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Scaling of Local Frisian Energy Initiatives

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I would like to state some personal notes and acknowledgements. In my previous thesis, during my Bachelor Spatial Planning and Design, my interest was also caught by citizen energy initiatives. They show commitment, intrinsic motivation and vision. Collective action is something that inspires me to the core. This was no different in my Master thesis, I spoke to all kinds of inspiring people.

I would like to thank the inspiring people I spoke with for their insights, their open arms and in general for their contributions on local and even larger scale. Together they are able to make impact on their own environment and the energy transition. In my point of view, citizen initiatives are also one of the most interesting actors in the challenges we face.

ABSTRACT

The energy transition is a complex process, in which citizens started to take action to produce their own renewable energy. The Frisian context is particularly interesting due to its focus on communities – ‘mienskippen’ – and its high amount of energy initiatives, compared to other parts of the Netherlands. Many elements of energy initiatives are researched, however not much is known about the next step. This study zooms in on how Frisian energy initiatives perceive scaling and which strategies they use, adopting the research question: *How are energy initiatives in Fryslân scaling to increase their impact?* The question is answered by the means of a qualitative case study. Interviews are conducted with three energy initiatives, a Frisian umbrella organization and a national umbrella organization. The results show that Frisian energy initiatives are mainly scaling by collaboration and by influencing their context. Umbrella organizations are sometimes created from collaboration, and in many ways play vital roles in collaboration. Scaling creates a new, more professional role of energy initiatives, which leads to various confusions: concerning scale, roles and responsibilities and how to include the ‘middle group’. This research attempts to contribute to society by showing practically how energy initiatives want or are able to scale. Furthermore, by providing a first look into this puzzle, this research contributes by means of detailed descriptions for entrances for further research.

1. INTRODUCTION

Local energy initiatives have been studied extensively (Wittmayer et al., 2022). Local energy initiatives are groups of citizens who collectively organize activities, aimed at making the local energy landscape more sustainable and/or renewable (Schwenke, 2020). They vary greatly in size, aims and activities, but once they start to seriously undertake activities, they generally establish a legal entity in the form of a foundation or cooperative (Schwenke, 2020). They “encompass a wide range of initiatives such as locally-owned renewable energy generation, community hall refurbishments, collective behavior change programs, and so on, and are claimed to bring additional public engagement benefits to top-down policy initiatives” (Seyfang, Park, & Smith, 2013: 977). Their role in society is diverse and interesting: they help involving citizens in the energy transition, show that there is another way, improve quality of the living environment and are key in solving energy-related injustices (Hanke, Guyet, & Feenstra, 2021; Wittmayer et al., 2022). They thus directly contribute to reducing Green House Gas (GHG) emissions, and have a wider societal role (Wittmayer et al., 2022). Governments increasingly aim to involve citizens more in the energy transition, for example by means of national goals towards local energy initiatives. Examples of this are the aim of 50% local ownership by 2030 in the Netherlands and the European Clean Energy Directive (European Commission, 2019).

1.1 Energy Initiatives

There are a couple of benefits of energy initiatives: economic (lowering transportation costs, economic regeneration), social (social cohesion, civic gratification), environmental (lowering CO₂ emissions, energy saving) (Warbroek, 2019: 5) and cultural (re-kindling of cultural traditions, strengthening of local cultural attributes) (Haf & Parkhill, 2017). They also play a vital role in the energy transition in a couple of ways. a) Increasing support from citizens for the energy transition, because of transparency, fairness and trust (Participatiecoalitie, 2020; Warbroek, 2019). b) Local ownership creates the best conditions for an open, equal, transparent collaboration between actors (Warbroek, 2019). c) Local ownership contributes to systemic change that makes citizens the owners of their energy, aiming towards energy democracy (Allen, Lyons, & Stephens, 2019).

Energy democracy goes beyond producing green energy. Energy democracy is about creating social change in the ownership of energy and keeping money within the community. Energy democracy is also important in solving problems such as energy poverty, since it focuses on local ownership. Furthermore, it is also relevant in light of the current problems in dependency

on other countries for gas and as said, for reclaiming citizen power. Thus, in an indirect way, knowing more about local energy initiatives can help achieve climate goals and help decrease inequalities in the energy transition.

1.2 Case: Fryslân

Fryslân is one of 12 provinces of the Netherlands. In 2020 Fryslân had 73 energy initiatives (Schwenke, 2020). Together with the province of Groningen, Fryslân has the highest ‘density of cooperatives’ of the Netherlands (Brander, 2021). Relatively, there are 11.3 energy initiatives per 100,000 inhabitants in Fryslân, while this number for the Netherlands is 3.4 (Schwenke, 2020). Fryslân thus is a leader in energy initiatives. Details about the Frisian energy landscape are extensively included in Warbroek (2019).

Apart from this high density of initiatives, the Frisian context of energy initiatives is interesting because of their specific focus on community and general interest (Schwenke, 2020). The ‘mienskippen’ play a role in this. ‘Mienskippen’ can be translated from Frisian into ‘communities’, but this does not capture the full meaning (“De Friese Mienskip,” n.d.). They are listed as intangible heritage and originate from the times when the Frisian villages had to fend for themselves against the water (“De Friese Mienskip,” n.d.). These mienskippen thus go back generations, are tight and originate from a time when they were dependent only on themselves. Inhabitants of Fryslân say it is in their nature to prioritize the collective interest above the interest of the cooperative (Schwenke, 2020). This is supported by their general preference for foundations over other legal structures, where members can directly influence the foundation and all revenues flow back into the village or community (Schwenke, 2020).

Even though there are many energy initiatives in Fryslân, their contribution to all wind energy production in Fryslân is only 2.2% and their contribution to solar energy production is only 3.6% (Brander, 2021). To produce more renewable energy, a more diverse group of people should be encouraged to get involved (Brander, 2021).

1.3 Research Question, Aim and Objective

Scaling of local energy initiatives – which can happen in various ways – can contribute to important climate goals. Due to their important benefits on economic, social, cultural and environmental level, it is interesting to study scaling of these initiatives, to find out if these benefits can be increased. Scaling in this research is specifically defined based on the Frisian context, because of the general focus on communities and the priority of the general interest. Scaling in this research is defined as: increasing impact. Although barriers of scaling have been

studied, perspectives and specific strategies for scaling are not clear, especially considering the large differences among initiatives and countries (Overbeke, 2017). There is a gap in the knowledge about long term activities of energy initiatives and their long-term, larger impact and contribution to the energy transition. The case of Fryslân is particularly interesting and unique, considering the aforementioned arguments. This is why the following question is researched: *How are energy initiatives in Fryslân scaling to increase their impact?*

To answer this question, I chose a qualitative research design. By conducting six semi-structured interviews, I expect to be able to answer this question. It is important to first study the perspectives of energy initiatives, and after that the different strategies for scaling of energy initiatives. This question is studied from an entrepreneurial perspective of scaling. The aim of this research is to learn about the perspective on and ability to increase their impact. The objective is to study local energy initiatives, local umbrella organizations and national energy organizations. By including these umbrella organizations, local, as well as overarching perspectives are studied in the research.

