



**KTH Industrial Engineering  
and Management**

# Collaboration between Local Authorities and Renewable Energy Cooperatives

*A bottom-up approach, partners in mitigating climate change*

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**Collaboration between local authorities and  
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## **Abstract**

Addressing climate change has become a major challenge. To keep the rise in temperature below 2°C, by 2050, the carbon emissions should be reduced to 80% of their levels compared to 1990. In order to achieve the targets, all levels of society need to be engaged. But even if the targets are realized, there is a real concern in how they are realized. The many crises, society is facing now, are a symptom of a failing world view. Fighting the symptoms without addressing the underlining causes is merely postponing the problem. Business as usual will not be sufficient to tackle the problem at the roots.

Everywhere in the world, local authorities commit themselves to undertake climate action but often lack the capacity to implement these changes. They need partners for successful collaboration. Renewable Energy Cooperatives (REScoops) are identified as a great potential partner to address these challenges.

This thesis addresses the following research questions:

1. What are the challenges local governments face in realizing their climate action commitment? And what do REScoops have to offer?
2. What are the challenges cooperatives are facing? And what can municipalities do to facilitate cooperative entrepreneurship?
3. What are successful examples of collaborations between local governments and REScoops and which factors made the collaboration successful?

Case studies are used to gather insights and resulted in recommendations for local authorities to facilitate future collaborations. Evidence from the case studies illustrates that cooperatives provide an ample opportunity to implement local authorities' climate action plan through the implementation of Renewable Energy and Energy Efficiency projects, while generating multiple other benefits such as unburdening the local authorities' administration but also addressing the wider context of engaging citizens in the energy transition, fostering a long term behavioral change and fostering positive impact on the local economy through their mission-oriented business. REScoops and municipalities have great potential in collaborating when vision is aligned and mutual benefits are clear. Local authorities can strengthen

REScoops in achieving their shared goals in the energy transition in multiple ways, such as the adding specific criteria in the call for tender, advocating the cooperative model, facilitate networking and others.

Keywords: Collaboration, Commons, Cooperative, Local Authorities, Municipality, Renewable Energy, REScoop

This Thesis is submitted for the completion of the Master of Energy Innovation at KTH, Stockholm. The thesis is produced in collaboration with REScoop Europe, the European federation of Energy Cooperatives and Coopkracht, the Flemish network of cooperatives. The thesis was conducted during the period of February - September 2017.

## Sammanfattning

Att ta itu med klimatförändringen är en stor utmaning. För att hålla temperaturökningen under 2° C och minska koldioxidutsläppen till 80 % av deras nivåer jämfört med 1990 fram till 2050. För att uppnå dessa måste samhället i alla nivåer vara engagerat. Men även om målen realiserar, finns det ett verkligt problem i hur de realiserar. De många kriserna som det mänskliga samhället nu står inför, är ett symptom för en misslyckad världsbild. Bekämpa symptomen utan att åtgärda underliggande är bara att skjuta upp problemet framöver. "Business as usual" räcker inte längre för att angripa problemet vid roten. Överallt i världen bestämmer lokala myndigheter sig för att genomföra klimatåtgärder men de ofta saknar kapacitet att genomföra dessa förändringar. De behöver partners för ett framgångsrikt samarbete. Förnybar energikooperativ (REScoops) identifieras som en stor potentiell partner för att möta dessa utmaningar.

Denna avhandling behandlar de följande forskningsfrågorna:

1. Vilka är de utmaningar för lokala regeringar för att förverkliga deras klimat engagemang? Och vad REScoops har att erbjuda?
2. Vilka är de utmaningar kooperativen står inför? Och vad kan kommuner göra för att underlätta kooperativt företagande?
3. Vad är framgångsrika exempel på samarbeten mellan lokala regeringar och REScoops och vilka faktorer gjort samarbetet framgångsrikt?

Fallstudier används för att samla statistik. Det resulterade i rekommendationer för lokala myndigheter för att underlätta framtida samarbeten. Bevis från Fallstudierna visar att kooperativ ger stora möjligheter att genomföra handlingsplanen för kommunernas klimat politik och genomförande av projekt för förnybar energi och energieffektivitet, samtidigt som de skapar flera andra förmåner såsom avlastas kommunernas administration. kooperativ kan också engagera medborgarna i energiomställningen i större sammanhang, och främja en l...

REScoops och kommuner har stor potential att samarbeta när vision är ömsesidiga och tydliga. Lokala myndigheter kan stärka REScoops att uppnå sina gemensamma mål i energiomställningen på flera sätt, såsom att lägga till specifika kriterierna i samtalet för anbudet, förespråkar den kooperativa modellen, underlätta nätverkande och andra.

Nyckelord: Samarbete, kooperativ, lokala myndigheter, kommun, förnybar energi, REScoop

Detta examensarbete har skickats för slutförandet av Master av energinnovation på KTH, Stockholm. Avhandlingen är producerad i samarbete med REScoop Europa, Europeiska federationen för energikooperativ och Coopkracht, det flamländska nätverket av kooperativ. Examensarbetet genomfördes under perioden februari - september 2017.

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## **List of Abbreviations**

CfT: Call for Tender

CoM: Covenant of Mayors

CPR: Common Pool Resources

EE: Energy Efficiency

ETS: Emission Trading Scheme

FINcoop: Financing Cooperative

RES: Renewable Energy Source

REScoop: Renewable Energy Cooperative

SDG: Sustainable Development Goals

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# 1 Introduction

Nowadays, society is confronted with an accumulation of crises. Not only do we have a severe environmental crisis, there is also an economic crisis, high unemployment rates, a crisis of values, a crisis in politics and a social crisis. The environmental crisis can be linked to the negative externalities our economy is producing, and how the market mechanisms fail to incorporate and reduce these externalities. The political crisis can be attributed to a lack of citizens' trust in politicians. While citizens get more emancipated and have access to information and scandals are revealed, they demand a more transparent and participatory governance model. All of these crises are interlinked and shape today's society (Errembault, 2012). The current prevailing paradigm, characterized by a neoliberal, dualistic world view, is not able to present a coherent approach to address these crises.

Just as the enlightenment period totally shifted worldview of that time, now a new paradigm is rising to face the challenges that lie ahead of us (Weber, 2015). This new paradigm should not look at all the different crises separately, as if everything can be compartmentalized and put into separate "boxes". A holistic approach is needed.

As the scope has to be limited, the research focusses on climate change. However, when looking for solutions, the overall context and its crises need to be taken into account so that the problem does not become isolated.

**The topic of this thesis is the collaboration between local authorities and energy cooperatives as a possible solution to face the challenge of climate change.** This collaboration has the potential of integrating multiple aspects to mitigate the crises. It does not only address the need for more installed capacity of renewable energy and energy efficiency, but tries to address the systemic failures which lie at the root of the crises. Operating from a different world view, it focusses on behavior change of citizens, a social, mission-driven and responsible economy, and fosters active and responsible citizenship. These collaborations already exist, but are rather scarce. This thesis identifies some of these successful collaboration with the intention to give them visibility and learn from them for future collaborations.

The first chapters explains the background of the thesis, the context, and the relevance of the thesis. The second chapter explains the methodology which is used to obtain the results. A third chapter explains some of the crucial concepts and definitions to understand the context and the starting point out of which this thesis is written. The main topics highlighted in this chapter are "the commons" and "renewable energy cooperatives". Chapter 4 focusses on why local authorities should collaborate with REScoops, identifying the challenges which local authorities have, and how REScoops tackle these challenges. The fifth chapter focusses on how this collaboration can take form and which actions local authorities can do to facilitate REScoops in achieving the shared goals. Chapter 6 takes a closer look at the success factors of these collaborations. The seventh chapter is the conclusion, summarizing the main findings, and the final chapter contains recommendations for the different stakeholders.

## 1.1 Background

### The Challenge: Climate change

There is a real sense of urgency in addressing the challenge of climate change. If the world's temperature is to be prevented from an average increase of 2°C, drastic measures need to be taken. A higher increase of temperature would lead to a big loss of biodiversity, increased drought, migration problems due to loss of inhabitable regions, and many more. In order to limit the rise of temperature, it means that in Europe, by 2050, the carbon emissions should be reduced to 80% of their levels compared to 1990 (Hassol, 2011). This requires a tremendous effort.

Even if humanity succeeds in keeping the increase of temperature below the 2°C, there will still be a drastic impact on the climate as we know it today. Not only the mitigation of climate change, but also adaptation has become an urgent topic for local governments' agenda. As the transition movement

highlights, in order to prepare ourselves for this change, it is important to create resilient networks at the local level (Hopkins, 2009). At different levels, targets and guidelines have been put in place to address this challenge, and local authorities have an important responsibility in its achievement. The Paris agreement is an international effort and major contribution in the mitigation and adaptation of climate change. Not only do the signatories engage themselves to keep the temperature increase below 2°C, they also commit to foster climate resilience and low greenhouse gas emissions development, and commit to make the financial flows consistent with a pathway towards a climate resilient development. (UNFCCC, 2015).

### **European response to climate change: Policy Framework**

The European Union has undertaken action in mitigating climate change. It has introduced the **Horizon 2020 targets**, aiming for a 20% of energy from renewable sources, 20% (or even 30% in some cases) reduction in greenhouse gas emissions compared to 1990, and 20% increase in energy efficiency (EU, 2017). For 2030, these targets are; 27% from renewable energy sources, 40% reduction in greenhouse gas emissions and 27% energy savings compared to a business as usual scenario.

In tackling this challenge, there is a growing consensus that local authorities play a crucial role. The UN recognizes the role of local governments as a crucial factor for sustainable development, highlighted in their **Sustainable Development Goals (SDG's)**. The SDG's, launched by the United Nations in 2015, is a set of 17 targets for sustainable development. One of these goals is entirely dedicated to the role of cities and local governments. As Judith Karl, the UNCDF Executive says: "There is increasing acceptance that societies and economies cannot undergo that transformation – and cannot meet the SDGs - without utilizing the comparative advantage of local governments. Central government ministries alone cannot drive transformation towards resilient, sustainable, equitable growth alone." (Karl, 2015) The European commission urges local governments to implement these goals into their policy planning as we all need to work together to realize these goals.

One very important initiative in achieving the SDG n° 7 (clean and affordable energy for all), and SDG n° 11 (sustainable cities and communities) is the Covenant of Mayors.

The **Covenant of Mayors (CoM)** is a European initiative launched by the European Commission to engage local municipalities *and their citizens*, in mitigating climate change. The initiative started through the realization that if we want something to happen, the local level should be engaged.

Each city participating in the Covenant of Mayors *voluntarily* commits itself to reduce, by 2020, the CO2 emissions of the city by 20% compared to 1990 (or the first following year that reliable data is available). Now, since 2015, the Covenant has renewed itself with a long term vision for 2030. Here the commitment is to decrease the carbon emissions by 40%, to increase the resilience to the impact of climate change and to assure clean and affordable energy for all. The city starts by preparing a baseline emission inventory to quantify the CO2 emitted on the city's territory. A risk and vulnerability assessment is made to identify the climate hazards and vulnerable places in the region. Following, a Sustainable Energy and Climate Action Plan (SECAP) is developed. This document is a strategic plan which policies and measures will be undertaken to achieve the goals. Every 2 years, monitoring reports need to be submitted to assess the progress of the action plan (CovenantOfMayors).

This covenant is an opportunity for cities to improve their sustainability by getting support and knowledge from the Covenant of Mayors Office and the other participating cities. The cities and municipalities are responsible to find the expertise so to set up this action plan, and to implement it. Organizations like Climate Alliance, but also regional and federal governments help to build capacity.

### **Flemish response to climate change: Policy Framework**

The Sustainable development goals need to be implemented on national and regional policy level. A few of the main priorities for the long term vision is the energy transition, a safe and smooth mobility plan,

and a circular economy. The Flemish government is implementing the SDG's into their policy plans for 2030 and urges cities and municipalities to also implement the SDG's into their local policy and management planning cycles ("Beheers- en beleidscyclus BBC"). Important therefore is to form new partnerships to implement these goals (Government, 2015). The SDG goals cannot be separated from each other since they cut across policy areas. The complexity demands a multi-actor governance, collaboration with knowledge institutions, NGO's, citizens, business and financial institutions. The specific policy plans for implementing the SDG's on the Flemish level are still under construction but should be done by June 2017. By 2019, after the new political elections at local level, all BBC's should be synchronized with the SDG's.

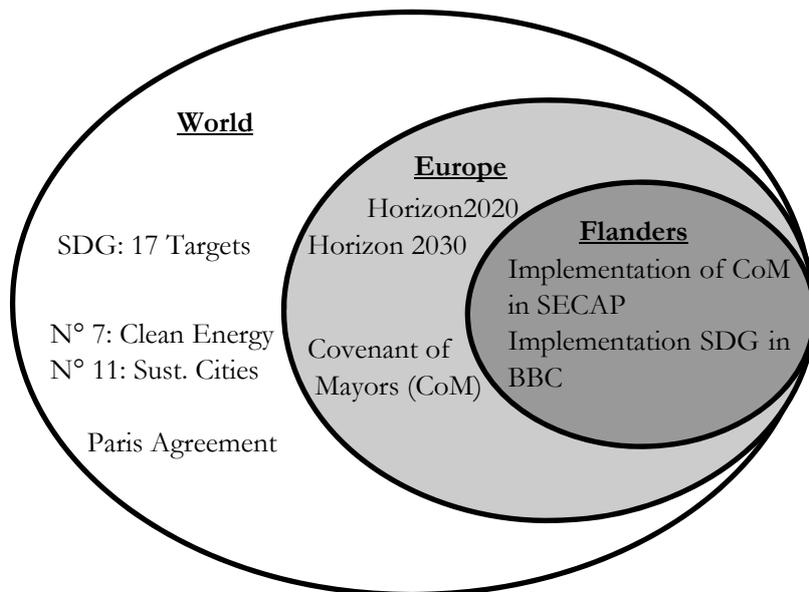


Figure 1: Context Climate and Energy action plans

The document released by the Flemish government "Vision 2050" focusses on the SDG's. Also energy is one of the main topics (Ruebens). The objective is to have reduced the CO2 emissions by 85 – 90% compared to 1990. This means big investment in renewable energy production, the energy efficiency of buildings and clean mobility. The main challenge is to find the capital to finance the big investments needed for energy networks, the renovation of buildings and the construction of new renewable energy production capacities.

Important here is a strategic planning so that the gains from the low hanging fruits can be reinvested again in measures which do not pay themselves back so easily.

In Belgium, many cities have signed the Covenant of Mayors. The Flemish region played an important role in facilitating and financing the studies to set up the Sustainable Energy and Climate Action Plan (SECAP). The Flemish region also paid for the "baseline inventory" study for all the local municipalities, providing them with the necessary data to set up an action plan. However, the implementation is still a big struggle. There is a lack of knowledge, expertise and financial resources to implement this plan.

### **Need for collaboration**

The complexity of the challenges are huge and collaboration is needed; collaboration between the government, business, financial institutions, knowledge institutions and with the citizens. A top down approach alone will not succeed in driving the changes fast enough. A bottom up approach is needed too. Citizens need to have a way to organize themselves and shape their living context. The role of local government is crucial in this, as they are the layer of the political structure closest to the citizens. Local governments can become great potential partners for the citizens' initiatives, they can enable and encourage them as they can have close contact. Where the political system is under pressure, populism is rising, and the legitimacy of the politicians are put into question, it is a wakeup call for local governments to reconnect with the citizens, their ideas, visions and initiatives to shape the future together.

Literature lists some drivers of collaboration for sustainability. On the macro level drivers are: the changing role of government, complex social problem and changing role of business. On the micro level, some of the relevant drivers are: gaining legitimacy and credibility, getting access to finance, expertise and resources (Sofia Leeb, 2014). These drivers are clearly present today. The role of the government is changing, shifting towards a more enabling role. Social problems like (energy) poverty but also

immigration, the rise of populism put pressure on the local government urging them to find new partners tackle the challenges. Moreover the local government often lacks the financial resources and expertise to execute their Sustainable Energy Action Plans, and can strengthen its legitimacy by collaborating with civil society and citizen projects.

### **Need for citizen participation**

For local governments to fulfill their role, citizen participation is a crucial element. The root of the political crisis is that politicians have lost touch with the ones they represent: citizens. The concept 'democracy' has been changing over time. According to De Rynck F. (De Rynck Filip, 2010), democracy is a continuum between representative democracy on the one hand, and direct participation on the other.

Historically, in Belgium, the political system was compartmentalized. This compartmentalization suited well the representative democracy, as citizens chose people representing their ideology. Here the function of the government is mainly just to inform the citizens what they have done. Since then, there have been three waves of participation movements. In the '60's the participation was mainly on the initiative of the authorities. The role of participation was mainly to get advice from the citizens. A second wave takes place in the '90's, as a natural result of the movement in the 60's. Participation, through referenda, has led to a more interactive policy-making and co-creation.

