group] turned up with sand bags to try and help, but by then the floodwaters were starting to go down. And what the community realized was they're separate to Dunedin. There's a big enough distance that means, when things happen they're going to have to survive on their own, . . . So they came together and looked at different things, from energy, food, transport, they were some of the key issues that the group wanted to look and try and create resilience around for the community, and the Blueskin Resilient Communities Trust was formed out of that. [M-I-2 Michelle]

Finding a gap alongside the informal networks that had formed during the rescue process in the flooding event formed the initial core of the enterprise. Most of the participants then discussed the influence of passionate individuals in this process. They identified these passionate individuals as the main drivers for the formation of the formal entity, noting they allocated time and networked with other members in their community to bring them together in order to gain access to resources in their communities. This aligns with research showing that community cohesion for environmental stewardship can be achieved through passionate commitment to an agreed purpose (Sachdeva 2017, chapter ► "Environmental Stewardship"). The participants reported that:

> the BRCT was formed with [passionate individuals], I think perhaps as one of its drivers, but [those individuals] first amongst equals of driving this trust with the aim of creating a resilient community, a community in transition from reliance on fossil fuel and getting all its supplies from outside of the area, they were looking to design a community that was dependent much more on itself. [R-I-1 Liz]
>
> It's the right organization and the right personnel. Just being community-based hasn't done it, because you've got [a community charitable trust] at the table which is a big community-based organization, with them that we haven't been able to get that happening. [R-I-2 George]

The results show that continuous effort by these passionate individuals accompanied by support from the community resulted in the formal organization of a trust in 2008. This milestone adds to the formality of interactions between the community group and other institutions and enables them to have a more legitimate voice in their institutional environment. They could secure funding from some third parties and gain access to scarce resources in their business environment. Access to these resources enabled them to employ some of those passionate individuals, who were involved in the process since the beginning, to pursue their communal goals. This changed the nature of their organizational interactions from merely voluntary to more formal:

> Typically some of the groups that are associated with us could be regarded as very fringe and in the nicest possible way, lunatics, but they all have their place in adding to the color of a community, and the reality is that on their own they can't really do much, so by associating and being part of that BRCT umbrella, they get some grunt going in dealing with other organizations. [M-I-1 Leanne]
>
> "You can, let's do it in our spare time" [achieve community goals]. It's not that, we don't have spare time. Why not pay someone to do this work, because it's important, you know, it's make a community resilient, it's not going to happen overnight. It needs research, it needs understanding, it needs community engagement, it needs somebody to do the grunt work, and that's what I think the Community Trust is for. [M-I-2 Michelle]

Since the new enterprise differed structurally from other organizations in its institutional environment, it had to define a legitimate model to find access to resources and distinguish itself. The findings in this case study highlight different methods of resource mobilization compared to conventional models:

> As an entity, their principal problem, I think there's two problems that they face, well there's two. One is funding, so how to sustain their activities and the trust has historically been, well initially it was basically voluntary. So there wasn't a lot of costs associated with running the trust. As the trust has moved to employing people … obviously that brings a substantial labour cost in the Trust. … So finding the funding to sustain, I guess the salaries bill for the employees of the Trust and the overheads, in terms of accommodation and operating expenses is probably, at top level is one of the major challenges that the Trust faces and it's been very reliant to date on grants from Lotteries Grants Board, Hikurangi Foundation, various other supportive organizations. There's been a focus on the trustees to try and reduce our reliance on that to the extent that we can and the energy project is part of that strategy if you like in terms of creating some sustainable revenue source that will support the other work of the Trust. So that is one of the issues. The other issue which is more a philosophical issue I suppose, is defining the Trust's mandate within the community because the Trustees such as myself we are not elected by anybody, we're just appointed by the Trust, within the Trust so to speak, so the other Trustees effectively appoint their fellow Trustees. [M-I-4 Bruce]

As indicated in the preceding quote, in addition to funding, the participants highlighted community engagement as the main source for finding access to resources and gaining internal legitimacy. Since the initial intention of the entity was to pursue communal needs, all the decisions and strategies had to be consulted with various community groups. While this process added to the complexity facing this enterprise, it also legitimized the actions of the enterprise in a broader societal context as their requests were considered to be community demands. Hence, finding new organizational procedures to facilitate these collaborations were among the proprieties for the actors involved. Two of the participants described this:

> The first one is you have got to get the community engagement and we've adopted what is apparently more of a European model than a New Zealand model in that we frontend-loaded the community involvement right at the very start. So by that, what I mean is we've had newsletters, public meetings saying, this is what we want to do and we've invited public submissions on everything from, you know around the project, so that's to do with the ownership. So we've put up the various models of ownership that there could be. We've put up the sites. We've done, just trying to engage the community to say "what are your concerns with that?" and then constantly collected and refined those. [M-I-1 Leanne]
>
> In the commercial world that selection criteria would be done by the company, the developer. In the world of community winds, thats been a project that has been done really more as a community conversation. So there"s been a much deeper level of consultation, engagement with the community from a much earlier stage. So, you know, that participation has gone to comparing the different sites and weighing up the different merits and saying, "All right, this is the one we want to use."… It is making the process a little more complicated in one sense but the rationale is … by the time you get to lodging the consent, the vast majority of people are comfortable with the proposition. [M-I-3 Michael]

The results in this section demonstrated how a shared experience among the community members resulted in a united vision and demonstrated a need for further actions. It showed how the shared vision resulted in formation of a trust to pursue communal values in a more formal way. The influence of passionate individuals as a driver for this process was emphasized, highlighting how these dedicated people allocated their resources to this new organization to move forward and make things

happen. The results show that community engagement is an essential element in gaining legitimacy for this organization. Correspondingly, this example highlights that finding organizational procedures to facilitate collaboration among community actors that enhance inclusiveness is of great importance for securing internal legitimacy. The next section explains how the new entity mobilized community resources to find wider influence in the surrounding institutional environment.

Exercise in Practice One: Community Engagement

As one of three coleaders of the Residents Association in your near-city-center apartment complex, you have been approached by a rather shy long-term resident with an innovative solution to several of the perpetual issues facing occupants of the relatively old building: "Living Walls." The suggestion is that a combination of composting select food waste and rooftop water collection, with solar panels on the side, would enable the residents to cooperatively maintain a series of living walls that would serve to simultaneously better insulate the building, provide fresher air inside, save energy, and provide supplemental herbs (and some food) while decreasing dependence on potentially vulnerable community and commercial systems outside the building. You love the idea, but potential objections immediately occur to you: costs, odors, volunteer fatigue, leaks, maintenance, visual issues, allergies, and more. Assume that you would like to proceed with this suggestion and potentially serve as its "champion" to the leadership board and subsequently the residents as a collective. How would you go about maximizing the goodwill and cooperation of all of the affected parties, to enhance the chances that this proposal will succeed? Which tools would you utilize, and what approaches or communication techniques would you select?

Wider Cognitive and Sociopolitical Legitimacy

This section explains how different strategies were used by the enterprise to enhance its legitimacy and gain access to the resources required to achieve its goals. The enterprise had to use different methods to maintain its engagement with community groups to collect ideas and gain support. Being engaged with the community enabled obtaining some resources that otherwise were not accessible. The enterprise could define joint objectives with more legitimate organizations such as the University of Otago and the Dunedin City Council through individuals who were engaged in those institutions. These involvements added to the legitimacy of the new organization and provided leverage for their claims in negotiations with other third parties. Nevertheless, the support of the community behind those demands still played a major role backing up the enterprise's objectives:

> The Trust has worked closely with the university on a number of research projects. One of the pieces of work which led to the Cosy Homes Project was some research for energy cultures that was a community led initiative on how people react to advice about energy efficiency, and are there more effective ways of providing that information to people via the use of social networks or whatever.... The other thing that gives confidence is by having

> reputed counter parties. So for example, we're in negotiations with the Dunedin City Council to sell them the energy the project produces. . . . So when you talk to various other suppliers and say, "Well, we're selling the energy to an A-rated counterparty that's a territorial authority," you know, City Council, that gives them a lot of confidence that those invoices will be paid. And so the, you know, cash in the business will continue to flow. [M-I-3 Michael]
>
> Well we're profiled in the community and we are profiled nationally high and they have built that up over time so they're doing really well at increasing that profile and it is getting to the stage as I say that they can start putting political lobbying with credibility whereas in the past they'd be just a group of greenies out there and that's what it was but that's changed over the last probably two years, three years. All of a sudden it's a political voice, the energy, when the energy plan for the city was being formulated, who are the groups that we want to be involved? [M-I-5 Sue]