This research contributes to the knowledge about perspectives and strategies of scaling of Frisian energy initiatives, and by providing a first look, which can lead to new relevant research questions. There are practical implications of this research for the actors involved in local energy initiatives, including policy makers, involved businesses and citizens in energy initiatives. Local governments need to know better how they can support or facilitate energy initiatives. Citizens in energy initiatives need to know how and in what way they can scale, increasing their overall impact.

2. THEORY

2.1 Local Energy Versus Global Movement

Due to large differences in structure and activities, there is no clear definition of *local energy* (van der Waal, 2021). Local energy initiatives are grassroots or bottom-up, meaning they have a local focus and generally consist of enthusiastic volunteers (Middlemiss & Parrish, 2010). Grassroots initiatives generally have two main drivers: unmet social need and ideology (Seyfang & Smith, 2007). Local ownership, as used in the Climate Agreement of 2019 from the Rijksoverheid, means collective investment in production of renewable energy of local individuals and businesses, where everybody in the local environment has had the opportunity to join (Rijksoverheid, 2019; Schwencke, Van Rijn, & Schreurs, 2020). What distinguishes the community or local energy sector from other energy sectors, is their unique process and

outcome structure (Walker & Devine-Wright, 2008). The process is open and participatory, while the outcome is local and collective (Walker & Devine-Wright, 2008). Supporting this definition, Seyfang, Park & Smith (2013: 278) state: “consider community energy to refer to those projects where communities – of place or interest – exhibit a high degree of ownership and control, as well as benefiting collectively from the outcomes, and we include both supply- and demand-side sustainable energy initiatives”. As said, local energy initiatives play a crucial role in reclaiming energy systems, they generally have a local focus and character. Their function to increase support from citizens in the energy transition, makes it highly important that these projects are (partially) owned by local citizens. The local identity of energy initiatives thus seems to be playing a large role in the energy transition, but there are points of criticism and their contribution in the production of renewable energy is falling behind.

Although energy initiatives are generally expected to contribute to citizen participation and empowerment, there are critical notes about inclusivity of participation in these projects. There has been criticism on the notion that energy initiatives contribute to solving energy poverty (Hanke et al., 2021). There is a general trend that energy initiatives are led by middle-aged, highly educated men, which is also seen in Fryslân (Brander, 2021; Hanke et al., 2021). Feminist theory highlights the important role of women in the energy transition (Allen et al., 2019). Vulnerable households are underrepresented in local energy initiatives, they face barriers such as (perceived) lack of knowledge, money or network (Hanke et al., 2021).

The global movement of *Energy Democracy* and *Energy Justice* on the other hand is highly concerned with inclusivity and ownership rather than participation. It is about replacing the traditional large-scale energy producers with local, citizen-owned energy production (Stephens, 2019). The move towards renewable energy production is an opportunity for more than decreasing GHG emissions: “Emerging renewable energy technologies, including solar, wind, geothermal, and biogas can be deployed at different scales and by different categories of investors than traditional fossil fuel energy generation, enabling communities, individuals, cooperatives, and small companies to invest in and benefit from renewable energy technology development” (Allen et al., 2019: 2). Thus energy democracy goes beyond the technological change, and includes activism for social change. Energy democracy focusses on 3 types of social change: resisting, restructuring and reclaiming energy systems (Stephens, 2019). Energy initiatives have their main role in reclaiming energy systems: organizing and investing in local production of energy. Another key feature of the energy democracy movement, is inclusion and

social justice (Stephens, 2019). *Energy justice* can be defined as a representative and inclusive system, that divides the costs and benefits of all elements of energy fairly (Hanke et al., 2021).

Although there still seems to be a gap between the goals of energy democracy and the results, energy initiatives are able to start a transition and encourage radical change. This is highly related to the energy democracy movement: resistance against the large energy suppliers and opting for local, autonomous ownership of energy.

The case of Fryslân shows that energy initiatives serve multiple goals. In a recent study, it became clear that motivations such as: the local character and building something together with the community are almost as important motivations to join an energy initiative as their worries about the climate crisis (Brander, 2021). This is a huge opportunity for expanding the scope and scale of energy initiatives.

2.2 Changing Role Energy Initiatives

Due to professionalization of energy initiatives, energy initiatives take up a new role. They evolve from local small-scale groups who want to include the rest of the village, towards large cooperative solar projects, that produce more than 1,000 kWp, compared to the average of 125 kWp (415 panels) (Schwenke, 2020). This kind of project asks for different strategies, structures and roles. There is no sufficient knowledge about how energy initiatives respond to the increasing societal role in the energy transition (Schwenke, 2020). As explained, energy initiatives increasingly take on larger roles than merely producing their own energy. They are becoming the main point of contact for some municipalities in the Netherlands, when making energy related plans (Schwenke, 2020). They also often function as voluntary advisors for other citizens, informing them about investments, providing heat scans and other energy related knowledge (Hufen & Koppenjan, 2015).

Hybridization of energy companies is another trend that currently prevails in the Netherlands. Energy initiatives become more professional and start to collaborate closely with energy companies (de Bakker, Lagendijk, & Wiering, 2020). In this tight network, a new hybrid institutional form arises: the cooperative energy company (de Bakker et al., 2020). This trend poses questions about where a cooperative ends and where an energy company starts. This scale-up process is able to increase the potential for wider impact and financial stability, but can also pose risks to the local identity and values of the initiatives. In Denmark energy initiatives are taken-over by larger companies, while in Sweden they are marginalized (de Bakker et al., 2020). Thus there is no general pattern of scaling and professionalization of

energy initiatives across countries yet, and there is uncertainty how the situation in the Netherlands will develop.