Now according to De Rynck P. (ibid.) there is a third wave of civil participation, characterized by the facilitation of citizen initiatives by the government. The contact between the government and citizens is a lot more intense, and the task of the government is not only to achieve the desired outcomes, but at the same time improve and create a desired context where citizens can take up their role (ibid.). Internet has enabled new ways to involve citizens more directly in the decision making process. Online platforms like DemocracyOS<sup>1</sup> and Citizenlab<sup>2</sup> have been developed for local authorities to lower the threshold for citizens to participate and to combine online and off-line democracy.

### **How to move forward?**

The crises cannot be looked upon separately. It is nice to achieve the targets, but when the vision gets blurred, they will fail to address the complexity of the systemic failures. It is clear that something needs to be done to mitigate climate change. Both on European and national level, targets have been set. Local authorities are an important agent in achieving these targets. There is a need for collaboration in the implementation of the action plans. Additionally, there is a growing need for citizen participation. So the question is this: "If local authorities are to partner in achieving their climate goals, which partners offer a solution, while, at the same time, deal with the deeper systematic failures?" These malfunctions are at the root of climate change, and the other crises. Instead of only looking how to treat the symptoms of a malfunctioning system, there is a need for looking at the root of the problem.

Looking at the culture and type of organizations of our economy and society, one might find solutions which address the problem at the deeper level. The cooperative movement has proven to foster an inclusive, resilient and social responsible culture (Socialeconomie, 2016). This movement is embedded in the vision of the commons, a vision which emancipates citizens and aims at governing common goods together. The cooperative movement is active in all different sectors; healthcare, housing, agriculture, energy, etc. Related to the topic of climate change, Renewable Energy Cooperatives also called REScoops, have a lot to contribute. REScoops do not only realize projects which directly mitigate climate change, they also challenge the current economic and political paradigm, engage citizens and offer a way towards more responsible citizenship.

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<sup>1</sup> "DemocracyOS is an online space for deliberation and voting on political proposals. It is a platform for a more open and participatory government" More info on: <http://democracyos.org/>

<sup>2</sup> CitizenLab is an online tool, specific for local authorities to facilitate citizen participation. More info on: <https://www.citizenlab.co/>

## 1.2 Problem Description

Referring to the background description, urgent action is needed to mitigate and adapt to climate change. Key agents in this process are local governments and municipalities. Local municipalities need to increase their action and impact, take up their leadership role, and enable a bottom up movement. These municipalities however often lack the skills, knowledge and resources to do this efficiently. They need partners to tackle this challenge together. At the same time, vision is needed to make sure that the solutions implemented are more than merely addressing the symptoms of the problem, but are also focussing on its roots, fostering a systematic change.

Energy cooperatives are a promising potential partner. They represent the exact same stakeholders as the city, namely the citizens, and are a bridge between the local government and its citizens. And as they are mission driven instead of profit oriented, they foster a new culture of entrepreneurship. However this collaboration is far from reaching its full potential. There is a need to **explore ways to improve** collaboration and **learn from the successful collaborations** which already exist.

## 2 Methodology

The research follows a qualitative method. The qualitative method is used since the main objective is to get insight in how collaboration works. The research is mainly exploratory, understanding the process of collaboration in order to give recommendations. The research model below gives an overview of the approach used in this research.

### 2.1 Aim and Research Question

This research fits into a wider research on how local governments can work together with citizen initiatives and “Commons” as a holistic approach to face the main challenges of our society, concerning, access to land and housing, agriculture, energy and healthcare.

The main research questions which are explored in this thesis are threefold:

1. What are the challenges the local authorities face in realizing their climate action commitment? And what do REScoops have to offer? These questions address *why* local authorities would consider collaborating with REScoops.
2. What are the challenges REScoops are facing? And what can municipalities do to facilitate cooperative entrepreneurship? These questions address *how* local authorities can collaborate with REScoops.
3. What are successful examples of collaborations and which factors made it successful?

This research focusses on the energy aspect and aims to contribute to an energy transition where citizens have more democratic control in the generation of energy. Through the cooperative model they enhance the local community, while fostering a more systemic change. This research aims to foster the collaboration between renewable energy cooperatives (REScoop) and local municipalities. Through this cooperation local municipalities can achieve their sustainable development goals, while benefiting from the REScoop model. The main findings are used to write recommendations to local authorities and REScoops.

### 2.2 Scope and delineations of the research

The scope of the research is to analyze the situation of collaboration for the Flemish region in Belgium. Also some cases in Europe are explored to see how the collaboration process works elsewhere.

There are many kind of cooperatives. The focus of the research lies on REScoops ranging from a local group of citizens to a fully integrated REScoop, but the research does not focus on network REScoops (whose business model is based on incubating and starting up new REScoops) or non energy focussed cooperatives.

The research builds on the vision of the commons, where resources as wind and sun belong to all, and should also benefit all. The recommendations focus on a more holistic view, reaching the climate targets in a social just way.

The recommendations are based on the challenges identified in the Belgian context. Some of these challenges local authorities and its cooperatives are facing might be the same for other counties. But in order to extrapolate the findings, local authorities need to check if the context corresponds with theirs. Different European countries delegate a different degree of authority to the local level. Therefore in every context local authorities need to adapt the recommendations to their own context within the possibilities of their authority.

## 2.3 Research Phases

The research passes through 3 different stages. The first phase consists of a literature review, setting the background and a theoretical framework for these collaborations. The second phase explored case studies to see how these collaboration take form. In the third phase, conclusions from these case studies are drawn and recommendations for the collaboration between local municipalities and REScoops are made.

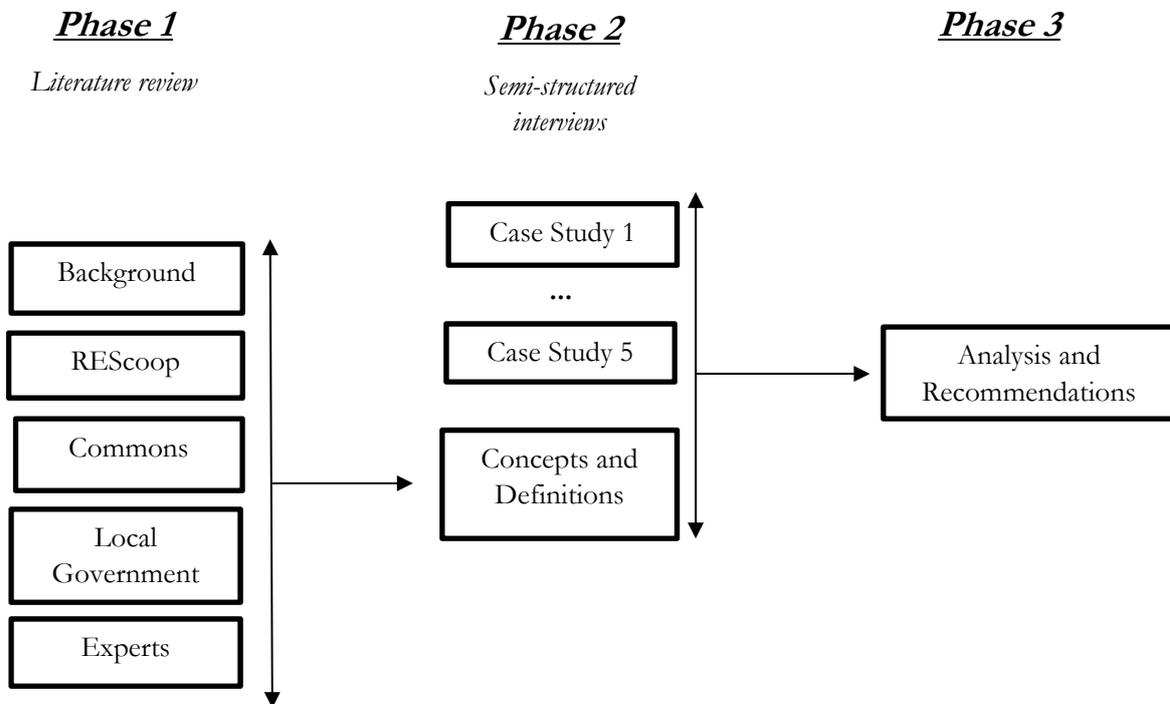


Figure 2: Research Phases

### 2.3.1 Phase 1 –Literature review

Phase 1 explains the background of the research. It investigates and explains the needs and challenges of local governments in their search for sustainable development. It takes a closer look at the vision of the Commons as a framework to meet some of these needs local governments are facing. Further it looks more in depth at REScoops. It explains what REScoops are and what they do.

This phase is mainly based on literature review. Additionally semi-structured interviews with experts were conducted to get a deeper understanding of the context. Following experts were interviewed.

Cederic Depuyt, VVGS organization for Flemish cities and municipalities

Dirk Vansintjan, President of REScoop Europe and Co-founder of Ecopower

Jan de Pauw, President of Rescoop Vlaanderen

Giustino Piccolo, Climate Alliance

Karel Derveaux, Project Manager Ecopower

Michel Bauwens, Commons Expert

### 2.3.2 Phase2 –Case studies

Phase 2 explores in depth some collaboration processes through the method of case studies. While building up the framework, several interesting cases of collaboration between local authorities and energy cooperatives are identified. Five of these studies are selected to understand the collaboration. These cases are selected to have a variation in the type of local authority, type of cooperative, type of projects, and also the regional spread. The main research questions are kept in mind while performing the semi-conducted interviews. These research questions are “What are the challenges the municipalities face in realizing their climate action commitment” and “What do cooperatives have to offer?” On the other hand: “What are the challenges cooperatives are facing? And “What can municipalities do to facilitate cooperatives?” Finally, “What are successful examples of collaborations and which factors made it successful?”

The case study as a tool is chosen because it provides a more integral image of the object of research (Verschuren, et al., 2010). A case study can be defined as: “an empirical inquiry that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident” (Yin, 2013). The research’s object, forms of collaboration, is very difficult to separate from its context. The complexity of the problem, and the multiple facets of the context are very difficult to capture in regular surveys. The case study approach allows the researcher and stakeholders to be more actively involved in the process and search together for possible solutions. The problem can be experienced from within, resulting in a short feedback loop. One of the critics of this method is that it is not generalizable (ibid.). A case study does not aim at proving a statistic general rule. Rather it aims at achieving some analytical generalization, through increasing the knowledge in a specific field. A multiple-case design is chosen to compare and get input from different well working collaborations. Although taking more time and resources, this is done to give more robustness to the research (ibid.). The case study falls into the category of an exploratory case study, since it will explore the examples of a well working collaboration.

A semi-structured interview is used as a method. This is an interview guide based on a checklist of topics to be covered, mostly in a specific order. The benefits are that there is more flexibility and that follow up questions are possible. However clear and concise questions are needed. The interview is recorded and the notes are send back to the interviewee to make sure the data is correct.

Following cases are conducted:

<i>Criteria \ Case</i>		<b>Eeklo- Ecopower</b>	<b>Ghent- EnerGent</b>	<b>Halle- Pajopower</b>	<b>Kuurne- BeauVent</b>	<b>Lochem- LochemEnergie</b>
<i>Type of Local Authority</i>	<b>City</b>	x	x	x		
	<b>Municipality</b>				x	x
<i>Type of Cooperative</i>	<b>Starting</b>		x	x		x
	<b>Established</b>	x			x	
<i>Type of Project</i>	<b>RES</b>	x			x	
	<b>EE</b>		x	x		x
<i>Regional Spread</i>	<b>East-Flanders</b>	x	x			
	<b>West-Flanders</b>				x	
	<b>Fl- Brabant</b>			x		
	<b>Netherlands</b>					x

### **2.3.3 Phase3 –Analysis and recommendations**

The third phase concludes with an analysis and recommendations for local municipalities. The case studies are analyzed and the central question here is: “What recommendations can be made for future successful collaborations between municipalities and REScoops?”

For the factors identified as success factors, first a literature review identified some potential factors for successful collaboration. The work “Stakeholder collaboration in a Sustainable City” (Sofia Leeb, 2014) is used to get a first understanding of potential factors. These factors are kept in mind while interviewing different stakeholders. Out of these factors, the cases revealed some factors to be significant, and are adopted.

## **2.4 Research Methods and Triangulation**

The Semi-Structured interviews are recorded. They are not fully transcribed but are used to write out the main ideas. The findings are represented again to the people interviewed to make sure there are no misunderstandings. The findings are also compared with literature review to increase the consistency of the findings.

Triangulation is used by conducting interviews with a wide range of people. Members of a cooperative are interviewed, as well as people from the local authorities to make sure that both sides of the topic are covered. Also experts from umbrella organizations are interviewed to get a more overall view.

## **3 Concepts and Definitions**

### **3.1 Commons**

What are commons, what do they have to do with citizen participation, and what does it have to offer facing the current crises?

#### **3.1.1 What is our world view?**

Everything we see around us, society, the institutions it consists of, the crises we face today, etc. is a result of the collective world view. How do we look at the world? What assumptions do we have? What drives us? The dominating assumptions of our paradigm stems from the Enlightenment period; a dualistic philosophy putting the rational individual in the center. One assumption at the root of the crises is the assumption that the individual is separated from the rest. We are living in the Anthropocene, the epoch where humans, and not nature anymore, are dominating the ecosphere (Weber, 2015). With all the technology, humans have been trying to dominate and control nature, creating the separation of an “I” that needs to control “nature” to survive. This dualism can be found in the most spheres of life; in economy, where there is the complete separation between “consumer” and “resource”; in politics, where there is the separation between the “governed” and the “governor”; a social crisis combined with a crisis of identity; we don’t know who we are and what it means to be human. The metaphors and world view we use today are inadequate to describe our world and make sense of it. Andreas Weber points out that the accumulation of crises gives us the opportunity to rethink and reimagine our ontological conditions (Weber, 2015). He argues that we are at a transformation point, similar to the beginning of the Enlightenment period. Reframing our world view is the solution to face the societal challenges.

#### **3.1.2 Evolution of governance**

Throughout history, tribal cultures have developed a hierarchal structure out of the need to organize themselves better. These institutions, developed a top down approach to manage the challenges they were facing. These structures were extremely efficient in, for example, expanding and defending a nation, enforcing law and order etc. but as society grew more complex, this structure was not sufficient. This centralized top- down structure mainly fails to manage complex flows of information.

Therefore the market, as a new governance structure, arose. New principles like competition, personal interest and individual rights enabled direct transactions without going through a central body and therefore facilitating complex transactions. Competition became the main driver.

Now, with the rise of the internet and mass communication, a new type of governance is on the rise; heterarchic collaboration (Ronfelt, 1996). Networks are formed between multiple organizations to consult, coordinate and act together over larger distances. It enables dispersed players with a common vision to find each other and work together. This revolution challenges hierarchical structures, ignores boundaries and makes it possible for citizens to get organized through NGO’s and associations, and take collective action. The time has come that the governance structures of market and state are under pressure. The citizens, as a community-based social force, take up their role and demand participation in the decision making process. They challenge the authority of the previous players and wants to participate. As being stated already in 1993 by Peter Drucker, a post-capitalistic polity needs a third sector, an autonomous social sector.

#### **3.1.3 Three Governance structures**

So how do these 3 different governance structures (centralized structure, the market-based structure, and the networking structure) relate to each other?

Each different structure functions according to a different logic and rules certain realms in our society. These realms are challenged as new structures arise and change over time. Each structure has its strengths

and failures. The logic is complex but the next paragraphs highlights some typical characteristics of the currently prevailing paradigm.

### ***State Logic***

The state power as a framework provider has traditionally used the **centralized, top-down governance** structure. The State here is an institutional power, creating a **legal framework**. As welfare state, at a certain point, it also governed the realm of **services** like public transport, public good, health care, infrastructure, etc. In managing these public affairs, the state has a team of planners and officials executing the plans and providing services in a top-down way. On national or even international levels the agenda is decided and then implemented by the more local layers of the political structure.

However, this governance model has its limitations. De Grauwe P., a liberal economist teaching at the London school of economics, analyzes in his book “Limits of the market” (De Grauwe, 2016) the limitations of the neoliberal model, and identifies also the limitations of the State. One of these internal limitations of the state is that there is the risk that a few well-off people decide for the political agenda (possibly through bribing) and do not represent the interest of the citizens. Typically for a top down structure, is its **lack of transparency** for the citizens. This creates frustration and mistrust. The lack of transparency leads to an unbalanced power relationship. When scandals are disclosed it releases indignation and protest with the citizens. When trust is lost, people don’t feel responsible to contribute to the state, resulting in avoiding taxes and social contribution, undermining the functioning of a welfare state. Another limitation is the efficiency, as the communication flow is restricted, the functioning of this structure is **inefficient**.