Being involved in community engagement activities, they could organize some collective actions to gain social and political legitimacy. The participants discussed the pivotal role that the community enterprise had played in forming a sector group to address issues related to housing with inadequate insulation. This resulted in a sector group that was funded by government to insulate some houses in the area that needed urgent attention. This was reported:

> With the Cosy Homes, they [Blueskin Trust] were contracted to run the initial session and they did all that, they did the running around. They did the invitations, they sorted that out, you know we paid with the [another Trust] for some of that stuff. And then since then [One of the people from Blueskin Trust] continued to be contracted to do that running around and has got the right people in the room. So they're doing that connecting stuff on the Cosy Homes. [R-I-2 George]
>
> For instance, I have just joined the group with them and they are on the Chamber of Commerce so [one of the people from Blueskin Trust] is the chairman of the energy group for the Chamber of Commerce so that effectively Waitati is sneaking into the business sector and providing concepts and ideas to go to the council for decision making in regard to the energy plan for the city. [M-I-5 Sue]

Despite the progress of the new entity and finding broader influence in their institutional environment, some of the participants discussed the effect of strong minded individuals, who were involved in the enterprise, in forming and giving direction to the activities. They argued that some of the ideas pursued by these individuals were not supported by the broader community. This created a less united front and vison for the trust and left some members of the community out of the decision-making process. This issue was seen by some of the participants as a key concern that may change perceptions of the community trust, delegitimize its decisions, and split the community into separate smaller groups. One participant reported:

> My understanding is that they started off okay, they started off on a series of work programs and with the group together but then quite quickly people who had come in as trustees began to fall away and people who wanted to work with the BRCT and had been hugely inspired began to drop out because there was something not working right, working within there. Quite quickly, quite a number of people who were inspired, motivated, and invigorated just began to leave and withdraw from participating. So quite quickly the community turned away from BRCT. [R-I-1 Liz]

> By and large there's always going to be, you won't please everybody, and we have some who are vehemently against it for various reasons, but, pretty much, I would say we have community support. [M-I-1 Leanne]

This tension was critical in the project to develop a wind farm and create local energy using wind turbines. This project was unique in New Zealand, and the enterprise was pioneering this approach in the New Zealand context. One of the participants reported:

> So the wind is the flagship one, in that we are working towards, well, what we have established is a community-owned wind farm that will provide the big dollop of money needed to support all this sort of stuff. So what we're looking at in the future, that's what I said, a big fund of money that comes off the sale of electricity. [M-I-1 Leanne]

The community was not united toward the final objectives of this project. While a considerable amount of resources and effort were put into this project, different institutional and legal problems question the adequacy of the evidence for stakeholders involved in it. The people passionate about this project used different strategies to solve these issues. One of the main actions was to be as transparent as possible by publishing technical data and informing various community groups on their progress. This strategy was adopted by trustees to leverage their claims against conflicting opinions in their community and the broader institutional system. As reported in a leading regional newspaper:

> The next significant matter in developing a proposed wind farm project for Blueskin Bay was "raised" yesterday. The 30m wind testing tower was raised on Porteous Hill yesterday on a near windless day. Blueskin Resilient Communities Trust manager [Name] said the tower was loaned to the trust by [Company Name] and would allow the trust to carry out more precise testing at its proposed wind turbine site, which would be important for sourcing funding for the project. . . . The data collected from the tower would provide more certainty to potential investors and information that would aid the resource consent process, which was the next step to be taken, [The manager] said. The trust plans to erect up to four turbines on Porteous Hill, capable of generating 5.2GWh of energy each year, at a cost of about $5 million. (Porteous 2013)

These decisions were made to legitimize the actions based on evidence. Despite all these efforts, the project was not completely accepted by the whole community. It seems that losing community support for this project delegitimized the trust's actions so that despite initial consultations to choose the most appropriate site, the necessary resource consent was refused by the Dunedin City Council. The decision was made based on the argument that an industrial-scale turbine at the chosen site may have a negative effect on the rural enjoyment of some community landowners in the area. This was reported in the media as:

> A 110m wind turbine proposed for Porteous Hill above Blueskin Bay has been described by local residents as "the wrong project in definitely the wrong place". (Sinclair, 1 July 2017)

The results in this case study show that the new entity uses diverse strategies such as creating bonds with more legitimate institutions and organizing collective actions to find sociopolitical legitimacy. The results highlighted that community engagement and having united vision across the board are the main leverage for the new enterprise supporting their strategies. However, the outcomes highlighted that the idealism of proactive individuals and the complexities associated with community engagement have resulted in an undesirable situation. This outcome raises a question that warrants further discussion: What mechanisms should be adopted in this form of organization to balance the shared objectives of communities with the goals of the passionate individuals, involved in these organizations, who make things happen?