2.3 Strategies of Scaling

Looking from an entrepreneurial point of view to energy initiatives, we can shed new light on scaling of energy initiatives. Useful insights for this study from social and sustainable entrepreneurial scaling are various. I argue that energy initiatives display a form of social/sustainable entrepreneurship because they combine resources in new ways and use these to explore and exploit opportunities to create social value by stimulating social change or meeting social needs (Mair & Martí, 2006: 37). These insights cannot be applied 1-on-1 onto energy initiatives, but still provide relevant insights that help interpret scaling of energy initiatives. Firstly, there is no agreement on the definition of *scaling* (Islam, 2020). According to Islam (2020: 2), *scaling social impact* “is an ongoing process of increasing the magnitude of both quantitative and qualitative positive changes in society by addressing pressing social problems at individual and/or systemic levels through one or more scaling paths.” In this research, the specific Frisian context is important for defining scaling. Considering the focus on the *mienskip*, scaling in this research is defined as *increasing impact*. Secondly, social businesses run the risk of losing their core social goals, when they are scaling, focusing too much on funders’ demands to scale up, and not enough on the beneficiaries (André & Pache, 2016). Scaling can specifically be studied in their social impacts. Thirdly, scaling can also be seen in the light of scaling up versus scaling deep, as proposed by Kim & Kim (2021). Scaling up is about geographical expansion, scaling deep about local vitalization (Kim & Kim, 2021). Using these insights from entrepreneurial theory and considering the specific definition of scaling in this research, scaling up is defined as expansion of impact in a geographical or financial way. Scaling deep is defined as expansion by focusing on local positive impacts and connection. Strategies of scaling, based on social entrepreneurial research and existing knowledge about scaling of energy initiatives are included in Table 1.

It is precisely the local and democratic character of energy initiatives that makes them difficult to move forward and compete with large, established energy producers. Conditions for scaling are various: Overbeke (2017) identified 26 conditions, in 6 categories for scaling up of energy initiatives. These 6 conditions are political influence, internal organization, intrinsic motivation, learning, network and external context (Overbeke, 2017). The found conditions can affect the perspectives of energy initiatives on scaling.

Type of scaling	Strategy of scaling	Literature
Scaling up	Collaboration with other local initiatives (e. g. ecosystems)	(Schwenke, 2020; Vernay & Sebi, 2020)
	Collaboration with other parties (businesses, grid operator, etc.)	(de Bakker et al., 2020; Schwenke, 2020)
	Connecting to an umbrella organization	(Schwenke, 2020)
Scaling deep	Including broader goals (e. g. social)	(Wittmayer et al., 2022)
	Involving (more diverse) citizens	(Hanke et al., 2021; Wittmayer et al., 2022)
	Connection to cultural local identity	(Hufen & Koppenjan, 2015)

Table 1: Strategies of scaling, categorized into scaling up or scaling deep

3. METHODS

The qualitative research design is an exploratory case study, to dive deep into the dynamics of the local energy transition of Fryslân. The case that is selected, Fryslân, is an extreme case for multiple reasons. It has a high amount of energy initiatives, has the biggest collective solar roof and has the highest collective power in kWp per 1,000 inhabitants (Schwenke, 2020). Fryslân is not only a province, it is also one of the 30 Regional Energy Strategy (RES) regions in the Netherlands (Regionale Energie Strategie, n.d.).

Although case studies run a couple of risks, this is an appropriate method because of the ‘how’ question, the dynamic nature of transitions and because of the importance of local context (Teegavarapu, Summers, & Mocko, 2008). Case studies are generally used for real-life phenomena, specifically in complex contemporary situations, they rely generally on qualitative data and they focus on providing detailed overview of a complex contemporary phenomenon (Ogawa & Malen, 1991). The local energy production movement is complex because it involves many stakeholders, has no clear or agreed upon goals and is highly related to other complex sustainability issues (Meckenstock, Barbosa-Póvoa, & Carvalho, 2016), making this research approach suitable for studying Frisian energy initiatives.

3.1 Data Collection

Participants are selected in collaboration with the Fries Sociaal Planbureau. The selected participants all met these criteria: (one of the) leader(s) of a local energy initiative, the initiative has achieved one of their core goals and the initiative is in Fryslân. Apart from initiatives, two umbrella organizations are included in the research, by conducting interviews: a national

organization and the Frisian umbrella organization for energy initiatives. The interviews are held in Dutch and the duration is around 1 hour.

Semi-structured interviews are conducted. There is limited knowledge available about this topic and this research has an exploratory nature, thus a structured interview guide is not appropriate (Leech, 2002). An unstructured interview on the other hand, would be unnecessary, because on some elements research has been conducted (Leech, 2002). The interview guides differ between the initiatives and umbrella organizations and can be found in Appendix A and B, respectively. The interviews are recorded using a password protected iPad and I make a back-up for the telephone and online interviews using the program OBS¹.

The interviews are planned to be held at the house of the interviewees. However, due to unforeseen circumstances, most interviews had to be conducted by telephone. Although the qualitative research field is reluctant to conduct interviews by telephone, multiple studies showed there are not much differences found in data between telephone and traditional interviews (Block & Erskine, 2012). Generally, “there is good support in the literature for the telephone interview as a legitimate data collection method for research” (Carr & Worth, 2001: 513). The difference between online interviews and telephone interviews is mainly the lack of visual cues. I chose telephone interviews over video interviews because I expected the interviewees to be more at ease. Considering the specific focus and the non-personal data of the interviews, the method is appropriate (Saarijärvi & Bratt, 2021). These non-verbal observations are not the priority, I chose the comfort of the participants over the non-verbal expressions.

Another challenging element within data collection was finding participants for the interviews. Through emails, calls and using the networks of other participants, I did my best to find suitable participants. The Frisian context of energy initiatives appears to be popular for doing research, which makes initiatives hesitant in making time for them. In the end, I found six suitable participants, of whom an overview can be seen in Table 2. U1 and U2 are participants from umbrella organizations. I1, I2, I3 and I4 are participants from energy initiatives. I3 and I4 are from the same initiative. Some people in the initiatives wanted to stay anonymous themselves, and also did not want to include any information that could point towards the energy initiative. This is why a more detailed description of founding year, composition of the board and number of customers/members could not be disclosed in this thesis. One other form of primary data is

¹ <https://obsproject.com/>

used for analysis, which is a press moment of one of the initiatives. In this press moment, the initiative reported on their recent success of one of their campaigns. The press moment included a conversation between the board of the initiative, citizens who participated in the campaign and an individual from the municipality.

Interview	Type of organization	Age	Nationality	Gender	Function	Type of interview
U1	National umbrella org.	37	Dutch	Man	Knowledge and relation manager	Online
U2	Frisian umbrella org.	59	Dutch	Man	Director-quartermaster	Telephone
I1	Energy initiative	67	Dutch	Man	Chairman	Offline
I2	Energy initiative and small umbrella organization	72	Dutch	Man	Chairman and Treasurer	Telephone
I3	Energy initiative	72	Dutch	Woman	Co-founder and PR	Telephone
I4	Energy initiative	71	Frisian	Man	Chairman	Telephone

Table 2: Overview of the participants

3.2 Data Analysis

All interviews are transcribed by hand, to listen to the exact words of the participants again, and to already start the analysis. Whilst transcribing, I already collected interesting arising thoughts, which were included into memos. I chose an inductive approach for coding, with some deductive elements. Although the study is based on inductive theory building from data, I did not assume the ‘blank slate’ and researched strategies beforehand, as seen in Table 1. Due to the open research design and question, it is appropriate to use inductive coding. The value of inductive research is mainly to not be blinded by existing knowledge, posing the risk of confirmation bias (Gioia, Corley, & Hamilton, 2013). The deductive elements do not change to approach to abductive, because then problematization existing theories is central (Alvesson & Kärreman, 2007). Scaling of local energy initiatives however, has not been studied with this specific focus yet, thus existing knowledge is limited. The codes are based on the interviews, but with the already studied strategies for scaling in mind. For coding, I used the trial version of ATLAS.ti², which includes all functions.