Today, as citizens are more vocal and demand more participation in the decision making process, the role and legitimization of the state is challenged. A pure vertical approach is not acceptable for citizens anymore. In order to regain the trust, they want more transparency and participation in the decision making process.

An example of this is the Podemos movement in Spain. In 2014, out of indignation of corruption and inequality, citizens organized themselves into the political party ‘Podemos’ to challenge the current system. In 2015 they received 21% of the votes and became the third largest party in the parliament. Although a political party they tend to be more horizontal, inclusive and diverge from the centralized, hierarchical governance model.

The limitations of the hierarchical system, especially concerning efficiency, has tempted the governments to adopt some of the market logic. The realm of services got under pressure by the market logic because it would be more efficient. In the 1960’s under the government of Reagan and Thatcher, a lot of the public services and entities were privatized. The slogan “There Is No Alternative” (TINA) (Berlinski, 2011) was used to promote privatization and the neoliberal model was the only way of improving society. This was during the fall of communism and the slogan represented the idea that no ideology other than capitalism could be taken seriously.

When the state logic pend over too much towards market logic, long term vision is at stake. Long term benefits are more difficult to quantify than short term financial gains. And with a culture focusing on financial gains and compartmentalizing different sectors of society, there is no unified long term vision. This lack of long term vision threatens the common good. The example of EANDIS, the distribution operator in Flanders, shows how the short term thinking, focusing on financial gain, can undermine the long term advantages of the community. Local municipalities wanted to sell their shares to a Chinese company, as it was a good financial deal, but overlooked the democratic economic participation. Instead of letting the main stakeholders – users of the grid- , participate financially and perhaps even democratically, a foreign multinational would have had a big influence on local energy prices (Segers, 2016). Luckily people brought to light the hidden disadvantages and the deal did not go through.

Often, as municipalities are in need of financial resources, when there is an opportunity to make quick money, it is taken with both hands without taking into consideration the future losses or the losses for the community. This is also the case with renewable energy, when new commercial projects are developed. A long term vision is needed to be able to see the long term advantages over a short term financial gain of a remuneration fee.

### ***Market Logic***

The market as a new way of managing interactions between individuals, is facilitated by governance structure based on competition and pursuit of individual gain. The rise of the market structure developed its own logic, reaching its summit with the neo-liberal ideology. This logic is based on **competition** in order to increase efficiency. The basic assumption underneath is that people are a “**homo economicus**”, a rational decision maker that pursues a maximum of self-interest (De Grauwe, 2016). The purpose of launching ventures is to have **profit maximization**. The entrepreneur sees a way how to create value, engages people who want to join him in the venture. The ‘labor market’ is an example how skills and expertise are commodified and exchanged to enable the entrepreneurs undertaking. Looking with the entrepreneurial, market-oriented mind, everything which could possibly create value, is tried to enclose and privatized in order to extract value (money) out of it.

This governance has also fostered a logic of competition. The actors competing against each other focus more on themselves and the interpretation of value is reduced to private profit. The company’s structure is set up in a way that its managers have to be answerable for the shareholders in the first place. A few people, representing only a small part of the shareholders decide on the future of the company, and how it should relate to society. Since the logic is profit maximization, the investments done are the ones which will bring about the most profit, but it will not necessarily be invested in the needs of society.

The logic is based on scarcity. Following this principle, it tries to appropriate, enclose, **privatize and commodify** all things. The reasoning behind it is that only something can generate value when it is private. This reasoning has led to property laws, and has expended to intellectual property law. Even when a good, like an idea, is not scarce, it had to be put in law to make it artificially scarce, otherwise the economic model would stop working as it was. Its tendency is to enclose and privatize everything, including common and public goods.

De Grauwe (De Grauwe, 2016), also identified internal and external limitations of the market. One of the main external failures is that it does not find ways to incorporate the **negative externalities**, in particular the negative effects on the environment. When profit becomes the only criteria on which to focus, other valuable resources like human, social and natural capital, which are more difficult to put a price tag on it, get under pressure. A UNEP report in 2013 warns investors to take other capital into account when choosing in which company to invest. The estimated annual environmental costs from global human activity equating to US\$ 6.6 trillion or 11% of global GDP in 2008. The cost of environmental damage caused by the world’s 3,000 largest publicly-listed companies in 2008, is estimated at 2.15 trillion US\$ (UNEP, et al., 2013). Also does market fail in allocating the created value to the right people. Rich people get richer and the poor, poorer. An extreme example of this governance structure, without any interference of the state, is the idea of “The trickling down effect”, meaning that when the government does not interfere with market through taxations, it should also benefit the poor in terms of jobs and cheaper goods. This has however led to an **increased gap between the rich and the poor**. 1% of the people own together 46% of the global assets (Global Wealth report 2013, 2013).

Another external limitation of the market is the instability of the market, where **speculation** can lead to a negative spiral and ‘bubbles’; and a third external limitation is the loss of public goods. The State tends to privatize its services, as it joins the market logic of efficiency.

One of the internal limitation on the other hand, is the assumption of the 'homo economicus'. Both Kahneman, the 2002 Nobel Prize winner of economics (Kahneman, et al., 2000), and Damasio (Damasio, 1994) have done extensive research on the emotional component of human thinking and action and concluded that **human behavior is not so rational**, nor as predictable as economic theory would have hoped. A second internal limitation is the motivation. Both intrinsic and **extrinsic motivation** are present but the market's logic tends to stimulate external motivation and take over the intrinsic one. A last internal limitation, according to Paul De Grauwe, is the **contradiction between cooperation and competition**. Internally in a company, there is collaboration, but between companies only competition counts. Cooperation though is part of what makes us human.

De Grauwe concludes with the idea that only democracy can protect the market system from its own destruction. The market governance structure is under pressure and here again the realm of its influence is challenged.

### ***Commons***

The third player, which could restore balance, are citizen movements: a social power organizing themselves through institutions and associations. Instead of things being governed by the State (public good), or by the Market (private good), now as an alternative, citizens could govern together the Common good.

As the Network governance structure arose, allowing a democratic, horizontal structure, it questions the state governance and the market governance. The problem with the other governance structures is the lack of democratic control, and the institutions governing the other domains (Market and State) are challenged to become more democratic in order to keep their legitimacy.

### ***Interaction between these 3 structures***

Right now there is a very close partnership between the State and the Market. The Market counts on favorable regulation from the state, in order to generate wealth for the society. On the other hand, through taxation, the state relies on the market to continue to provide services for the citizens. As for the state, with its hierarchical structure, it is difficult to manage resources in an efficient way, it started to collaborate more and more with the market, outsourcing some of its services through privatization or public-private partnerships. The state, as an institution, created a framework that shifted some of the roles and services it had towards the market to handle these services. The Belgian 'intercommunales' is a good case to see how the services, arranged by the State, have gradually shifted towards the market. An Intercommunale is a structure which arose to facilitate municipalities to provide services like waste management, distribution of water, electricity etc. These structures were originally associations assuring the common good. As it was more efficient, municipalities joined forces and collaborated to provide these services. The people managing these associations, were originally representatives from the municipality. Later also 'mixed intercommunales' arose, where private businesses are part of the managing board to facilitate the services. This collaboration is situated in the middle of the state-market continuum and gave rise to some scandals. As there was a mixture between public and private interests, and politicians were paid to be part of the board, a conflict of interests arose. Again a lack of transparency and democratic participation, has led to a loss of trust by citizens. For example, the pursuit of profit has led one of these intercommunales, Publipart, to invest in chemical weapons (Verstraete, 2017). This is an example of a collaboration, where the combination of a lack of transparency and a conflict of interests has threatened the common good.

The paradigm held so far is the one of a scale with on the one extreme the State, and on the other end the Market. However citizens can also play a role. The citizen initiatives are currently still in the margin of this game of power. Cooperatives and other movements get more participation within the market but their contribution is still rather small. The current policies are still adapted to the old framework of the market-state dipole. Structures that organize themselves outside of the market are often even seen as a threat for

the state, since in the old paradigm, the market is needed to finance the State. Politics need a solid economy in order to play their current role in society. Alternative currencies and time banking face challenges from the authorities to become legal (ex. Helsinki time bank (Peltoski, et al., 2015)), but also other ways of commoning, like sharing, file sharing, etc. are being criminalized by the authorities because it undermines the market functioning (Bollier, 2017).

The debate is always about who is supposed to govern this common good. Traditionally or the government has taken this role, or it has been outsourced and privatized. However, as can be seen, when there is no governance, and private interests (of both business people and politicians) interfere with the public good, the public good suffers. Citizens need to be part of governing the common good. The question is not anymore “Should the market or the state govern the common good?”, but rather, “How can citizens be engaged to govern the common good in an effective way, and how can the state and market be reformed to facilitate this transition?” The vision of the Commons has a proposal.

### **3.1.4 The Commons**

#### ***What are commons?***

“The Commons” is a very broad topic. It is a world view, a philosophy and at the same time it translates itself in very concrete and tangible forms and structures. Like DNA, it manifests itself in different forms depending on the surroundings.

A one phrase sentence to define commons could be: “Commons are resources managed in the interest of future generation” (Tacking back ownership, transforming capital into commons, 2016)

The definition which will be used further is a more complete one, given by Tinne de Moor (Time is now, Commons from past to present, 2016), head of the Institute of Collective Action at the University of Utrecht: Commons can be described as the combination of three things:

- First; there is a group of people, mostly prosumers, consuming and producing a resource.
- Second; there is a collective resource; a resource of which the use depends on the decisions of these people.
- Third; there is an institution, which facilitates the cooperation between the people, manages the resource and ensures the continuity of the resource and its commons.

#### ***Commons logic:***

Commoning emerges from a worldview and has a profound impact on how it relates with other people and the planet.

#### **The worldview**

The paradigm consists of the realization that the individual is part of a greater whole, its interdependence with the other people and the resources around. It is an answer and reaction to the enclosure and privatization of shared resources. Citizens become world citizens and the individual is not solely a rational homo economicus, but a social and emotional being. This paradigm does not isolate man from its environment and does not take the environment, which makes it possible for humans to exist, for granted. The line between dualistic concepts slightly fade away by acknowledging the interconnection and inter-being of things.

#### **Expression**

This worldview expresses itself in various ways:

- Common practices focus more on the right of use than on the right of ownership. It focusses on the use of the resource and making it available to the largest amount of people possible, while guaranteeing its continuation and enhancement. It highly contrasts with the idea of accumulation of private goods (Bollier, 2012).
- This world view puts the individual in relationship with its environment. As a social being, reciprocity and trust are key. In a community setting, where people engage with each other in meaningful relationships and where collaboration, trust and care are fostered, people act with each other in a more reciprocal way. Not everything needs to be arranged according to the market principles. Acknowledging that people, who are also social beings, can interact with each other on a reciprocal base, good and services can be managed as commons.  
Money has two basic functions: an organizational function and a trust function. Money allows exchange between two partners who do not know each other. Without money, if there is no trust relationship, it would make a transaction difficult since reciprocity is not guaranteed. Money enables direct reciprocity and thus fulfills the function of trust. It is a very useful tool, but at the same time, when taken out of its context it has also its limitations. Money is a representation of wealth, not wealth itself. And when money is pursued as a goal, it loses its relationship with the context. Especially in sectors which are inherently social, like healthcare, education, elderly care, but also art, housing, etc. market mechanisms are not always the best way to deal with it. Negative externalities sneak in when leaving it over to the market (Gordon, 2017).
- The governance structure differs greatly from State or Market in their way of functioning and design. It is not based on hierarchy nor is it centered on individuals, it is based on self-governance; meaning self-regulation, self-sanctioning and self-management (Bollier, 2012).
- As a result of the awareness of our vital dependency of these resources (tangible, like forests and water or intangible like knowledge and culture), they organize themselves to manage these resources. Often when these resources are under threat, the commitment to manage it grows. This creates a strong community, an identity, a sense of belonging and a common goal. People share the same values and mission and therefore are willing to cooperate. The managing of the commons is in a certain way needed to ensure the livelihood of the people. (Bollier, 2012)
- This commitment creates a common goal and a strong vision. This vision enables people to collaborate over different organizations and use each other's strengths and expertise to move forward. If there is competition, it is with the other institutions or companies, trying to enclose and privatize these resources. The struggle here is to prevent that a resource, belonging to all, only benefits a small group of people.
- As the resource belongs to all the generations, it focusses on long term benefits rather than short term profits. It is not profit maximization but goal maximization which drives the commons.
- Financial capital is not the only wealth commons are focusing on. It recognizes that the financial capital is only possible through primary resources, which are often taken for granted. Resources like education, culture, natural resources, ecosystems, etc. make it possible to create the financial capital, but it is only the tip of the iceberg. When one is not aware of the natural capital and the social/cultural capital, it can lead to exploitation and mismanagement. There is a whole layer of 'primary economy', done by nature and culture for us, before it enters the "conventional" economy. The commons paradigm recognizes this wealth and tries to preserve it (Errembault, 2012).
- Work has a different perception in this paradigm. Intrinsic motivation is the driving force since vision, values and action are aligned. There is no strict separation between work and life, rather than speaking of a work life balance, it is a work life harmony.

### ***Examples of the Commons:***

Commons can be categorized under different groups. Commons can be natural, social, cultural, knowledge, digital etc.

One of the most famous examples of a commons is probably Wikipedia. This is a specific case of a knowledge commons. No one is owner of the information, everyone can access the information for free, and everyone can correct one another work and contribute to it. The example of Wikipedia shows how productive and useful this collaborative approach can be. It outperformed all encyclopedias both by quality, quantity and has the possibility to be updated frequently. Through the clear citation of references and the peer review of the articles, quality is acceptable. Wikipedia has also a certain rules, policies and guidelines on how to use and contribute to the resource, (these guidelines can be found on the Wikipedia page itself). This helps to manage the resource in a harmonious way, explaining the vision and guiding how to use and contribute to it.

Another example of a biocultural commons is the “potato park” in Peru. In the mountains in Peru there is a high biodiversity of potato plants managed by the native people. Their aim is not to produce as many potatoes as possible and sell them on the market, but living in a reciprocal, harmonious relation with nature. Biodiversity and genetic code is something which belongs to nature and all of us, and should not be privatized. The wealth and value nature has produced for us is there for everyone. In order to protect itself against the privatization of big multinationals, like Monsanto, who are keen to modify and patent this natural resource, the community launched the Indigenous Biocultural Heritage Area (IBHA). This potato park in Peru was created as a legally protected area to promote and protect the biodiversity and is being controlled by the local community (Bollier, 2015).

A city can also be seen as a Commons. People are living in a city and shape together the culture. This cultural and social resource is valuable and essential for wellbeing. With the market pushing to extract the maximum of ‘value’ out of the city, more and more area is privatized and exploited for financial gain. This puts life in the city under pressure because it is exactly in the common spaces –where people meet and exchange- that the culture, characterizing urbanization, is formed. All over the world citizens take initiatives to influence the city planners and to participate in the design process. When space in a city is seen as a place where financial profit can be made, and overlooks the social and cultural aspect, the city becomes difficult to live in. This is why citizens stand up and actively shape their living environment together. They challenge the city planners to take the local needs more into account and urge for more autonomy to shape the neighborhood. In Bologna, Italy, the concept of the “co-city” was brought to life, where the city actively integrates the citizens in planning and shaping the public space. It is a co-design process where public spaces, green zones and abandoned buildings are managed together. The city created a state-commons partnership: Bologna regulation for the care and regeneration of urban commons. This is a post-democratic governance model which invites citizens to take responsibility for urban places (Bollier, 2017).

A fourth example is renewable energy. The sun and the wind are resources that belong to everyone. The current energy players claim and privatize these resources. Wind is a good example to demonstrate this: wind blows over a large area but can only be harvested on a limited space. A project developer can build a wind turbine, gives a share of the profit to the land owner, and the rest of the profit goes to the shareholders of the company. The local community is left out. Energy cooperatives on the other hand, are citizens who organize themselves through the institution of a cooperative, to harvest the energy nature is providing. Their aim is that the value of these projects benefits the whole community and not just a few. Although the legal framework and institutions should be further developed (in collaboration with the state), citizens are able to manage these common resources and to open up the benefits to a larger group.

## ***Drawbacks of the commons***

There is no perfect solution and the commons approach will need to be combined with other approaches. The commons approach is based on values and a culture. It is not something which can be enforced and thus it takes time to cultivate this culture through education. It is not a quick fix.

One pitfall is that commons in reality can still be closed. A commons need to protect itself to make sure it survives, and therefore, there the open character of commons can be restricted. Especially throughout history, the commons were exclusive because the notion of ‘the community’ was limited. The institutions, set up to govern the commons, need to be carefully designed to ensure the openness of access.