Exercise in Practice Two: Balancing Divergent Objectives
Pioneers have always faced difficulties and typically approach the challenges with relish. However, in practice, idealism collides with realism in an often unpredictable manner. In this case, legitimation intertwined with delegitimation as the community – united in its goals and strategies – fractured regarding one particular significant project once implementation plans were developed and their consequences better understood. The collective unison gave way to opposed individuals and factions, with both sides claiming the moral high ground and common sense. Assume that you have been appointed as an outside, neutral arbitrator to reach agreement among the various groups so that the community can heal and resume progress toward its mutual goals. What advantages and disadvantages would being an outsider, a formal neutral third party, bring to your role? How would you proceed? What time frame would you envision? What outcomes would you seek? How will you measure progress? Given hindsight, what would you advise the participants to do differently next time?

Conclusion

This case study related an example of community-based enterprise and grassroots innovation that aims to address problems related to global warming (such as severe weather conditions and lack of food security). The findings showed that realizing a gap in the surrounding institutional environment and having a shared vision among the community groups toward that gap were the main driver for the formation of the new community enterprise. Community engagement was the main source of internal legitimacy for the focal organization, with passionate individuals playing a crucial role in advancing the communal objectives in this process. The case study demonstrated that having strong roots in the community legitimizes the actions of the enterprise in its surrounding institutional environment and facilitates access to resources required for further actions. Legitimation leverages claims in negotiations with third parties and connects the enterprise with more legitimate entities that could also justify their actions. The study also raised an important concern regarding the communal interest of various community groups and passionate individuals who become a driver for the new enterprise. It showed that this paradox caused serious

problems affecting one of the projects of the community enterprise in this case study. The case study encourages further discussion toward finding effective mechanisms to address this paradox.

Key Lesson for Engaged Sustainability Lesson

The case study provides an illustration of a common issue related to sustainability initiatives that typically manifest as wicked problems. Different interpretations, expectations, and worldviews among stakeholders involved in a problematic situation may result in inertia leading to nonsolution of the problems. Finding a common understanding about problems and reaching consensus regarding implementable solutions constitute the most difficult part of the transition.

Reflection Questions:

What roles can social networking play in promoting consensus toward both goals and actions in community sustainability initiatives?

Which roles in grassroots innovation efforts could be better handled by outsiders than by insiders?

Given that passionate individuals often see themselves as the expert on a given idea or project, how can other group members engage an outside expert to reduce potential acceptance problems?

How can community-based sustainability initiatives obtain the backing of sufficient capital to ensure their success? (Consider social, intellectual, and cultural, as well as financial capital.)

What are the advantages and disadvantages of linking a local community enterprise initiative to larger-scale regional or national projects, agencies, or institutions?

How would you measure such non-quantifiable aspects as community support, alignment of interest groups, likelihood of success, and degree of consensus regarding a specific grassroots innovation proposal?

What methods for determining mutually acceptable compromise strategies can you identify? Consider this within the context of an organization with multiple overlapping constituencies that share overall goals but differ in perceptions of the nature and relative importance of various types of costs and benefits. Describe potential thresholds and hurdles and how these are affected by the relative levels of incommensurable priorities.

Should a split community call in an arbitrator? When? Who? Who does the requesting? What goal parameters should be set for the arbitrator?

How does perceived conflict of interest affect the legitimation of a "passionate individual" in the collective's eyes?

Cross-References

► Agent-Based Change in Facilitating Sustainability Transitions
► Ecopreneurship for Sustainable Development
► Empathy Driving Engaged Sustainability in Enterprises

► Environmental Stewardship
► From Environmental Awareness to Sustainable Practices
► Low-Carbon Economies (LCEs)
► Moving Forward with Social Responsibility

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