² <https://atlasti.com/>

To find meaningful results for theory and answers on the research questions, a systematic data analysis approach is needed. For this, I found inspiration in the Gioia approach, which was specifically developed to make inductive research rigorous (Gioia et al., 2013).

3.3 Ethical and Quality Considerations

The quality of this research is safeguarded by a number of actions and decisions. Concerning credibility of the results and conclusions taken from the data, a transparent approach, including detailed prescriptions of the process, is taken. Known limitations of case studies are problems with representativeness, generalizability and case selection (Teegavarapu et al., 2008). However, as explained, case studies have multiple advantages when studying unique and dynamic situations. Furthermore, it is not agreed upon whether qualitative research should aim for generalizability or, as is the stance in this research, for transferability (Bryman & Bell, 2011). Transferability is ensured by the thick description of the studied unique case (Bryman & Bell, 2011). The research is also dependable, due to the documentation of transcripts, and the detailed descriptions of case selection, participant selection and steps in the literature review.

There are no expected negative effects from participating in this study. All participants signed a consent form and had the opportunity to ask questions about it. This research conforms to the Dutch Code of Conduct for Research Integrity, which can be found on the website of the Rijksuniversiteit Groningen (Nederlands Code of Conduct for Research Integrity, 2018).

4. RESULTS

The research questions in this research is *How are energy initiatives in Fryslân scaling to increase their share of renewable energy production?* To answer this question, I studied the perspectives of energy initiatives and their strategies for scaling. Scaling in this research is defined in the specific Frisian context as increasing impact. The results are discussed in that order. The data used for this analysis are the interviews with the initiatives (I1, I2, I3 and I4), the interviews with the umbrella organizations (U1 and U2) and the summary of the press moment of one of the initiatives (P1).

4.1 Perspectives on Scaling

From all interviews, it is clear that scaling is seen in the light of bigger and more ambitious. Scaling generally goes hand in hand with professionalization. There is great diversity among initiatives, where some are investing in million euro projects, while others are focusing on medium to large solar roofs. The most observed strategy for bigger projects for the initiatives is collaboration. Some initiatives work together with each other, sometimes forming networks,

while others work together with other organizations such as municipality or businesses. Due to scaling of energy initiatives, their role is changing. There are two interesting consequences of the scaling of energy initiatives: this changing role leads to confusion about roles and responsibilities and it is not clear at which scale frictions between perspectives should be managed.

4.1.1 Changing roles lead to confusion. The trend of professionalization and scaling also creates new roles for the initiatives. The scaling energy initiatives take up a new role in society: by the municipality they are seen as a business, but often they are dependent on subsidies. They consist of volunteers, but large amounts of money is flowing in some projects. Some initiatives are professionalizing by hiring parttime employees. Parties involved are still searching for how to adjust to this trend and are figuring out what the new roles and responsibilities are. U1 even points out that this new role of citizens (in energy initiatives) comes from a gap that has emerged after World War II during capitalism, between state and market. They say: “There is a clear distribution [of responsibilities], either the government does it, or the market. And you pay for it via taxes, or via a product or service. [...] But now in a world that appears to be more complex, gaps are forming in this distribution. Then you see that citizens, in many ways, start doing it themselves.”

Some initiatives can provide stronger social cohesion and can encourage citizens to join the movement. There is confusion about whether or not there is a role for initiatives to also target energy poverty. In Fryslân, this is fragmented, but some initiatives are still trying to include people who are not able to pay the energy bills. U2 expresses their discontent with this fragmentation: “We preferred, and still prefer, to integrate [energy poverty] with energy initiatives. You often see that energy initiatives are also energy coaches. And when you talk about including a broader target group, to include them in the energy transition. [...] We would love to see this integration, that strengthens instead of fragments [these movements].” Confusions arise, and for example, the role of the government is not entirely clear in this: “It requires vision from the government and from involved people, to step outside their usual responsibilities and tasks.”

The initiatives are also aware of their role in the transition and mostly aim to include more people in the movement. The participants explain how the ‘dark green frontrunners’ have done their job, now the large middle group needs to be involved. This is mainly done by focusing on energy saving, and cost reduction of the bills, rather than from an idealist perspective. U1

explains how these groups of people have a whole other point of view, which needs to be targeted in a different way if you want to encourage them towards energy saving or producing methods.

4.1.2 What scale. Scaling raises questions about varying perspectives and dealing with them in a democratic way. The frontrunners are included. Now energy initiatives want to extend to other target groups, they have to deal with frictions between the various perspectives. As U2 reveals: “You start a local initiative, which has its own signature, you could say. And to be honest, it is difficult enough to organize that collaboration on such a small scale, let alone looking beyond your village borders, in Friesland, or even the Netherlands. So you have to find something, where your own identity, the local connection, keeps its form and is strengthened, while on the other hand, you can share knowledge and expertise. [...] If it gets too big, then people feel they lose their grip.” I2 explains how they founded a cooperative of cooperatives in their municipality: “we sat together, because if we want to make impact, in the municipality, with big projects, then we need to collaborate”. On the other hand, they indicate how much expertise is needed for these projects, you need to be on the same level as “the big guys”.

The democratic process is important even at the smallest scale. U2 highlights: “As energy cooperative, you take decisions, which people should support. Finding support is a democratic process, where you need everybody. You cannot say, we as energy cooperative want something, but the village association wants something, it is not possible, it can only happen synchronous.”

4.1.3 Making the movement bigger. The energy initiatives are scaling by including more people – which generally means to target a new target group – and also by strengthening the social cohesion and social value. Including the large middle group, is done by focussing on the money these investments can save, according to the participants. U1: “Those people differ a lot from the people in energy cooperatives. How can we, in their language and interest, their point of view, include them in the sustainability story? That is what it is all about. [...] You say sustainability, they switch off. You say energy saving, they switch on.” I3 explains that their energy initiative (among other things) developed an encouragement plan for investing in energy saving methods. In this plan they included all buildings in the village: houses, rental houses, churches, business buildings. They gave all people a large voucher that can be used for insulation, hybrid heat pumps or anything else that helps save energy or natural gas.