In places where there is a strong community, people will very well manage the common good and the community will benefit. But not all the communities have the skills to organize themselves, nor the financial means to do the necessary investments. This could create a gap between high quality service for the rich and educated, where the less educated and poor are left with the degrading public services. The construction of the right institutions connecting people from different layers of society are crucial to ensure the inclusive aspect. A research conducted by J.W. Duyvendak, a professor in sociology at the University of Amsterdam, shows that civic society does not necessarily creates justice but rather represents the injustice which is embedded in the society (Duyvendak, et al., 2006). Active citizens tend to have higher education and participation of the lower educated people is a challenge. Not all citizen initiatives are managed as a commons, but the challenge to include all classes is also present.

When people are taking the responsibility to manage the common good themselves, they depend less on the state and might expect to pay less taxes. Citizen initiatives can take away the support for collective services by the government and this might undermine the welfare state. The State still has a very important role to play to guarantee a quality service accessible for everyone. But to legitimize itself, it will have to shift away from an authoritarian to an enabling role.

## ***Tragedy of the Commons?***

In the famous work, “the Tragedy of the Commons” in 1968, Garrett Hardin argued that governing a common good, will always lead to an overexploitation or destruction of the common good. The two most often proposed solutions are either to put in under state control (public good) or make it private (private good). Elinor Ostrom, Nobel Prize winner for economics in 2009, disputed some of Hardin’s assumptions. The basic assumptions which lead Harvin to his conclusion were that people pursue self-interest and are not capable of good communication nor cooperation. He assumed people to act as individuals out of the context of the community. In her work, first, Ostrom showed that both the state and the market have their limitations in managing common resources. She offers a third alternative: to govern it together as a commons. In her research she explored examples of well managed commons, and distilled 8 working principles from it (Ostrom, 1990).

1. Define clear group boundaries.
2. Match rules governing use of common goods to local needs and conditions.
3. Ensure that those affected by the rules can participate in modifying the rules.
4. Make sure the rule-making rights of community members are respected by outside authorities.
5. Develop a system, carried out by community members, for monitoring members’ behavior.
6. Use graduated sanctions for rule violators.
7. Provide accessible, low-cost means for dispute resolution.
8. Build responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system.

Ostrom focusses in her work mainly on the managing in common; how Common Pool Resources (CPR) are managed. The design principles are an answer to the question of who gets which share of the commons; a question of appropriation. One of the main critics is that the commons, as understood now, deal more with the right of usage rather than the right of appropriation. Commons are a much wider

concept than just Common Pool Resources. Talking about commons that are non-scarce (like knowledge), the question is not now how much a user is allowed to consume, but rather, what is allowed the resource to be used for? Another critique is that she overlooked that the social process of managing commons together, is a way of commoning itself, relationships are a crucial resource; it creates a bond which strengthen the community and give more solid ground for dealing with the more complex management of other commons. (Commoning; on the social organisation of the commons, 2013)

**Relevance of commons**

Commons give an alternative starting point to tackle the challenges we are facing. The vision of the commons emerges from a different worldview. The whole society and policy making in the west is framed in a market centered, dualistic paradigm, adhering the ‘rational theory’. Because of the omni-presence of this paradigm, it is difficult to recognize other patterns which shape society and human interactions. Therefore the vocabulary and discourse of the commons can be an eye-opener for policy makers. Contrasted by a new paradigm it helps to understand the current one. As David Bollier puts it, commons provide a new framework and language to reorient people’s perceptions and understanding, and to bring about a society change. We need to rethink the ontological foundations for sustainable future. Commons creates a holistic vision to rise beyond the dualistic discourse the market is having (Commoning as a Transformative Social Paradigm, 2016).

Cultures are blind for their own paradigm, and confrontation with a new vision is needed to think out of the box. It puts in question again where we want to go, and what the possible options are to get there. For citizens, it creates a vision how to engage their civic movements and connect with a bigger movement. For policy makers, it can provide a framework to evaluate policy measures and conduct dialogues with different stakeholders. This way the policies, approaching the challenges it tries to solve from a different angle, can clear the way for this new paradigm to evolve.

To rebalance dominance of the market, it is crucial that citizens organize themselves outside the market. Market does not listen to human needs but to customer’s demand. The power relation will only change when consumers wake up and demand change. The Commons give an alternative to citizens to organize themselves and get more autonomy over their lives. This way the dominance of the market is limited. Therefore, Commons have as first priority to fulfill the commoners in their basic needs in a social, ethical and ecological way.

The state could play a crucial role in transforming the dominance of the market. Bauwens (Bauwens, et al., 2014) advocates the transition towards a partner state. When right conditions are created, effective self-governance arises.

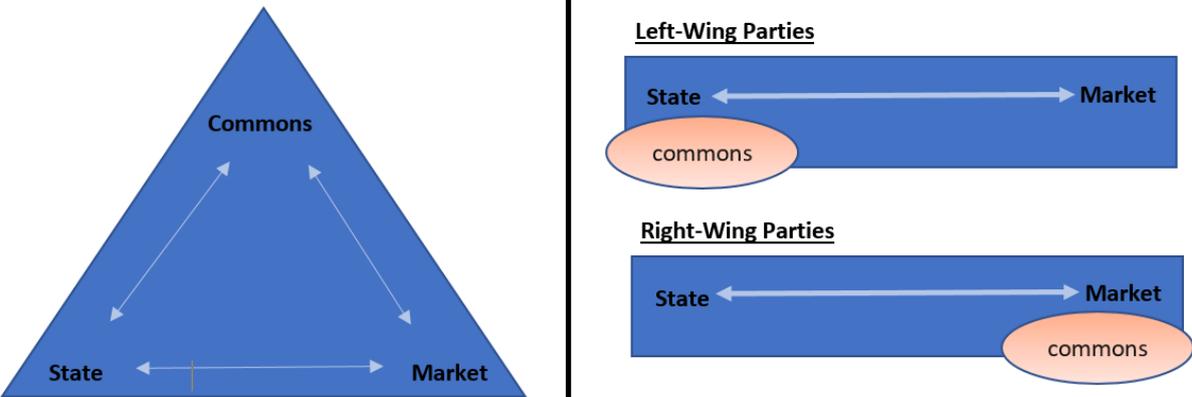


Figure 3: Models to look at the Commons; new model (left) old paradigm (right)

## ***Transcending the 'redistribution of income' model?***

The debate between the left and the right wing parties is often about how much needs to be redistributed. Where Left wing parties tend to redistribute more and put the governance of the commons as a task of the State, Right wing parties tend to redistribute less and put the governance of the commons under the market. However both are dependent of a strong and growing economy to generate that wealth in the first place. The Commons opens up this discussion by asking if this strong economy and its redistribution is really necessary, and if there are no other ways to provide the services needed. Is it not possible to design an economy that mainly focusses on the needs of society, an economy which is democratic and where the stakeholders choose how the profit can benefit society? This puts the legitimacy of the state and market into question, and in this new vision, the role of both will need to be redefined. In the new paradigm, the commons do not need to be governed by the state nor the market. Citizens themselves can manage the commons, and become a third player and potential partner of the state and market.

### **Role of the State**

Commoning challenges the state power and pushes to re-imagine the state. The crisis of the state will persist until the state and statehood is reimagined. The state must be able to understand commons as a new category of individual-in-relation-with-others, able to shape and coordinate themselves (Bollier, 2016). There are no definite answers or steps to take in how the state should transform, but to face the challenges and crises of our time, something needs to change at the topography of state power (ibid.). When a shift in relationship between Market, State and Commons appears, the State could play a much more enabling role. The State, as an institution which provides a framework for society, could shift its logic from a centralized approach to an enabling approach. The term "Partner State" refers to a State that enables the projects brought forward by the citizens. The State is already a 'Partner State' to the Market, as can be seen through the many private-public agreements, and it could be a partner for the citizens as well. As a **Partner State**, it has a clear role, but instead of forcing its agenda top down, it enables citizens to shape their environment. The state plays a role in emancipating the citizens and make them more engaged in society. Citizens are actively involved in the decision making process. Instead of the State being the provider of the services, it rather acts like a guardian and **facilitator**, making sure everyone has access to it (Bauwens, et al., 2014). The legitimacy of the State and its authority also shift. As citizens provide more services for themselves, the Market plays a smaller role, and also will the State have to rely less on the Market to fulfil its role. The firm grip which the Market has on the State might be loosened when citizen projects are fostered.

Right now, the State and the Market work very closely together. There are a lot of mechanisms that make them mutual dependent of each other. One of the clearest examples is probably taxation. The Market needs the State to create a favorable regulatory framework in which the market can operate. On the other hand, the State needs the Market and a 'growing' economy so that they get the income to perform the services to the public. The state gets its legitimacy by creating a framework for the economy to work, and to redistribute the wealth afterwards.

The Commons are inherently democratic and can provide services and goods without the negative externalities. For this model to grow, it will need similar partnerships with the State. It will need a parallel ecosystem and institutions, in a similar way the market collaborates with banks, investors and the state. One way how the State could facilitate and support commoning, is through providing a legal recognition to commoning and not insisting upon monetization and private property as the only way (Bollier, 2017). As the State recognizes the commons more and gives less power to the Market mechanisms, the power balance might be restored. Through this, the democratic structure of the commons gradually takes over some of the Market's services and goods, it creates room for a healthy economy within the boundaries of the planet. This is done without the State being undermined by a degrowth of the regular economy. The

State legitimizes its role by enabling this transition, because without a new regulatory framework, citizen initiatives have a hard time competing with the big companies.

As the invisible hand doesn't work to establish equity in the market, it will not work either for the commons. Institutions managing the commons will be mainly concerned about their commons and so the State should play a major role as superstructure, guiding these separate commons to the common good.

### Role of the Market:

#### Commons and cooperatives

In the new paradigm, one way how the market could evolve to a more sustainable system, is through the cooperative approach. Cooperatives are interacting with the market, are relying on it and tend to make profit, but at the same time their mindset differs from a for-profit oriented business. The mechanism of the market, as a money based transaction, will remain but the logic behind it transforms. The logic based on scarcity, competition and greed has to transform so that it can collaborate with the commons. It is possible for commons and the market to "play nicely together" but this requires that the market respects the commons values and allows them to practice their values. Commons in itself doesn't need money to be managed, and when interacting with the market, it needs to be able to regulate themselves the interaction with the market so that their values are maintained (Bollier, 2017). Cooperatives, which follow the ICA principles, allow commons to interact with the market on their own terms, as they share the same values. Following the 7 ICA principles, cooperatives work internally like a commons: 1) it is open for any member to join, 2) there is participation in the decision making process, 3) members contribute (financially) to the capital of the group and participate in how to manage this capital, 4) autonomy and independence, so that even when interacting with the market they protect themselves being ruled by the market demand, 5) educating and training the future generation for the skills to continue, 6) cooperation amongst cooperatives, and 7) concern for the community. At the same time cooperatives interact with the outside market where a different logic rules. The cooperative structure can be seen as an interface between the market and the commons, participating in the market, while at the same time protecting the commons. Cooperatives are a beautiful example of a Common-Market partnership; the market based transactions are in some cases more convenient than the Common's approach, based on reciprocity, but through its principles it allows the logic of the Commons to be there. It uses the Market mechanisms, while at the same time, it challenges the logic behind it. The quality of the service or product is not guaranteed through competition but through a democratic, transparent and cooperative approach.

For policy makers it is important to bear this difference in mind. Cooperatives, although operating in the market, use the logic of the commons and are oriented on goal-maximization, rather than profit maximization. Their created value goes beyond the financial gain but focusses on the impact and enhancement of the community. The preservation of the natural capital, belonging to all, and the strengthening of the social capital within the community are more important than the financial gain. The value is directly transferred to the society without passing through the State.

The market-based approach will remain, but their logic will transform. On the one side because cooperative structures take a bigger place, and on the other side because the State creates a new framework for the Market which prevents exploitative behavior.

As mentioned before, renewable energy is a resource which can be managed as a common. Commons arise when three elements are present; 1. A resource (energy) 2. People managing this resource (citizens) 3. An institution which facilitates the cooperation between the people, manages the resource and ensures the continuity of the resource while benefiting the whole community. REScoops is one of these institutions which aims to govern this common resource as a Commons. It aims to keep the energy resources in the hands of the citizens to allow "energy democracy". So how does a cooperative structure manage this resource? And in what ways is it different from other businesses?

## 3.2 REScoop - Renewable Energy Cooperatives

Nowadays it can be said that there is a consensus about the need for renewable energy. The energy transition is a fact. It might be delayed, but cannot be stopped. The urgent question however is: “How are we going to make this transition?” Will the energy production remain in the hands of a few, or will everyone, the citizens, participate and democratize the energy sector? A typical characteristic of a centralized system is that there are a few big players dominating the market. Now, the renewable energy technology brings about the possibility to have an efficient cost effective decentralized system where individuals can produce and consume their own energy, individually or collective as prosumers. The sun and the wind are resources that belong to all. For a democratic and fair society, ideally, these local natural resources should also benefit all.

Currently, big market players’ business model is to develop renewable energy projects with the highest profits possible. There is little or no communication, let alone participation with the local stakeholders. Big energy players, although contributing to the targets for reducing CO2 emissions, do not necessarily contribute to a more social just, inclusive, equitable and strong society. Their business model is to harvest the local renewable energy for ‘profit maximization’.

With the vision of the commons in mind, cooperatives present an alternative on how to allow access to the benefits of these common resources to as many stakeholders and in benefit to the community. Their business model is to harvest the local renewable energy for ‘value maximization’.

### 3.2.1 What are energy cooperatives?

Energy cooperatives, also called REScoops (Renewable Energy Sources Cooperatives), are characterized by their cooperative business model. Sharing the cooperative values, it means that citizens are involved in both the decision making and financial & economical participation. A renewable energy cooperative’s main characteristic is not its legal statute, but rather a way of doing business by creating value to the community.

A cooperative is defined as “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise”, (UN, 2012) and is characterized by the 7 ICA-principles (Coopkracht), formed by the International Cooperative Alliance. It is their guide to ethical entrepreneurship;

1. Voluntary and Open Membership
  - People can freely join the cooperative, without any discrimination on gender, race, political background, etc.
2. Democratic Member Control
  - Members participate in the decision making process as equal members, independent of the capital contributed. The democratic structure is similar to the one of our politics; people of the board are democratically chosen by the members, every member can put itself candidate to be part of the board. The cooperative model applies the democratic principles to the economy.
3. Economic Participation through Direct Ownership
  - The members are both user, investor and owner of the service, through the contribution of capital. The profits are partly distributed to its members according to their financial contribution, and partly reinvested in the cooperative and its mission.
4. Autonomy and Independence
  - When cooperatives have partnerships with other institutions they make sure they can keep the democratic control by the members over the cooperative.
5. Education, Training and Information
  - Cooperatives educate and train their members for the cooperative to continue, but they also engage with the wider community to promote the advantages of cooperative practices.
6. Cooperation among Cooperatives

- Locally, nationally and internationally cooperatives join and exchange experience and expertise. Since they have the same goal and mission, collaboration makes the cooperative movement stronger.
7. Concern for Community
- The cooperative serves the community with its service and promotes sustainable development

### 3.2.2 How do REScoops work?

REScoops can have a different business model, and this defines their way of working. A study conducted by REScoops Europe, mapping different cooperatives in Europe, categorized REScoops into 6 clusters according to their business model (Rescoop, 2012):

1. Business Model 1 : A group of local citizens

The cooperative is small and mainly runs on volunteers. It is a bottom-up approach as an answer to their identified need. They develop small local projects, mainly small hydro and solar. The financial capital mainly comes from the members.

2. Business Model 2: Regional-National REScoop

This model can arise when a local group of citizens scales-up and take on bigger projects. Or when an external actor gets different actors together. The focus here is to meet local needs as well as seizing an opportunity. Both volunteers and employees work on the projects. As the projects get bigger, they rely more on partnerships for financing the investments.

3. Business Model 3: Fully integrated REScoop

These REScoops integrate multiple services: generation, supply, distribution, and others services. Often these cooperatives are already operating for a long time and are able to function independently on the different dimensions of the energy sector.

4. Business Model 4: Network of REScoops

A REScoop can have the business model of incubating new local REScoops, by giving access to capital and expertise. By replicating their best practices they scale up the REScoop model. This approach makes advantage of the economies of scale.

5. Business Model 5: Multi-Stakeholder governance model

A governance structure that gathers all the relevant stakeholders in provision and consumption of renewable energy. It does not develop projects itself but gathers project developers, cooperatives, consumers and at the same time interacts with policy makers and authorities.

6. Business Model 6: Non energy-focused organization

Typically this form arises when local actors are not mainly concerned about the energy production. For example, a farmers cooperative who put on a wind turbine on their land, or an educational institution who has a community energy program as a side project.

The focus of this thesis lies mainly on the Business Model 1-3. There seems to be an evolution from a citizen led cooperative to a fully integrated REScoop as it matures over time. Main activities of these REScoops are to develop renewable energy projects, energy efficiency, and energy supply.