I1 explains how the middle group can be included by including social and cultural goals in the energy initiative: “I really like that the revenues from the renewable transition benefit the

activities in the village. Culture, sports, welfare, we want to support those things, now that the government is withdrawing, and has less money available for keeping the swimming pool or the library open.”

They also explain how the initiative influences the social cohesion: “It is all about collaboration. I still enjoy that the revenues of [the initiative] are shared with others. If I am doing groceries, sometimes people stop me to say that they have a community garden, and they are so happy they received a nice amount of money from you. People really experience it like that.” Social cohesion is also a large theme in the initiative of I3: “We have very personal relationships [in the village]. If something happens, we do not respond by email, but we take our bicycle and visit them. We ring the doorbell and discuss the matter.” They also point out how one of the renters in the village stepped forward as a representative of the renters, all by themselves. I3 was fascinated by this development, they never expected it. The initiative empowered this person in such a way that they wanted to contribute. This renter gathers the insights and perspectives of the other renters and is also present during the difficult meetings with the housing corporation. This is a great example of increased social cohesion and true participation. Finally, the importance of social cohesion becomes clear during the press moment. An inhabitant explained how they were not really interested in renewable energy, but they wanted to use the voucher for insulation. They applied for the voucher and one of the members visited to discuss and asked: “Alright! And what else?” Due to this and more conversations, the inhabitant decided to invest even more ambitiously in energy saving measures. They express their positive experience, because they supported them with information, inspiration and overview of the possibilities.

Umbrella organizations also play a large role in including more people, supporting energy initiatives in encouraging people to be interested in the renewable energy movement and sharing information. U1 refers to a tool they developed which brings you in contact with people in the neighborhood who have already installed things.

4.2 Strategies for Scaling

The expected strategies for scaling of Table 1 are divided into scaling up and scaling deep. Strategies for scaling up concern collaboration, while strategies for scaling deep focus on social value. The two main strategies found in this research are collaboration and shaping institutions. Although the studied energy initiatives were generally interested in strengthening social cohesion, improving cultural and social life in the village and including people, these were not

found as strategies for scaling, because most initiatives already do this. Inclusion of more (diverse) citizens – one of the elements of scaling deep from Table 1 – is a strategy energy initiatives attempt to use for scaling.

4.2.1 Collaboration for scaling. Collaboration is a main way for energy initiatives to scale. Initiatives value sharing information and knowledge with other initiatives and with the umbrella organizations. I1 explains how another smaller energy initiative is going to merge with theirs, because then they ‘do not have to reinvent the wheel’. I2 explains how their initiative formed an overarching initiative with two other initiatives to be able to collectively buy a large renewable energy production site.

Collaboration with the various governmental actors are found to be vitally important when scaling, because larger projects often require permission and permits. In collaborating with governmental actors, initiatives express there are tensions. I1: “On the one hand, the government wants bottom-up [initiative], but they dictate from top-down. That is a tension, and we as energy cooperative can be crushed in that tension sometimes. You have to arrange everything so well, you have to document everything, we do not have the manpower for that.” Others express a more positive relation with the local government: “[collaborations] all work pretty well. We are also in contact with the alderman, who is also part of the municipality. The alderman of sustainability, we talk with him a couple of times every year, to talk about the future” (I2).

Umbrella organizations have a main role in sharing knowledge, because they can bring together initiatives and also provide explicit tools and information. I2 points out how Energiewerkplaats Fryslân developed the Energy Mix Method, which they found really useful for their initiative. They also say: “Good organization by the way, HIER Opgewekt, they provide very good information. For example about contracts, those kinds of things, legal matters, examples of statutes, [...] we got all those things from their website.” The umbrella organizations act in the network as connectors, U1 explains: “[...] we have been busy with the network, connecting and sharing knowledge, sharing perspectives, for all stakeholders in the transition. What should ministries do to support energy cooperatives. What are the grid operators. Municipalities, energy cooperatives themselves. Then it all comes together.”

Collaboration with the mienskip was not found as a separate scaling strategy, because the initiatives indicate they are already tightly connected to their mienskippen. They take great value from their mienskip, in various ways. They use them as a basis. As I1 explains: “[the

mienskip] is the basis for creating support, for your initiatives”. Caution should be taken about the homogeneity of perspectives within a mienskip: people within a mienskip vary greatly. As became clear from I3, a group of people united against their ideas: “The people who live close [to the location], or see it from their homes, they are not amused.

4.2.2 Shaping institutions for scaling. Another way energy initiatives indicate to scale, is by influencing institutions, both locally as well as on a larger scale and even nationally. The institutional context for energy initiatives is difficult for implementing their ideas. They have to deal with existing regulations of both governments and grid operators. Participants all point to the fact that small wind turbines cannot be implemented by citizens or citizen initiatives, only by businesses, for example farms. Even for these businesses, there are rules, which make it difficult to get a permit for a wind turbine. The participants indicate that in Groningen, there are less rules and also more small wind turbines.

Some initiatives are able to change this context. For example by shaping institutions by the means of showing entrepreneurial opportunity identification, development and exploitation. I1 explains: “Here, a new business park is developed. I am in contact with the chairman of the business association to find out how we can make that business park as sustainable as possible. [...] But then we need to cooperate. That is thus a collaboration between a local [energy] cooperation and the corporate world.” They saw a chance to make this new business park energy neutral – ‘zero on the meter’ – and they actively collaborate to make this happen, to increase impact. In this case, impact means less use of fossil fuels, more production of renewable energy, maybe even in combination with energy saving. Another way of shaping institutions of energy initiatives is by lobbying. I1 brings up that they found inspiration in the monetary structure of a nature conservation association. They talked to the Frisian umbrella organization to try to incorporate the same structure in the RES (Regional Energy Strategy). I4 also uses lobbying to scale, even on national scale: “You want something, you have a dream, a plan, and that does not always work automatically. So you need to do everything to make it possible. You make an analysis who can contribute something in this and who will you approach?” and they also say: “you approach relevant parties with your ideas and convictions and you try to get them on board, for the good cause.” Scaling then means to increase impact by spreading their ideas and using their skills to produce more renewable energy nationally.

The umbrella organizations also work hard to shape the institutions, in order to be workable for the energy initiatives. U1 gives an example: “The Participatiecoalitie is a collaboration between

3 organizations, we work very hard to achieve the 50% local ownership of renewable energy projects.”

Figure 1 provides an overview of the data structure, inspired on the Gioia method (Gioia et al., 2013). The first-order concepts are codes, which are supported by quotes from the data.

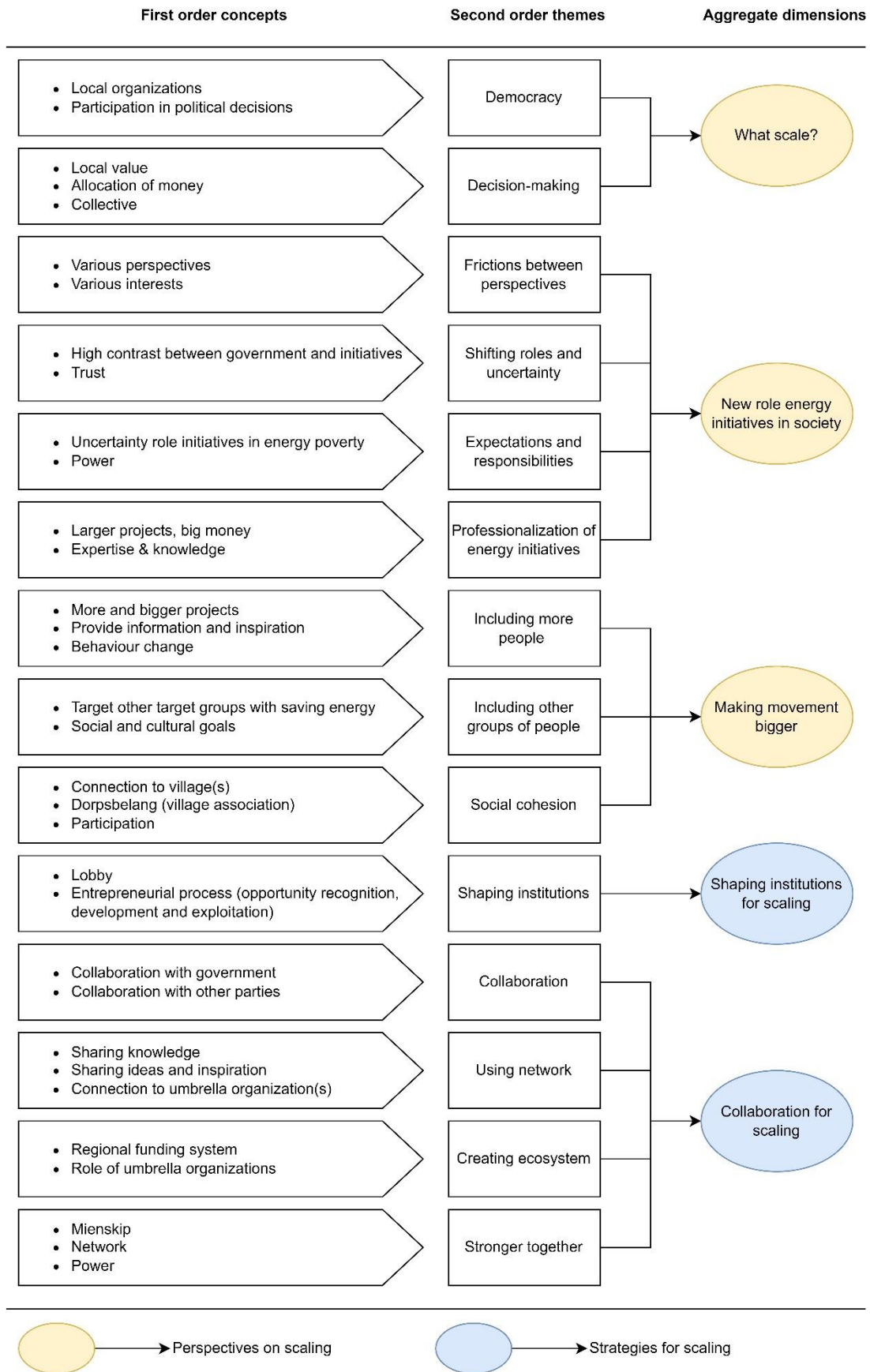


Figure 1: Overview of the concepts and aggregate dimensions

5. DISCUSSION

The aim of this research is to learn about the perspectives on scaling and ability of energy initiatives to increase impact. I collected data from 6 interviewees, who were part of local energy initiatives, local umbrella organizations or national energy organizations to answer the research question *How are energy initiatives in Fryslân scaling to increase their impact?* The results show that energy initiatives use collaboration as their main way of scaling. The diversity in partners they seek and collaborate with is immense: grid operators, municipalities, the province, other energy initiatives, other citizen initiatives, national umbrella organizations, etc. The aim of the collaboration is as diverse as the type of partner, sometimes they need knowledge, sometimes they are stronger together and sometimes they need permits.

Scaling of the energy initiatives goes often hand in hand with professionalization. Considering the results about fragmentation between energy initiatives and energy poverty, this might be problematic for the key elements of community energy: participatory & open process and local & collective outcomes, described by Walker & Devine-Wright (2008). On the other hand, professionalization is important for the prevalence of energy initiatives, as found in earlier research in Fryslân (Schwencke et al., 2020). The question remains if professionalization and scaling pose risks to the original structure and the value of this structure of the energy initiative: grassroots and bottom-up. There are more frictions that arise due to scaling. The volunteers in energy initiatives invest a lot of time in the initiatives and sometimes manage very large projects, consisting of large amounts of money. They do not always have the appropriate skills and knowledge for this. When looking at scaling, it is mentioned that the initiatives have difficulties finding new or different kinds of people for their boards, mainly meaning people with other skills and sometimes also younger people. Considering the conclusion of Overbeke (2017) that having the *right people on the right place* is the most important condition for scaling, this is a relevant and pressing challenge for energy initiatives.

Governments, businesses and initiatives are all doing this for the first time. Now that the increasingly professionalized energy initiatives take up a new role in society, the various actors do not know their roles and responsibilities yet. These confusions are logical, considering the full transformation of existing energy systems and distribution (Allen et al., 2019; Warbroek, 2019). Institutions and regulations need to be shaped within the democracy, on European, national, provincial, municipal and local level to fit these transformations. Apart from the content of institutions and regulations, it is not clear on what scale issues need to be addressed. There is a lot of friction, even on very local level. In ‘lower’ levels, projects tend to be smaller

and you miss opportunities for synergy. On ‘higher’ levels, people might feel they lose grip and lose local identity and value. Because the initiatives are creating their own role, within an existing structure, they face barriers from their context. Some initiatives are skillful in influencing their context, including relevant stakeholders, and are able to achieve their ambitions in this complexity. Lobbying is an element of influencing the institutional context for scaling, which was found as an interesting strategy. Lobbying is also described by Overbeke (2017) as an important element of scaling, mainly in light of the SCALERS model, from social entrepreneurship research (Bloom & Chatterji, 2009).

This confusion, that originates from this new role, which originates from scaling and professionalization is displayed in Figure 2. The two discussed ways in which energy initiatives scale, are a way of interaction with the context.