### 3.2.3 What are the strengths and benefits of REScoops?

The main strengths that energy cooperatives have, are their principles.

1. Voluntary and Open Membership

Open membership allows all people to participate. Cooperatives try to have a **low participation threshold** so that everyone, also the more vulnerable people in society, can participate in the energy transition.

## 2. Democratic Member Control

People are not governed by a board of directors chosen out of the most ‘important’ stakeholders, but govern and decide themselves. In giving **ownership to the people** it ensures that all relevant factors for sustainable development (people, planet, profit), are considered, and not only financial gain (Lipp, et al., 2015). As citizens experience their influence in shaping the project, they may become more active citizens in other areas of society.

**Democratic control** also leads to **transparency**. Cooperatives run on mutual trust, the members can participate democratically in the decision process and cannot exploit informational advantage (Huybrecht, et al., 2014). Since there is a relationship and trust, one of the important assets of cooperatives is the ability to induce behavioral change. As can be seen in Figure 4: Influence energy cooperatives on citizen engagement the energy cooperative model enables direct and indirect effects on citizen engagement. A direct effect is investment in renewable technology. Indirect effects are the increase of awareness of the issue through education.

## 3. Education, Training and Information

Co-ops actively train and **educate** their members for the continuation of the cooperative. But also, as a mission-driven organization, they reach out to a wider public. With **awareness** campaigns, workshops, information moments they raise awareness and build social acceptance for renewable energy projects. Linked with the democratic control and ownership, as people feel part of a movement, they are **empowered** to acquire new skills and knowledge, enabling them to take on future citizen-led initiatives (Lipp, et al., 2015).

The educational aspect, combined with a sense of community and commitment also leads to a long term behavior change, amongst others reduction of electricity consumption. ( (Bauwens, 2014), (Lipp, et al., 2015)).

## 4. Economic Participation through Direct Ownership

By pooling resources through a cooperative, it enables citizens to participate in a transition towards a clean energy economy (Lipp, et al., 2015). Cooperatives make it possible for everyone to invest in renewable energy, also if you don’t own a rooftop to install solar panels or don’t have enough capital, a small investment can always be made. Direct ownership allows people to have also **democratic participation in the economical realm**. This construction allows democracy to expand from the political level to the economy, minimizing negative externalities and fostering responsible entrepreneurship. The profits of these investments also flow directly back to the investors. The difference with FINcoops (financial cooperatives) is that there is no direct ownership and therefore also no democratic control over the assets. A FINcoop is a financial construction and is dependent on the corporation to which they lend the money.

## 5. Autonomy and Independence

Because long term vision prevails over profit, autonomy is very important. In a financial climate where profit is the first goal, values come second. By keeping the **autonomy**, it is possible to **safeguard the initial mission** of the cooperative. Autonomy is fundamental for democratic control. Cooperatives are **mission-driven instead of profit-driven** organizations. Profit is merely a means to be financial sustainable. In the current market framework, when there is no autonomy, the cooperative will have to go along with the profit-driven mentality, compromising their initial mission.

## 6. Cooperation among Cooperatives

There is a high sense of **collaboration** in between cooperatives, resulting in sharing knowledge and expertise. Even when new cooperatives start, they have immediately access to a wide network

of experts and partners. Starting energy cooperatives are rather small and locally organized. The in-house expertise at the early stage of the cooperative is often limited. However, through the collaboration of the different cooperatives - nationally and internationally – the common pool of knowledge is growing, and they **combine capacity**. The starting cooperative can rely on the help of other cooperatives. Collaboration overcomes competition. In the transition towards 100% renewable energy, there is room for ten thousands of energy cooperatives. The established energy cooperatives help starting cooperatives to professionalize, until they can manage on their own. The model they use is the one of a strawberry. The mother plant makes runners out of which new plants emerge. In the initial stage, the mother plant is needed to raise the new plant, but after a while, these new plants can support themselves without the sustenance of the mother plant.

## 7. Concern for Community

Energy cooperatives are created by the community for the community. Financing a renewable energy project is not a goal but a purpose to self-sufficiency. The profits are a means to achieve a goal, not the goal itself. The cooperatives share their profits with the members of the community and invest in projects that benefit the community as a whole. The **profits benefit the community** whereas otherwise it would flow out to international corporations. A study on a Scottish island mentioned that up to 8 times more value is created through a local cooperative compared to an external developer (Lasse Okkonena, 2015).

Cooperatives **create more jobs** and economic impact on the local region when compared to traditional energy players (Lipp, et al., 2015). The money does not go to foreign multinationals but stays within the community. These revenues are reinvested in the community as a means to achieve the common goal. Cooperatives don't try just to pick the low hanging fruits. They also invest in projects with a lower IRR but with a large societal urgency, like energy efficiency. Examples are Ecopower, who used the profits of a wind turbine, to pay employee, working at the local municipality to implement energy efficiency projects. Another example is Energent, who is actively focusing on energy efficiency measures in immigrant neighborhoods. Another example is in Germany, where a sustainable concert hall was built for the community (Rescoop).

As skills are passed on, a **sense of community** is build, and there is some financial space. Cooperatives also inspire social innovation and social entrepreneurship ( Lipp, et al., 2015), (Fernandez, et al., 2016))

Another important element in the transition toward the more sustainable future is **resilience**. Community resilience can be defined as “Communities and individuals harnessing local resources and expertise to help themselves in an emergency, in a way that complements the response of the emergency services.” (Vieta, et al., 2015)

As some of them were already mentioned above, the cooperative advantages, characterizing a resilient system, are:

1. responding to market failure
2. engender trust
3. spirit of self-help
4. strengthen civil society
5. promote stakeholder participation
6. greater social efficiency and efficacy through positive externalities

For cooperatives to have this positive effect, they have to be more than merely a juridical or organizational statute. It is the principles, embedded in a larger socio-economic context which make cooperatives contribute to resilient communities.

A study for the resilience of renewable energy cooperatives concluded that energy cooperatives have a resilient structure and their resilience has positive impact on the community, but whether the resilience is transferred to the local community needs to be further examined (Ayers, et al., 2014).

**Social capital** is an important resource for creating resilience. Energy cooperatives are a great way of building a stronger social capital and raising support for future citizen collective actions. Energy cooperatives are only one, but important, way of enhancing the resilience of a local community. Transition towns are very robust, interrelating all kind of practices to increase resilience.

Besides the guiding principles, other benefits are present. Cooperatives give a perception of fairness to the people around and enables social influence. At last, cooperatives invite people for **commitment**, resulting in **long term behavioral change** (Bauwens, 2014).

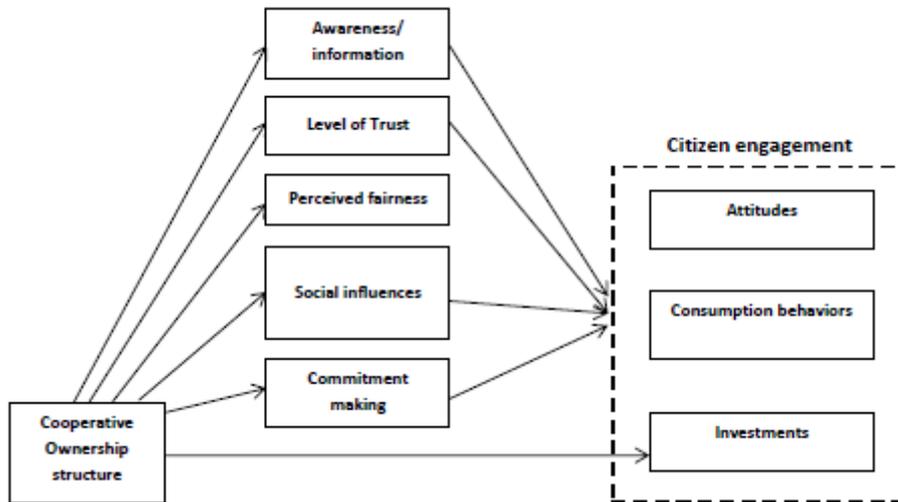


Figure 4: Influence energy cooperatives on citizen engagement (Bauwens, 2014)

As the cooperative produces for its members, it will not include high margins in the price. The price will be close to what it costs the cooperative. This **low price** is under the assumption that cooperatives work as efficiently as traditional energy providers.

Energy cooperatives actively involve the stakeholders and citizens and create a **public support for the renewable energy projects**. Especially since the citizens do not only have the burdens of the project, but can share in the profits. It has reduced opposition and the “Not In My BackYard-syndrome” (NIMBY). Some cooperative projects have shown that the support of the citizens has resulted in short development times of 22 (Rescoop, 2012) months, whereas an EU average of 53 months (on shore).

## 4 Why should Local Authorities collaborate with REScoops?

In order to get insight in the benefits of the collaboration, first it is important to understand the needs of local authorities.

This brings us to the first research question: “What are the challenges the municipalities face in realizing their climate action commitment? And what do cooperatives have to offer?”

### 4.1 The challenges Local Authorities face

Municipalities, in their search for implementing their sustainable action plans, are trying to address the challenges, interconnecting different sectors. The covenant of Mayors initially focused most on climate mitigation; the reduction of CO<sub>2</sub>, but the renewed commitment for 2030 also includes climate adaptation. Cities and municipalities are focusing on topics like short food chain, clean mobility, leading by example, energy efficiency in buildings etc.

Three main challenges identified in the realization of these sustainable energy and climate action plans. The first one is **financial capacity** to implement their plans. This is complicated as the expenditure of the municipalities is subject to strong European regulation and the financial resources of the municipalities and cities are limited.

Another challenge is the **human capacity**. Municipalities have the political will to take action, but the people which can be dedicated to this, are limited. A single sustainability municipal official can implement some projects, but has also other responsibilities. Not enough people are available to implement and develop the needed actions. Eventually less projects are developed than desired.

The municipality also lacks the **capacity to raise the awareness of citizens, mobilize** them and **build up public support**. Not only because they lack the manpower to be dedicated to this time consuming tasks, but also because the position of the city. As it is representing authority, it has a different approach on engaging people. People are aware that some action needs to be taken in order to improve the sustainability, but as soon as they are confronted with some inconvenient implication of these measures, opposition arises. It is very challenging for a city to engage citizens up to a degree that they accept and even support that sometimes small inconveniences will occur to achieve a greater good. They do not have the capacity on their own to realize this. It needs a long journey together with the citizens to explore what is needed in their local context to make it sustainable and how these action need to be implemented, benefitting the whole community. Not only the public support concerning energy is often lacking, but the government authorities in general are challenged. The connection between citizens and local authorities is sometimes lost, and citizens feel left out as decisions are made without their consultation.

Other obstacles identified is the complexity of the energy landscape. Private businesses, public companies, cooperatives etc. are all offering different things and it becomes difficult for municipalities to see the differences between all the offers and decide what the best option is. Not only engaging citizens, but also businesses and industry is a challenge.

### 4.2 Classification of Collaborations

Based on the identified needs of local authorities, a classification of collaboration is made of different potential partners who can address these needs. The three main challenges local authorities are facing, are identified as: 1) the lack of finances, 2) the lack of citizen engagement, and 3) the lack of internal human capacity. These factors can be used to classify different clusters of collaborations. Figure 5 schematically represents different clusters of partners by plotting on one axis the need for citizen engagement, and on the other axis the need for external investment. The main clusters are REScoop, Private project developers, FINcoops and municipality owned companies.

**Private project developers**

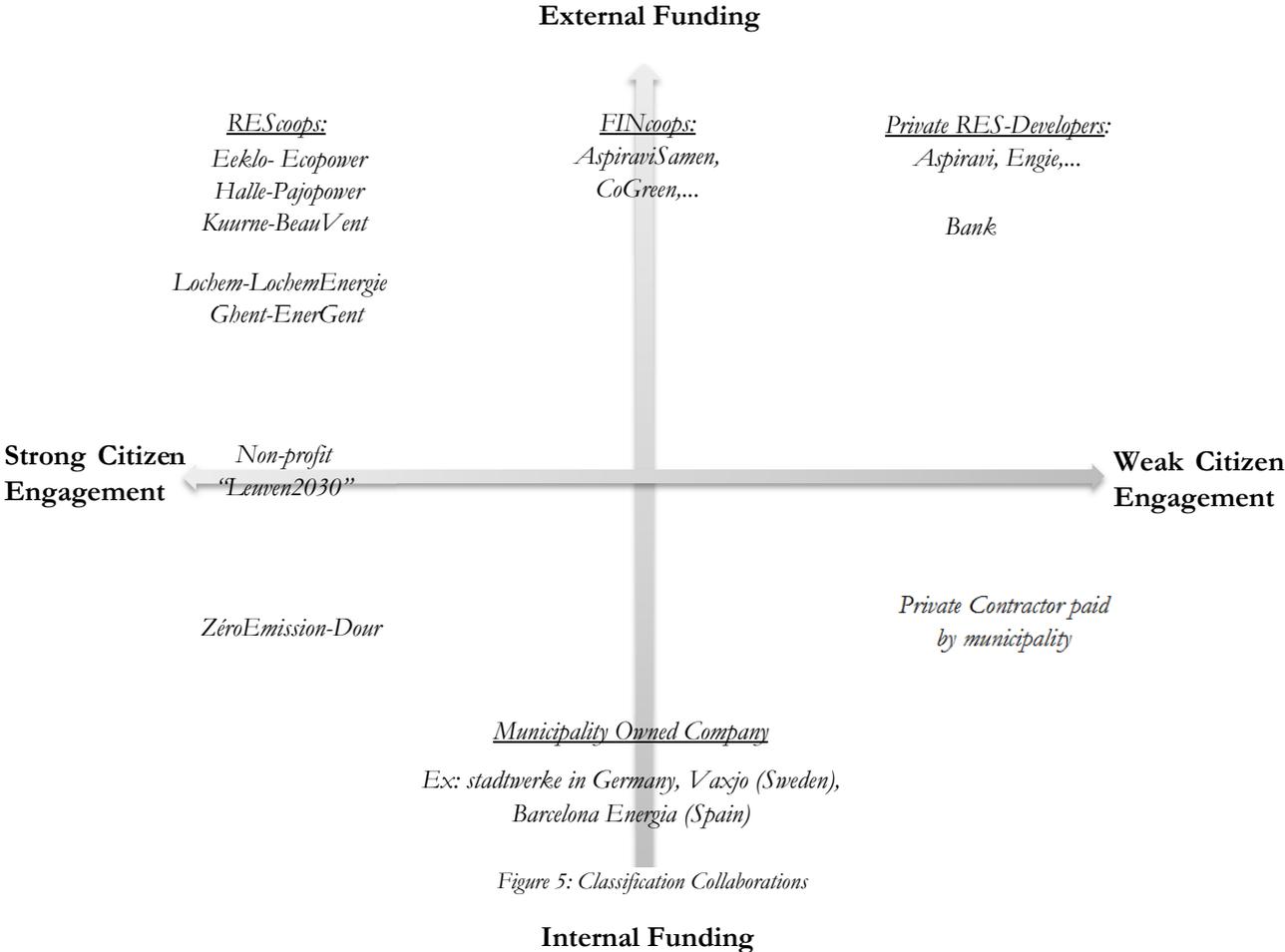


Figure 5: Classification Collaborations

In the upper right quadrant, the private project developers are situated, whose citizen participation is weak. They develop a project but citizens have no opportunity to participate financially nor democratically. Banks also are in this classification. When a municipality needs money for an investment it can borrow money from the bank, but there is no citizen engagement involved.

The benefits of this partner is that there is more security on the financial capacity and expertise available, as they are often big multinationals. However, the drawback is that there is no citizen participation and the opportunity to communicate and engage citizens is lost. The community is hardly involved and does not benefit from the project. Private developers do not engage the local economy and the generated profits easily flow out of the country/region. As the company is profit-driven instead of mission-driven, it might complicate the collaboration when the municipality wants to implement a vision. Even when a municipality is shareholder of this private developer, one might think that the municipality would benefit financially by collaborating with this partner. However, the profits are mostly reinvested and dividends are low. The municipality will mainly have financial benefits when it sells its shares. As an example; Aspiravi

is a project developers company with many municipalities as shareholders, as before the privatization of the energy market, it used to be a public company. In the year of 2010, for every 4 euro's profit, 3 parts were added to its own capital and 1 part was paid out to its shareholders (Aspiravi, 2010). Profits that could be used to finance the energy transition are kept in private hands.

## REScoop

In the upper left quadrant, the REScoop cluster is situated. They provide both the financial resources and citizen engagement. Citizens are engaged through financial and democratic participation through the cooperative. Citizens become co-owner of the project, they can decide together how the profits are allocated. If the cooperative is also a supplier of energy, its members can even decide on the price of electricity. The benefits REScoops offer have already been touched in Chapter 3.2: REScoop - Renewable Energy Cooperatives and is further elaborated in section 4.3: What do REScoops offer.