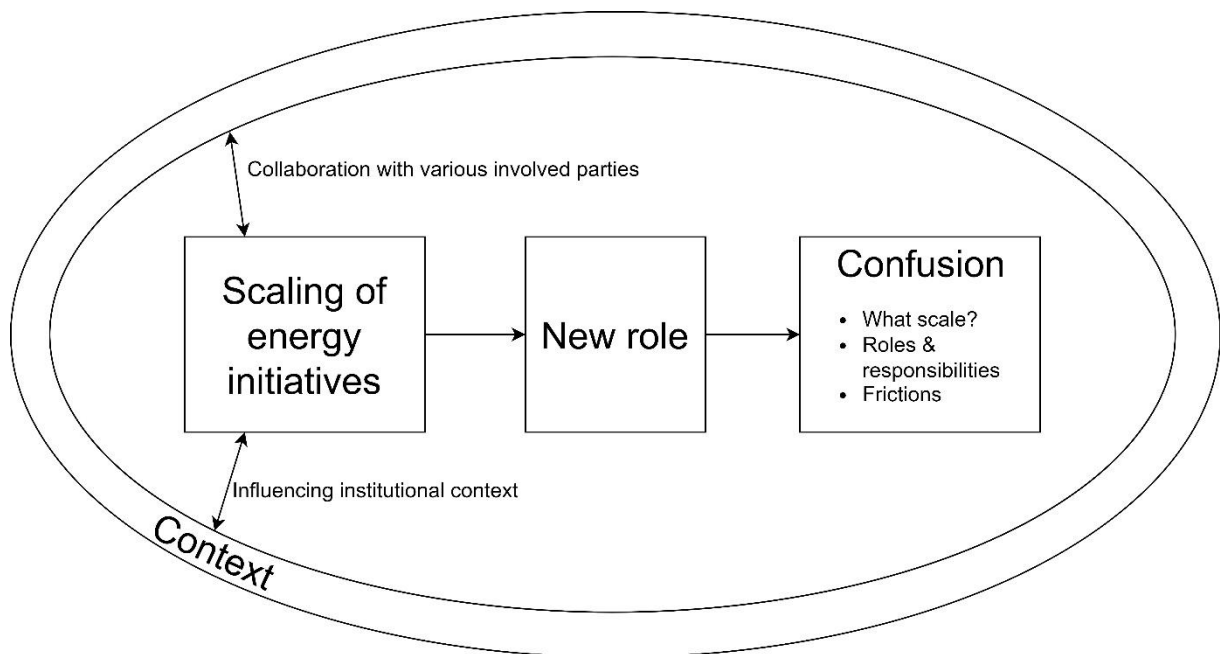


Figure 2: The strategies of scaling and the found consequences

5.1 Conclusions

In this research, a close look at the next stage in the transition of energy initiatives is taken. One of the main take-aways is the use of collaboration for all kinds of purposes and the role of umbrella organizations in bringing partners and knowledge together. The other take-away is complexity of this transition and the confusion this brings among all stakeholders about their roles and responsibilities. Connected to this is the question about what scale is best suited for solving energy related issues: local, municipal or even provincial? Considering the Regional Energy Strategy in Fryslân is on a provincial level, it makes sense to make decisions and

distribute money at this level. However, the local social value of villages can get lost at this scale.

5.2 Limitations and Reflections

Even though great care is taken in conducting this research, there are some noteworthy limitations. Even after careful consideration, it appears at the end that the study leans towards a cross-sectional study, rather than a case-study. This is due to the confusion whether or not Fryslân can be considered a case in this research, or that the energy initiatives are all separate cases. There are three possible ways to look at this, upon reflection. A) The research is cross-sectional. Cross-sectional studies are generally focused on finding variation between cases, by the means of a standardized and systematic approach (Bryman & Bell, 2011). Considering this, cross-sectional design does not fit with this research as it is. Although there is room for qualitative research in a cross-sectional design, the interview questions were not designed for this and this could not be changed afterwards. B) Looking back, another case could be the most appropriate. This would be a case study about one specific initiative, which is appeared to be successful on the one hand and on the other hand appeared to be dealing with various complexities. This would be an interesting phenomenon to study on its own. However, this was only clear after executing this research. C) Case study about scaling of energy initiatives in Fryslân is still valid, but not complete. More detail should have been studied about context, policy and history, for this research to be a case study. Even though I tried to grasp the context by including two umbrella organizations, this did not suffice. Concluding, given the fact that this research is focused on finding similarities and studying the energy initiatives as elements in the case of scaling of energy initiatives in the Frisian context, I still consider the case study the most appropriate design. Upon reflection, even more care should have been taken into considering the research design and adjusting the method accordingly.

Moreover, the amount of interviews conducted was lower than expected. The energy initiatives in Fryslân are studied by many researchers/students and some initiatives decided to quit doing interviews at all. From the case of the province of Fryslân, only a couple of the 73 initiatives is studied. By sampling bias, there is a possibility that important perspectives in Fryslân are overlooked. This concerns variations between initiatives as well as within initiatives. Considering the available time, at a certain point, the research needed to proceed from the data collection phase to the data analysis and conclusions.

The last limitations concerns stability, and thus dependability of the results. Although great care is taken into planning the circumstances of the interviews, there can never be a perfect replication and similarity between the separate interviews. In this research, some interviews are held offline, some by telephone and one online. This can affect the dependability of the results.

5.3 Future Research

A first peak into the entrepreneurial process of energy initiatives is given. As said, a case study about one of the included energy initiatives can reveal more detail about strategies and perspectives on scaling in the Frisian context. The parallel between the question what is the relevant level of studying energy initiatives and the struggle of energy initiatives to find the relevant level of collaboration, is intriguing. This research also raises the question if and when the initiative loses its value as a citizen initiative and grows into a professional organization. The last suggestion for further research that arises from this thesis, is a closer look at collaboration within the ecosystem of Fryslân. It appeared that not only energy umbrella organizations were important for the respondents, but other general village organizations as well, as well as specific funding organizations. The ecosystem, including governments, organizations, associations and energy initiatives can be mapped to find vital connections and support for the energy initiatives.

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APPENDIX A: INTERVIEW GUIDE INITIATIVES

Part	Question number	Question	Probing
Introduction	1.	Wie bent u? Wat is uw rol in het initiatief?	<p>Waarom doet u mee?</p> <p>Kunt u me meenemen in de beloop van het initiatief? Hoe begon het, wat gebeurde er, wie kwamen er bij?</p> <p>En wat is de huidige stand van zaken?</p> <p>Wat is de rolverdeling? En hoe gaan de vergaderingen in zijn werk?</p>
	2.	Op welke manier voelt u zich verbonden met het dorp?	<p>Wat is de 'lokale identiteit'? Op welke manieren verbindt initiatief zich aan het dorp? Wie doen er mee? Hoe werken jullie samen met de dorpsvereniging?</p> <p>Wat betekent mienskip voor u persoonlijk? En voor het initiatief?</p>
	3.	Welke normen en waarden heeft het initiatief?	<p>Sluit u zich hier ook bij aan, missen er dingen?</p> <p>In hoeverre speelt zelfvoorziening een rol?</p>
Perspectief op opschalen	4.	Neem me eens mee in ... (succesvol project)?	Los van de directe doelstellingen en effecten, zijn er indirecte effecten?
	5.	Wat zijn nu doelen van het initiatief?	Hoe gaat dit in zijn werk? Waar komen de ideeën vandaan?
	6.	Wat denkt u bij het woord opschalen (bijv bedrijf of project)?	Waarom zou dit wel of niet bij een burger energie initiatief passen?
	7.	Hoe zou uw initiatief volgens u kunnen opschalen?	Welke meerwaarde kan dat hebben?

	8.	Waarom zijn energie initiatieven belangrijk?	Welke maatschappelijke rol kunnen energie initiatieven vervullen? (verwachting vs controle overheid, vermaling) Welke rol heeft uwe? En voor het dorp? Er is een trend van professionalisering en vergroting, hoe verandert dit het belang van lokale initiatieven?
Strategieën	9.	We hebben het over opschalen, hoe denkt u dat dit de normen en waarden van het initiatief en initiatieven kan beïnvloeden?	Op welke manier ziet u dit gebeuren?
	10.	Wat is de rol van koepelorganisaties?	Vertel eens over ... (koepelorganisatie, bijvoorbeeld Ús Koöperaasje, HIER Opgewekt, Energie van Ons, SHEC). Hoe verandert deze rol met de veranderende professionaliteit en opschaling?
	11.	Met welke partijen werken jullie samen? (bedrijven, andere initiatieven, mensen in het dorp, gemeente, overkoepelende organisatie, onderwijs)	Op welke manier helpen deze samenwerkingen het initiatief? Op welke manieren werken partijen het initiatief tegen? Voorbeelden? Hoe gaat zo'n samenwerking? Waarom is dit zo belangrijk?
	12.	Op welke manieren draagt het initiatief bij aan de dorpen, los van energie productie? (sociaal bijvoorbeeld, aan het mienskip)	
	13.	Hoe denkt u over diversiteit in het initiatief? Wat is de situatie, kan iedereen meedoen die dat wil?	Hoe zorgt het initiatief actief voor inclusiviteit en diversiteit? Op welke manier denkt u dat diversiteit en inclusiviteit belangrijk zijn voor het initiatief? Energie armoede? Armere gezinnen, hoe kunnen die meedoen?
	14.	Gaan jullie wel eens naar (netwerk) evenementen?	Welke rol spelen deze voor het initiatief?

Afsluiting	15.	Hoe ziet de toekomst van energie initiatieven eruit?	Hoe ziet de toekomst van de energietransitie eruit?
	16.	Eventueel: specifieke vraag over interessant element van het initiatief.	

APPENDIX B: INTERVIEW GUIDE UMBRELLA ORGANIZATIONS

Part	Question number	Question	Probing
Introduction	1.	Wie bent u? Wat is uw rol in de organisatie?	Waarom doet u mee? Kunt u me meenemen in de beloop van de organisatie? Hoe begon het, wat gebeurde er, wie kwamen er bij? En wat is de huidige stand van zaken?
	2.	Op welke manier voelt u zich verbonden met Friesland?	Wat is de 'lokale identiteit'? Op welke manieren verbindt initiatief zich aan Friesland? Wat betekenen mienskippen voor de initiatieven?
	3.	Er staat een duidelijke motivatie van jullie om de organisatie te starten op de website. Kunt u dit toelichten?	Hoe belangrijk is zelfvoorziening en het eigenaarschap over energie? Hoe belangrijk is het groepsgevoel van Friesland hier in?
Perspectief op opschalen	4.	Welke succesvolle projecten hebben jullie recent aan bijgedragen?	Los van de directe doelstellingen en effecten, zijn er indirecte effecten?
	5.	Hoe verandert jullie rol? (opschaling, professionalisering)	Hoe gaat dit in zijn werk? Waarom?
	6.	Wat denkt u bij het woord opschalen (bijv bedrijf of project)?	Waarom zou dit wel of niet bij een burger energie initiatief passen?
	7.	Hoe kunnen initiatieven opschalen denkt u?	Welke meerwaarde kan dat hebben?
	8.	Waarom zijn energie initiatieven belangrijk?	Welke maatschappelijke rol kunnen energie initiatieven vervullen? (verwachting vs controle overheid, vermaling) Welke rol heeft uwe? En voor het dorp? Er is een trend van professionalisering en vergroting, hoe verandert dit het belang van lokale initiatieven?

Strategieën	9.	We hebben het over opschalen, hoe denkt u dat dit de normen en waarden van de initiatieven kan beïnvloeden?	Op welke manier ziet u dit gebeuren?
	10.	Wat is de rol van koepelorganisaties zoals de uwe?	Vertel eens over ... (koepelorganisatie, bijvoorbeeld Ús Koöperaasje, HIER Opgewekt, Energie van Ons, SHEC).
	11.	Met welke partijen werken jullie samen? (bedrijven, andere initiatieven, mensen in het dorp, gemeente, provincie, andere overkoepelende organisaties, onderwijs)	Op welke manier helpen deze samenwerkingen de organisatie? Op welke manieren werken partijen de organisatie tegen? Voorbeelden? Hoe gaat zo'n samenwerking? Waarom is dit zo belangrijk? Spanning overheid: vermaling tussen verwachtingen en controle.
	12.	Op welke manieren draagt de organisatie bij aan de dorpen, los van energie productie? (sociaal bijvoorbeeld, aan de mienskippen)	
	13.	Hoe denkt u over diversiteit in de initiatieven? Wat is de situatie, kan iedereen meedoen die dat wil?	Hoe zorgt het initiatief actief voor inclusiviteit en diversiteit? Op welke manier denkt u dat diversiteit en inclusiviteit belangrijk zijn voor het initiatief? Energie armoede? Armere gezinnen, hoe kunnen die meedoen?
	14.	Organiseren jullie wel eens (netwerk) evenementen?	Welke rol spelen deze voor de initiatieven?
Afsluiting	15.	Hoe ziet de toekomst van energie initiatieven eruit?	Hoe ziet de toekomst van de energietransitie eruit? Welke trends ziet u? Wie spelen hier een belangrijke rol in? Hoe staat u hier in, gaat het lukken?