In some cases external funding is less needed, this is the lower left quadrant. The REScoop develops a project, the municipality finances a percentage and becomes a co-owner of the project. This is the case in Dour, where the municipality owns 50% of a wind project.

The REScoop model promotes direct participation, making the members owners and customers of the project. At the same time members have a democratic participation in the decision making. Just like the democratic functioning of politics today, is the direct participation model the economic form of our political democracy. Everyone has a say and can put themselves as candidate for the board of members. The capital is funded by the citizens and members own the project. The members decide together on the price of energy, they share in the profits, and choose how these profits are allocated.

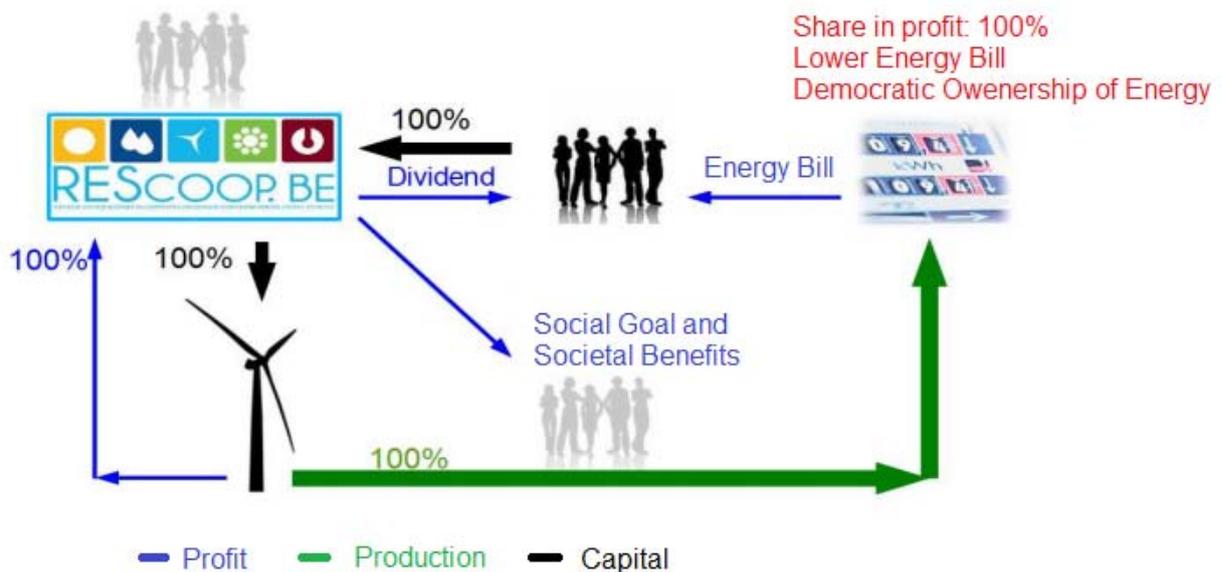


Figure 6: REScoop Model source (Willems, 2016)

The arrows in Figure 6 explain the model; the green arrow represents the produced energy which is delivered to the members. The capital used to finance the installation is represented by the black arrow and is member's capital. The profit, represented by the blue arrow, is partly given to the members through a low energy bill and through dividends, the other part is used for the mission of the cooperative and the society.

## FINcoops

The FINcoops, also called financing cooperatives, are situated in the middle between the REScoops and the commercial developers. They do offer financial participation to citizens, but this participation is limited. There is no democratic participation, nor is their ownership of the citizens. The difference between FINcoops and REScoops might seem minimal at first sight, but there are some significant differences.

FINcoops are often cooperatives founded by the private developers. In order to become more acceptable and in an attempt to fulfill the criteria of citizen participation, big energy players applied the strategy to set up their own energy cooperatives. These cooperatives however do not adhere the 7 ICA-principles and have a different working ethic. They are mainly used as a vehicle by the mother firm for financing projects.

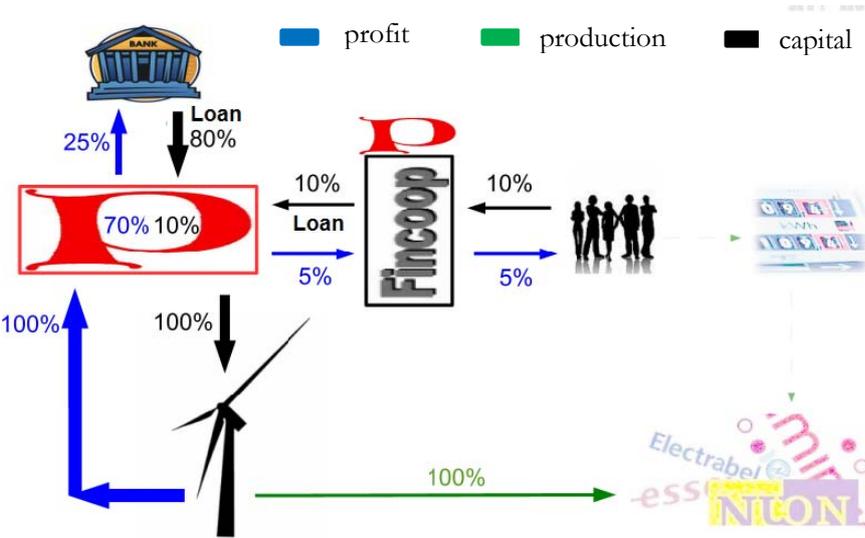


Figure 7: FINcoop Model source (Willems, 2016)

Figure 7 represents the FINcoop model. The red “P” stands for the private developer or “mother firm”. The capital the FINcoop raises through citizens is given as a loan to the energy company (black arrow). Sometimes the members can benefit a discount on their energy bills, but the citizens have no democratic right to negotiate the price of electricity. The profits, represented by the blue arrow, mainly benefits the private company. A fraction goes to the bank, and a very small percentage goes to the members of the FINcoop. The main disadvantage, from society’s point of view, is that the FINcoop and its members cannot keep the mother company accountable. There is no real democratic participation because the majority of the board of directors are members of the energy company who develops the project. Neither is there ownership, as the citizen capital is borrowed to the mother firm (Willems, 2016). There is no autonomy of the FINcoop, they are totally dependent on the mother company and can therefore not pursue their independent mission. They cannot decide on how the profits are allocated, and if the mother firm would be sold to another multinational, there is nothing the FINcoop’s members can do about it. A mission-driven REScoop would invest the money back in other projects related to energy production, energy efficiency or other projects that benefit society and are more difficult to pay itself back. With a FINcoop, this money will benefit a few shareholders of the energy company but will not be reinvested in the local community. The FINcoop model does not engage citizen at the same depth as it only focusses on financial participation, and still operates from the economic paradigm. It does not foster the desired societal change.

To keep the overall vision is crucial, especially facing the challenges of climate change, and the challenge of financing the implementation of the climate action plans. The profits generated by low hanging fruits

should be captured to finance urgent, but less profitable, projects. As can be seen, from society's point of view, a FINcoop participation model does not generate the same value as the REScoop model. A FINcoop generates more profit for the happy few, but a REScoop creates more value for the community.

### **Municipal owned companies**

Sometimes municipalities choose to have their own company. Depending on the political vision, the degree in which citizens are involved varies. In the case of Växjö, local politics are transparent and there is open communication between politicians and citizens, only politicians can become board member of the energy company, but there is indirect democratic participation to some extent. In Germany, the municipal owned company called "Stadtwerke" is also a popular construction.

The benefits of this collaboration is that the municipality has more control over the allocation of profits and can control more the development of the energy transition. The municipality can speed up the implementation and can make sure it has all the expertise needed by hiring the right people. The disadvantages from this approach are that it requires financial resources to do this. This construction is susceptible to political changes and when a different political party gets to power, it can easily become privatized. Another threat is that a top down approach does not guarantee citizen ownership nor participation. Even if consultation sessions and an openness to receive citizen input are present, bottom-up initiatives can become integrated, but the control remains within the hands of politicians. When there is a lack of transparency in decision making and allocation of profits, this might result in citizens distrusting politicians. This approach does not foster the development of the commons as it is still based on the old paradigm where the state takes care of the commons.

The city of Leuven has an interesting approach in implementing their climate action plan, which leans more towards to commons approach. A non-profit organization, founded and driven by local citizens, takes the lead. The city facilitates this non-profit and provides a part of the financial resources. This organization takes the role of coordinating the energy transition and facilitates the collaboration between the different players: the city, energy cooperatives, other private players, public companies, etc. The city does not directly collaborates with cooperatives or other players, but becomes a partner in collaboration.

There is an increasing tendency for municipalities to focus on its core responsibilities, and to outsource other tasks. Municipalities want to have the service, while not having to provide the service themselves. For this, suitable partners need to be available. As municipalities are representing the common good, they need to find partners who share the vision; a partner who can be trusted it will serve the common good.

In Annex 2: Other Types of Collaboration, more information and a brief strength weakness analysis of the different collaboration types can be found. As the focus of this thesis is the collaboration between REScoops and local authorities, the REScoop as a partner and what it has to offer is further explored in the next section.

## **4.3 What do REScoops offer**

This section explores further the collaboration of local authorities with the REScoops. As already mentioned in the section of concepts and definitions, cooperatives are part of the bigger framework of the commons, and have the potential to transform society. Cooperatives offer a **new paradigm** to address the current crises, and challenge the neoliberal market logic and the centralized state logic. Their vision is embodied in the 7 ICA principles, fostering the balance between people, planet and profit (Socialeconomie, 2016). Cooperatives focus on the **People** through the members' democratic control. Every member has one vote, independent from

### **7 ICA principles**

1. Open and voluntary membership
2. Democratic member's control
3. Economical member's participation
4. Autonomy and independence
5. Education, training and spreading information
6. Collaboration between cooperatives
7. Concern for community

their capital input (2<sup>nd</sup> principle). This principle also educates and empowers citizens in active citizenship. The cooperative uses citizen capital (3<sup>rd</sup> principle) to ensure independence from external actors who do not share the mission (4<sup>th</sup> principle). Cooperatives focus on education and training of their members (5<sup>th</sup> principle) to ensure that they are capable of governing the cooperative together (ibid.). The cooperative's long term vision benefits the **Planet**; the local character of a cooperative creates local anchoring, it creates a connection with the local environment, and takes care of its impact on it (7<sup>th</sup> principle). Sustainability is often a core element of their strategy. This is made possible exactly because there is the autonomy to pursue their mission, instead of having to be held accountable by the investors on financial arguments alone (2<sup>nd</sup> and 4<sup>th</sup> principle). Additionally, cooperatives have the possibility to invest in the long term. The main aim is not to make profit, but to provide a quality service for its members. This horizon makes it possible to think about long term impacts and future generations (7<sup>th</sup> principle). Multi-stakeholder cooperatives have the additional advantage that they bridge different interests. It is not evident to internalize the tensions between producer and consumer, created by the market. But this approach enables collaboration and brotherhood in overcoming the tension and solving this challenge together (ibid.). **Profit** is also important for the cooperative. Profit is used as a tool to achieve their mission. Members finance the cooperative (3<sup>rd</sup> principle) and with this money profit is generated for the wider community (7<sup>th</sup> principle). Not profit-maximization, but goal-maximization is the driver. The return on investment is limited so as to ensure that the profits can be invested in achieving the mission (3<sup>rd</sup> and 4<sup>th</sup> principle). Cooperatives contribute towards a stable economy and are less susceptible to economic crises. Local anchoring of the cooperatives help to keep the capital and generated value within the community (4<sup>th</sup> and 7<sup>th</sup> principle). Cooperatives are a role model for a more just and social economy, and have a positive impact on the market in which they operate (7<sup>th</sup> principle). Finally, cooperatives have a revenue model which makes them self-sufficient. Therefore they do not depend on government money (Socialeconomie, 2016).

Besides the general benefits of cooperatives, REScoops also offer solutions to the specific challenges local authorities are facing. The overall goal of local authorities engaged in climate change is to reduce the CO<sub>2</sub> emissions on their territory. The 4 sectors which contribute to the CO<sub>2</sub> emissions in the municipality are public buildings, private buildings, mobility and the non-ETS industry and services. The municipality will have to address all of them to achieve the outcomes. Public buildings often only represent a small fraction of the total CO<sub>2</sub> emissions, but nonetheless it is important for the municipality to take up its exemplary role. Cooperatives mainly address the public and residential sector, as their expertise is to engage the local stakeholders. However projects in partnership with the industry also occur. Recently cooperatives also have started to enter the sector of sustainable mobility, offering a cooperative electric car-sharing service on 100% renewable energy. These cooperatives are part of the energy cooperative or work in close collaboration with them like this is the case in Lochem, Ghent (Partago) and Barcelona (SOM Mobilitat).

In the investigated case studies, a spectrum of professionalization can be identified; on the one hand bigger professionalized cooperatives, like Ecopower and Beauvent. On the other side there are the starting cooperatives like Energent and Pajopower and LochemEnergie. The professionalized cooperatives are older and entered the energy market early in the energy transition.

The starting cooperatives, often run smaller projects which are of great relevance for the community, but are not possible to develop a real business case around. It is the sector in the energy field which is often left untouched by regular market players. These project can be made possible because the volunteers don't get paid. One of the strong advantages of working with volunteers is the **strong connection** with the **local community**, a connection which may get lost when the cooperative grows. The dynamic of volunteers is powerful and can penetrate more deeply into the societal tissue and **engage citizens** in a way a government or business cannot do. Pajopower works with 13 municipalities but its strength lies in their local teams of volunteers in each municipality. These volunteers look out for new opportunities, they keep contact with local politicians, they are more in touch with the needs of the citizens, and send a message of trust.

These cooperatives are strong in communicating a message to the public. They motivate and enable citizens to take action through **group purchases** of solar panels, LED lights or insulation materials, facilitate and accompany the **building renovation** process, etc. Often, like in the case of Energent and Pajopower, there is also a special focus on more difficult target groups, addressing the issue of energy poverty. Also **schools**, like in the case of Pajopower, are engaged by the cooperative. Not only do they implement energy saving measures and optimization. They also use this opportunity to **educate students**, **raise awareness** and engage the parents. By becoming member of the cooperative, they have the opportunity to invest in their children's school and improve it. Training citizens to become **energy coaches**, so that they in turn can sensitize other citizens, is another way how energy cooperatives contribute to the energy transition from bottom up.

Also cooperatives, as drivers of societal change, are eager to **innovate** and try new models and technology. LochemEnergie was the driver behind a smart grid project. Energent, in the project "Buurzame stroom" is also pushing the limits to integrate a smart neighborhood. Their capacity might be limited, but there is plenty of creativity and enthusiasm.

All these small actions are not going to change the world. If Europe wants to become carbon neutral by 2050, bigger scale projects need to be implemented soon. However these small projects help to foster awareness about the issues, and create **public support** when these big projects need to be implemented. People are aware of the fact that we need to make changes, but as soon as changes are proposed, local authorities meet a lot of resistance. These citizen initiatives, organized in cooperatives, help to engage the citizens to be aware of the challenge and the necessary actions that imply this. This approach also helps citizens to reflect about their own energy consumption. From bottom up, solutions and possible implementations can be brought up to make a supported transition. All the actions and campaigns that these cooperatives manage as they develop small projects, are important to change the perception of renewable energy. These are actions which the city does not have the capacity to organize themselves, but they support the city in their mission. The campaign of "adopting a street lamp" (cfr. Pajopower) is a powerful example of this. Whereas otherwise the money would be borrowed from the bank, now the whole city is mobilized into action.

The more established cooperatives have professionalized and have recognizable capacity. They develop bigger projects as they have a team of engineers dedicating their time to this. The scale of the projects need to be sufficient in order to maintain the cooperative. In the collaboration process, when bigger solar, wind or biomass projects are realized in collaboration with municipalities, additional **energy service** is offered to differentiate themselves from other market players. These services are similar to the ones the small cooperatives offer: the service of energy efficiency in municipal buildings, energy coaching for the citizens, group purchase, etc. Ecopower offers the service of the implementation of energy efficiency, both as renovation facilitation for households (Ecotraject) as well as in municipal buildings. Beauvent offered group purchase and installation of PV panels to the citizens, as an additional service to develop the solar installation on the municipal roof. These additional benefits on their own are weak business cases but combined with the realization of a bigger solar or wind project, it makes a sound investment.

Members involved in cooperatives tend to become more aware of their energy consumption. Quantitative research pointed out that the average energy consumption is significantly less (Bauwens, et al., 2017). In this way the cooperative contributes to the municipality's objectives to **reduce energy consumption** by 20%. The cooperative engages itself to enhance the local community and directly takes up its **social responsibility**, on request of its members. The feedback loop between actors is very short, and border between consumer and supplier slightly dissolves. This ensures that the value generated by the cooperative flows back to the community. It can be small projects, like the installation of charging stations for electric vehicles (cfr. Ecopower) to the acquisition of an open community space (cfr. BeauVent). As the REScoops are part of the social economy, they have a focus on including all layers of society. If people cannot pay the membership fee to buy a share, they have the opportunity to buy it gradually over a period

of two years. The cooperative collaborates with local contractors. This strengthens the local economy and enhances a collaborative economy.

As these bigger cooperatives need big projects and scale to sustain their business, they need to have a bigger area where they can develop projects. Ecopower develops projects everywhere in Belgium. Beauvent develops projects mainly in West-Flanders, but also a few in East-Flanders. This wider geographical action range makes it more difficult to have the same connection with the local community as compared to small local cooperatives that run on volunteers. The cooperative SOM Energia, in Spain, resolved this by having local voluntary work groups in many of the regions.

To conclude, there is a clear match between the needs of the municipalities and what the cooperatives can offer. Municipalities need a way to finance the implementation, they need additional human capacity, and they need the public support and commitment of citizens to realize their action plans.

Cooperatives, both established and starting, offer many ways to meet these needs. They implement awareness campaigns, group purchases, help reducing private energy consumption, facilitate building renovation etc. All these are important actions which speed up the transition process, but require a lot of human capacity. Cooperatives also gather the needed capital through citizens, willing to invest their savings. The cooperative has expertise in engaging citizens, as it is a citizen movement at its core.

When the need for collaboration is clear, the question rises how to collaborate. This leads us to the second research question: “What are the challenges cooperatives are facing? And what do municipalities do to facilitate cooperatives?”

## 5 How Local Authorities can collaborate with REScoops

In order to know how local authorities can facilitate REScoops, it is important to know what the challenges of REScoops are.

### 5.1 The challenges cooperatives face

The main challenge for cooperatives is the **access to projects**, and linked to this, the access to land. The energy market is a difficult market to penetrate. The early cooperatives, like Ecopower and Beauvent, entered the renewable energy market when it was in its startup and growing phase. This made it possible to gain expertise and develop some wind projects, necessary for the professionalization of the cooperative. Now, even though the market of renewable energy is still growing, the market is dominated by established players. In wind energy a big obstacle is the “wind rush”. One of the reasons why the big developers have a high bargaining power when negotiating with REScoops and municipalities is because they have contracts with the land owners. When wind energy was in the rise, private contractors rushed to the potential exploitation sites and made contracts with the land owners. Since locations for wind development in Flanders are scarce, this resulted that all the possible land for new projects is already under contract. However energy cooperatives don’t have these contracts (Bauwens, et al., 2016). One reason is because this speculative behavior is against their vision but also because it is simply not possible for small players to go out to the field to contract a massive amount of landowners. Big developers hold on to their “rights” stated in the contract that they have the right to exploit the energy on the land; on the other hand, they don’t get the permission of the local government if there is no participation of the citizens. The cooperatives have the sympathy of the local government, but not the contracts. This results in a deadlock situation. In the current framework, these contracts are needed to develop projects but risk to undermine the public support for renewable energy and the municipality’s common good.

The current **policy and legal framework** is dominated by a neoliberal world view, privatization and enclosure of the common good. These structures complicate the implementation of a new world view, keeping the common good in the hands of the citizens. The cooperatives need a partner who can create and facilitate a framework where the common good is protected. Therefore local governments could be an important potential partner.

Another challenge cooperatives are facing is the **lack of familiarity of the cooperative business model** amongst citizens and municipalities. The concept of cooperatives has not yet penetrated to the general public. People are familiar with profit-oriented business and NGO’s but they are often not aware of the hybrid form cooperatives offer. For the expansion of energy cooperatives, this model and its benefits needs to be spread (Huybrecht, et al., 2014). The cooperative model is already old and has proven its success and relevance. Globally 800 million people are member of a cooperative, more people invest in cooperatives than in stock market listed companies, and the employment in cooperatives is bigger than in stock market listed companies (ICA, 2000). However, in Belgium, high school students in economics spend less than 1 hour on cooperative entrepreneurship studying for 4 or 5 years, and masters in economics are often not taught at all about the cooperative economy. In some countries, like Denmark, Germany and Italy, the cooperative model is more widely spread. This lack of familiarity creates hesitance and sometimes even suspicion. The lack of awareness about the approach and the benefits of this model, complicates the acquisition of members and projects. When municipalities are aware of the cooperative approach, it takes more political courage, as it might take an extra effort to present an unconventional idea.

Additionally, starting cooperatives have an **urgent need to professionalize**. To increase their relevance and impact in the energy sector, they need to outgrow the stage in which they are dependent on volunteers. Volunteers are of great value, and even when professionalized, they are important to remain the local anchoring, but there needs to be a backbone of paid staff. The past has shown that the

realization of a first wind project is the start for the professionalization of the cooperative as it provides a substantial amount of revenues.

Finally, energy cooperatives need a **stable policy environment**, reducing the risks and ensuring stable and predictable revenues, in order to thrive.

## 5.2 How local authorities can facilitate REScoops

Now the challenges of the REScoops are identified, there are several actions local authorities can take to facilitate REScoops when collaborating.

In the case studies, the main way how municipalities have facilitated cooperatives is through **creating a level playing field** which allows to recognize the added value of the cooperative approach. Practically this was often done through adding specific criteria when setting up the Call for Tender procedure (CfT). Convinced about the need for citizen participation in the journey towards sustainability, additional criteria complemented the conventional criteria of price. When price is the only criteria, automatically the big corporations and multinationals are favored. The price might be cheaper, but the profits generated will flow outside the country, the local contractors will not be employed, the local community is not be involved, and additional efforts will be needed to build up public support and participation. The negative side effects do not outweigh the benefit of simply having a cheaper price. By adding specific criteria, the local authority does not only control the price, but also other elements in how the project should be realized. In the three cases where this CfT procedure was implemented, there was a specific focus on how citizen would be informed and engaged in the project; a specific focus on direct financial citizen participation and additional benefits that would be offered to the community and citizens. These criteria are in line with the vision of the municipality, and are a powerful tool for municipalities to implement their vision. Additionally, the selection criteria also favor local authorities as it enables them to implement different outcomes with the same effort, unburdening the administration of local authorities.

Another way how local authorities can support the cooperative movement and change the policy framework is by **referring structural legal and policy problems at a higher government level**. This allows municipalities to expand their vision beyond projects located on public property. The CfT approach is only suitable on land owned by the municipality. On private property, project developers are not required to engage with the local community. When there is no connection between the project and the local community, and the profits generated in the region, are not benefiting the local community, it risks to undermine the public support for renewable energy projects. Therefore, municipalities can address this issue at higher authorities to implement more structural changes in the legal framework. In the Walloon region, local authorities and the cooperatives have managed to push forward a regional recommendation that the wind projects need to have 50% of community participation (25% by the citizens and 25% by the municipality) (Cadre de référence pour l'implantation des éoliennes en région Wallonne, 2013). In Flanders, Eeklo presented the problem to the province's authority, stating that the current legal framework undermined the vision of the city and the public support. They stated that they supported the vision of citizen participation declared in the Walloon region, and asked if the province could not discuss on this issue and provide a new framework. This resulted in a decision at provincial level that at least 20% of each wind project should be available for direct citizen participation. On top of this €5000 per year per turbine should go to a community benefit fund to create a connection between the local community and the projects. Although these recommendations don't have any legal power, they are democratically supported and do have a societal and ethical power. It is not recommended for a project developer to go against the decision of the municipalities. Non-cooperation would not lead to local sustainable development but to loss of public image. This is a very sensitive topic for the project developers since it undermines their image of being a social responsible business. On top of that, even though municipalities cannot fully block a project since the permits are granted on regional level, they have enough possibility to delay a process. Project developers know that it is bad practice to try to develop something against the vision of a municipality. For municipalities to stand one's ground and not give in on

the demands of the big firms, a strong political will is needed. With the pressure of reaching targets by 2030, the long term vision of keeping the benefits into the hands of the citizens, might get blurred. Project developers know that delaying projects does not help reaching the targets, and use this pressure for the government to compromise their vision. However, once a permission is granted, the right to exploit that specific site is permanent. And thus, if a project is developed without citizen participation, it will be very difficult to reverse that process. The profit that could serve the future generations will forever get lost. This is a reason why cooperatives persist in the urgency of community energy projects, before the private corporations have privatized all potential exploitation sites.

From a legal point of view, it would be possible to make implement the “wind right”. This means that in order to be able to exploit wind energy at a certain site, the developer needs to own the “wind right”. This right is only granted when a specific number of socio-economic aspects are respected (Willems, 2016). This would also lead to more public acceptance of wind energy in general, and thus a faster development of the projects

Another way how to shape a more favorable framework for cooperatives is **consulting cooperatives to get advice and reflection** when new policies are to be implemented. From their perspective, they can add to the overall vision to ensure the common good. In the city of Oostende, the cooperative BeauVent is collaborating to install a district heating network. The city planners asked the cooperative for advice on which building regulation and guidelines they should implement to facilitate the connection to this district heating. Also the Flemish minister of Energy regularly meets with energy cooperatives to get their perspective on new energy policy proposals.

Eeklo is also an example of **advocating the cooperative model** to other municipalities. As they had a very successful first experience with Ecopower, they recommended this approach to other municipalities. Also to citizens, the cooperative model can be put in the spotlight, through promotion or inauguration at big events (cfr. Lochem). This has helped to spread the visibility and reputation of the cooperative model.

Municipalities facilitate cooperatives through **networking** and communication. As a city knows what is going on in its region, it can facilitate potential partners to find each other. This can be either through an online platform, where local businesses and citizens can communicate and find each other, or in person. For communication and awareness raising, they put their **communication channels** (website, newsletters, local newspaper, mailing list, etc.) at the disposition of the cooperative to inform the citizens about a new project. Besides municipalities assist through **offering meeting places or venues** to reach out to the citizens and communicate. In the case of Pajopower, a shop in the main shopping street was made available to present the pop-up sensitization campaign “adopt your streetlamp”.

Starting cooperatives received additional support, as a way to **facilitate** their **professionalization**. The case of Ghent is an example where the city provides financial support for all citizen initiatives related to sustainability. It is a way to foster bottom up approaches and allows it to increase its impact. This financial support helps to pay part of the employee’s wage, facilitating the professionalization. Additionally the municipality can support these initiatives through assisting and facilitating the meetings, taking a networking role and connecting possible partners and projects as it is aware of what is moving around in the region. It can also provide some of its internal resources and expertise: for instance an energy scan (cfr. Ghent) or juridical and technical advice (cfr. Halle). Municipalities can outsource some small projects related to energy to the cooperative, and pay for this service as an additional revenue stream for the cooperative while it is professionalizing. Municipalities can cover some of the start-up costs, like construction of a website, or cover some of the transportation expenses of the volunteers. Allocating subsidies from the regional or national level in a creative way, can also support cooperatives (cfr. Lochem). Sometimes is it complicated for a city to openly support a cooperative, as it is a business. Collaborating and supporting a non-profit is politically more correct.

To conclude, if local authorities are convinced of the cooperative model, there are many things they can do to facilitate REScoops, while receiving multiple benefits. Cooperatives have the challenges of lacking

access to land and projects, the lacking familiarity of the cooperative model in society, and smaller cooperatives also face a challenge in professionalizing. Municipalities facilitate cooperatives in focusing on citizen participation in their CfT to give cooperatives a competitive advantage. They advocate the cooperative models amongst citizens and other municipalities and take on a networking role. Municipalities also actively support starting cooperatives through subsidies, providing knowledge, advice, and reducing start-up costs.

So far, Chapter 4 addressed research question 1 and answered why municipalities should collaborate with REScoops. Chapter 5, has addressed research question 2 and showed how local authorities can collaborate. Now different examples of different collaboration are explored to make it more tangible.

### 5.3 Types of collaboration: Examples

To make these collaborations more tangible and understandable, the following cases explain how previous successful collaboration took form. The Logic Model (Figure 8) is used to characterize the collaboration. This model is usually used to evaluate programs, however it can also be used to get a better understanding of the collaboration.

The local authorities collaborate to achieve certain outcomes, they decide to use some of their internal resources as an input. With these inputs they can organize activities, identified in the previous section, which facilitate cooperatives. These activities lead indirectly, through the cooperative, to some tangible outputs, which in their turn contribute to the overall outcome and impacts. Depending on the inputs and on which activities municipalities do, the type of collaboration differs. The following figure gives an overview of the different inputs, activities, outputs, outcomes and impacts which are associated with a

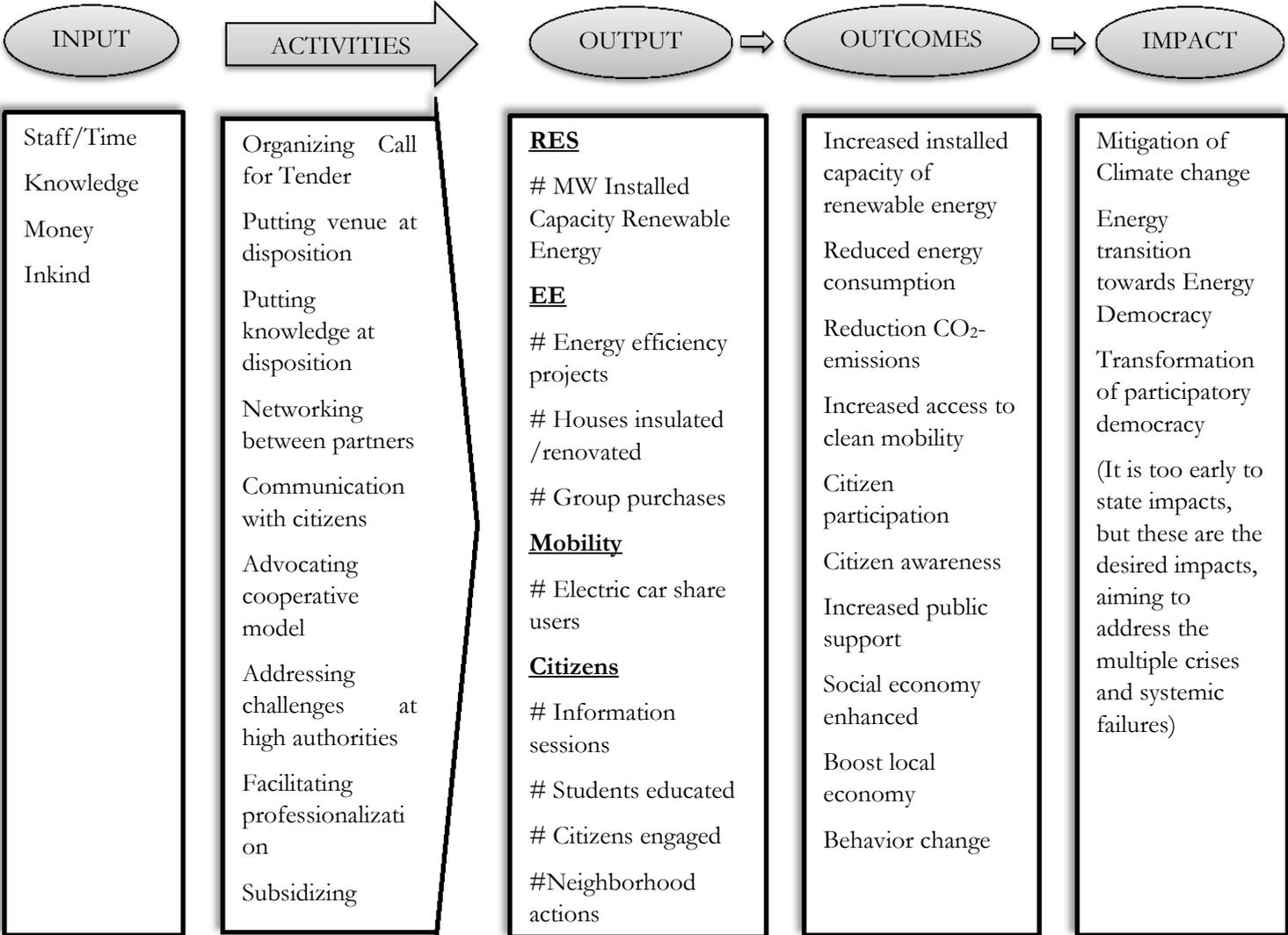


Figure 8: Logic model; inputs, activities, outputs, outcomes, impact

possible collaboration.

The collaboration is often based on a desired output, for which specific actions are taken, besides citizen engagement; the other categories are investment in Renewable Energy Resources (RES), Energy Efficiency (EE), and Mobility.

Five case studies have been analyzed. In all these cases the collaboration between local authorities and the cooperative are studied. Four of these cases (Ecopower-Eeklo, BeauVent-Kuurne, Pajopower-Halle EnerGent-Ghent) are in Belgium, and one (LochemEnergie-Lochem) is situated in the Netherlands. Figure 9: Classification REScoop gives an overview of the different case studies and which outputs in this collaboration were achieved.

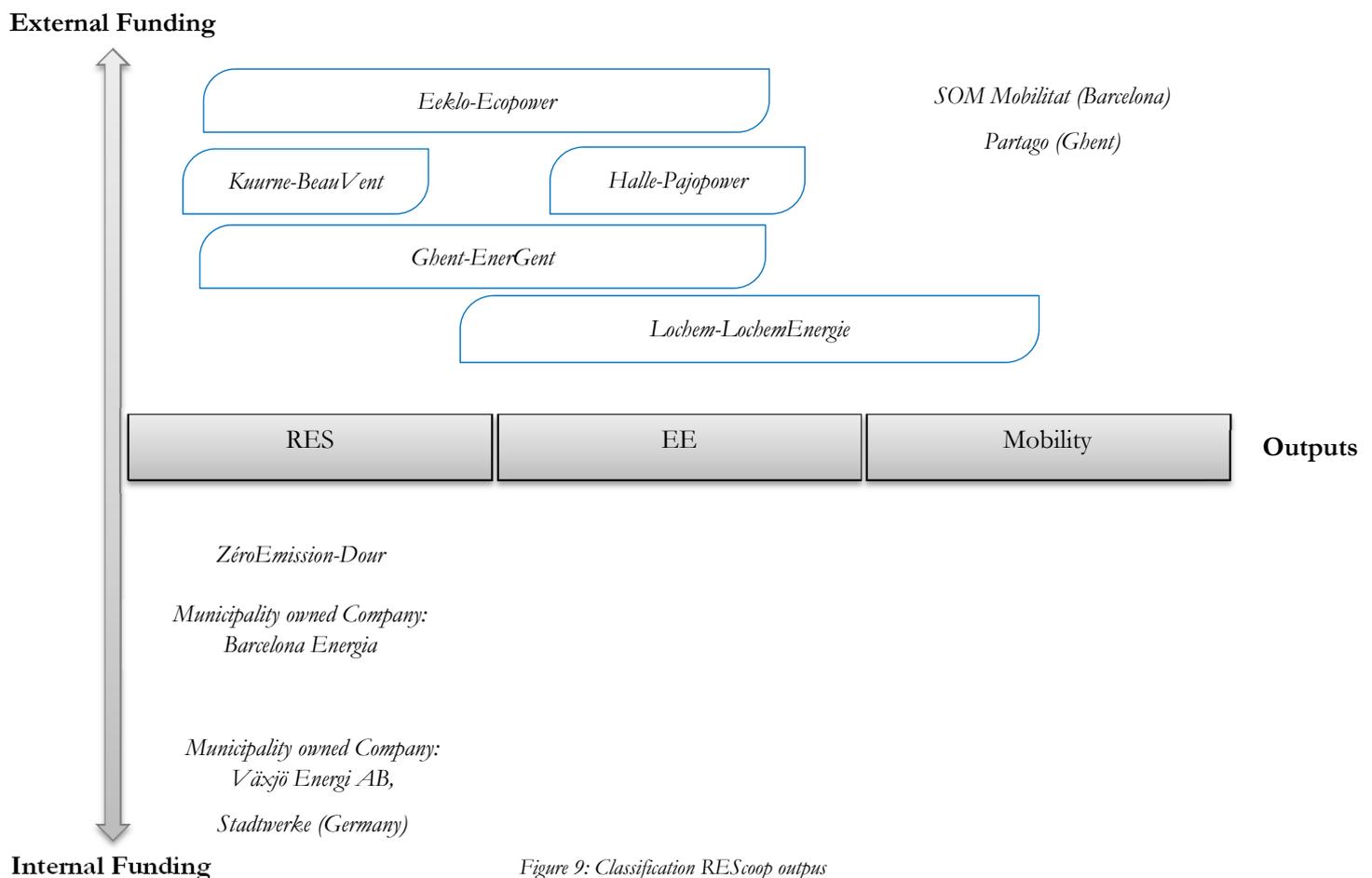


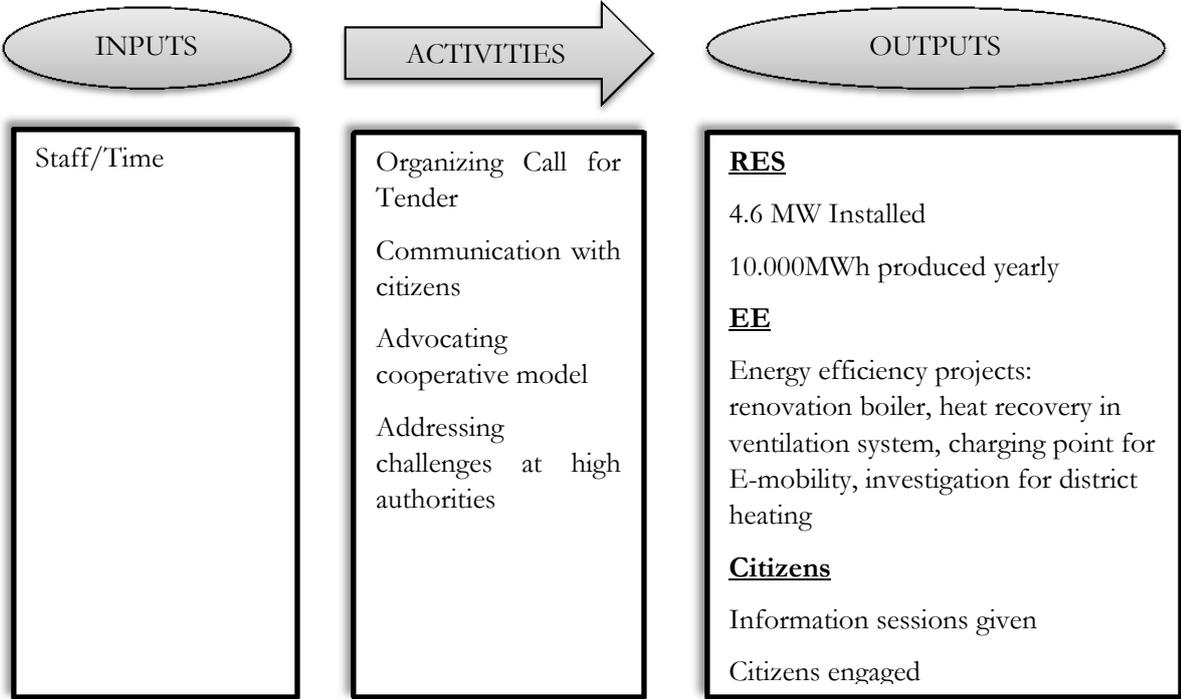
Figure 9: Classification REScoop output

The following section highlights some of the main points of this collaboration. The different inputs, activities and outputs are analyzed. Most of the collaborations are ongoing and some of the outputs are in progress. More information on the collaboration and its outputs can be found in Annex 3: Extended Case Studies.

### 5.3.1 Municipality wants to develop a RES projects

When a municipality is owner of a piece of land which would be suitable to develop a RES project, it looks for a partner to develop this project with. Often this project follows the procedure of a Call for Tender (CfT), where all companies can make an offer to the request of the municipality. Usually the criteria for this procedure is based on price. However municipalities can choose to add additional criteria

to the price. This helps municipalities and cities to implement a more holistic view, not only focusing on the result, but also give constraints on ‘the how’ of the project. The following two cases show how municipalities approached this, and how they managed to obtain citizen engagement.



**Case Eeklo- Ecopower:**

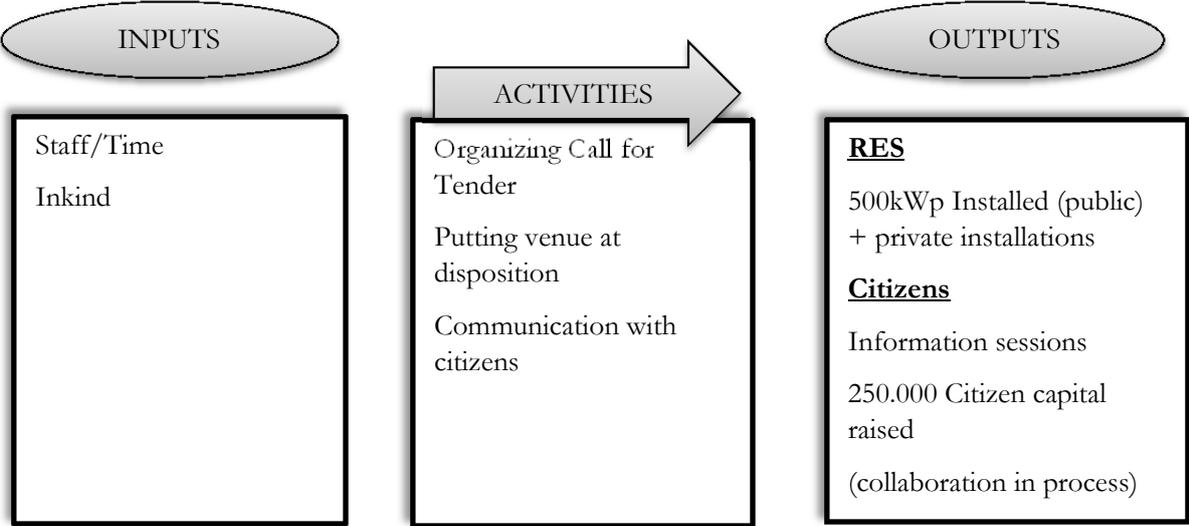
The initial input of the city was their time and staff, which was used to set up a Call for Tender. The call was for the implementation and financing of two wind turbines on the public property. The city has added specific criteria which made it possible to reflect and highlight their vision. Their vision of citizen participation in the energy transition process was translated into the following criteria:

- Yearly fee for the exploitation per wind turbine: €25.000
- Information and communication campaign, set up by the contracted, during and after construction (20 Points).
- Possibility for citizens for direct financial participation in the project (25 Points).
- Additional benefits offered by the contracted (like the commitment to realize or finance other project concerning Renewable Energy or Energy Efficiency) (35 Points)
- 2 Reference projects where the information and communication campaign, and direct financial participation were elaborated and implemented (20 Points)

Ecopower answered this call and proposed a 100% citizen participation, prioritizing citizens of Eeklo. Ecopower set up a plan to engage the citizens through information campaigns, website, private consultation sessions, and information evenings. The financial participation offered by Ecopower is also a great tool to reach out to people, make them have a share in the profits, and get their engagement. The additional benefits Ecopower proposed, was to have a full time engineer at their disposition, paid by Ecopower. This engineer is to implement energy efficiency measures in the city, to increase the city’s capacity to further develop projects like a district heating network, energy efficiency measures in public buildings, contact point for information on renewable energy, cooperative entrepreneurship and visits, etc. A dynamic working list is yearly revised to keep collaborating together towards the common goal. Additionally, smaller investments were financed by Ecopower with the revenues from the turbines, and

were paid back to Ecopower through the savings on the energy bill. Examples of these investments are the renovation of the boilers, a heat recovery in the ventilation system and a solar installation with charging point for electric mobility. This collaboration did not only enable the installation of a RES project, but also managed to include the implementation of EE projects at the side. As the production of energy has a sufficient margin, the collaboration allowed some of its profits to be relocated in the implementation of energy efficiency.

Later, as Eeklo had a successful experience with Ecopower, it used again its staff and time to support the REScoop. This was done by addressing challenges to the higher authorities. Because of the limitation of the CfT to the land owned by the municipality, Eeklo cannot implement its vision in her whole region. Project developers, developing on private property did not share the same vision of citizen participation and were undermining the vision of the local community and the public support for wind energy. Convinced by the importance of the cooperative approach, Eeklo took a Municipal council decision which reserved up to 50% of the wind projects for the community and addressed the issue to the authorities of the district. The approach of project developers would increase the opposition of renewable energy in the region and does not share the benefits with the local community. The district authority took a democratic decision upon the societal relevance of citizen participation in this processes and recommended a minimum of 20% *direct* citizen participation in all wind projects. This recommendation is not legally binding, however, it has moral authority because companies cannot afford to lose public image and opposition from local government and citizens in relation to Corporate Social Responsibility. A strong political will and courage was needed to address these issues. To convince higher authorities the benefits from previous projects had to be clear.



**Case: Kuurne-Beauvent**

The municipality of Kuurne was looking for a partner to implement solar panels on the public building. At the same time, it would like to do an effort to engage the local citizens in putting solar panels on their own rooftops. The municipality decided to write out a Call for Tender (CfT). The call was for a third party to finance, install and maintain the solar PV installation on the rooftops of the municipality’s buildings. The exploitation rights are attributed for 20 years and should have a positive financial outcome for the municipality. Additionally, specific requirements were formulated to highlight the citizen participation:

The criteria for this collaboration were:

- Price (50 Points)
- Amount of total installed capacity (20 Points)
- Guarantee of Production (kWh/kWp) (20 Points)

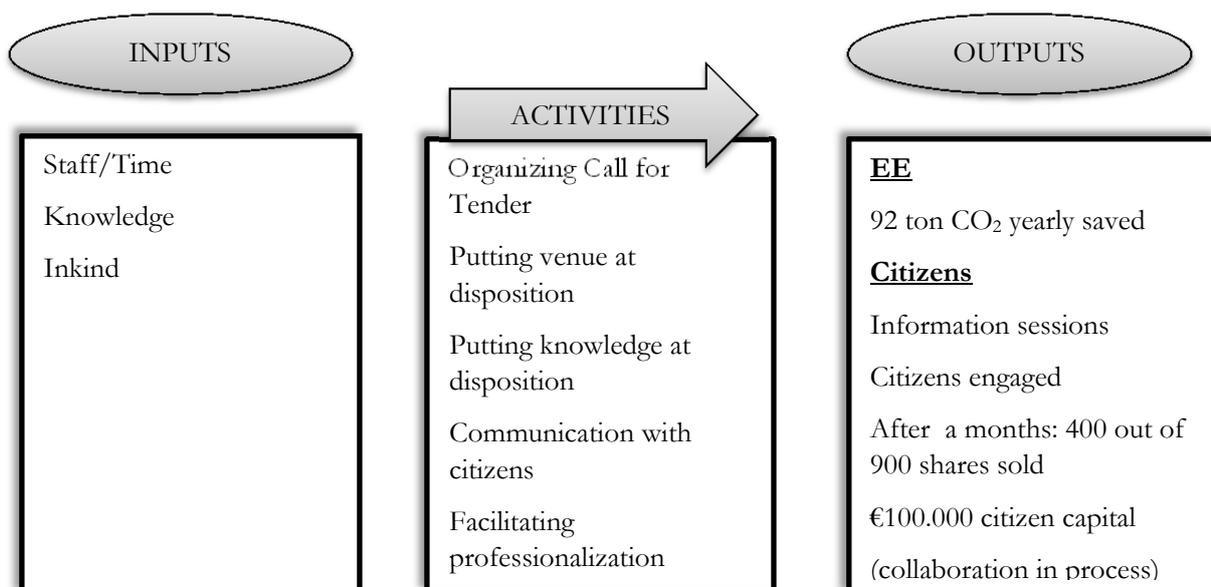
- Methodology for financial citizen participation (20 Points)
  - Scale of action to integrate citizens: how many stakeholders are they trying to reach
  - Depth of action: how intense is the intended action
  - (Financial) return for stakeholders
- Methodology for Third Party Financing of PV installations on roofs not owned by the municipality; reaching out to its citizens and businesses who also would like to invest in solar on their roof (30 Points):
  - Scale of action to integrate citizens: how many stakeholders are they trying to reach
  - Depth of action: how intense is the intended action
  - Financial benefit for stakeholder

This resulted in the following collaboration. Beauvent offered to install in total around 500kWp. The savings the municipality achieves, is estimated around € 5.000-10.000 per year, and this for a period of 20 years. Citizens are all invited through mail, to join an information evening on the financial participation for the public PV installation, and how they can invest in PV on their own roof. Also facebook and the communication channels of Kuurne are used to reach out to citizens. The overall aim is to raise €250.000 of citizen capital.

The municipality of Kuurne supported the cooperative in the campaign to reach out to the citizens through their communication channels; local newspaper, newsletter, email and their website. Also the municipality provides a room where the information session can be held. Kuurne provides a framework where the cooperative can act and reach out to the citizens.

### 5.3.2 Municipality wants to implement EE services

When local authorities lack the internal capacity and skills to implement their sustainable action plan, or simply do not want to provide these services themselves as it is not part of their core responsibility, they can call upon partners to facilitate this implementation. It can be through the financing of some implementations, as well as through the facilitation of renovation of houses, or the installation of solar PV on private houses etc.



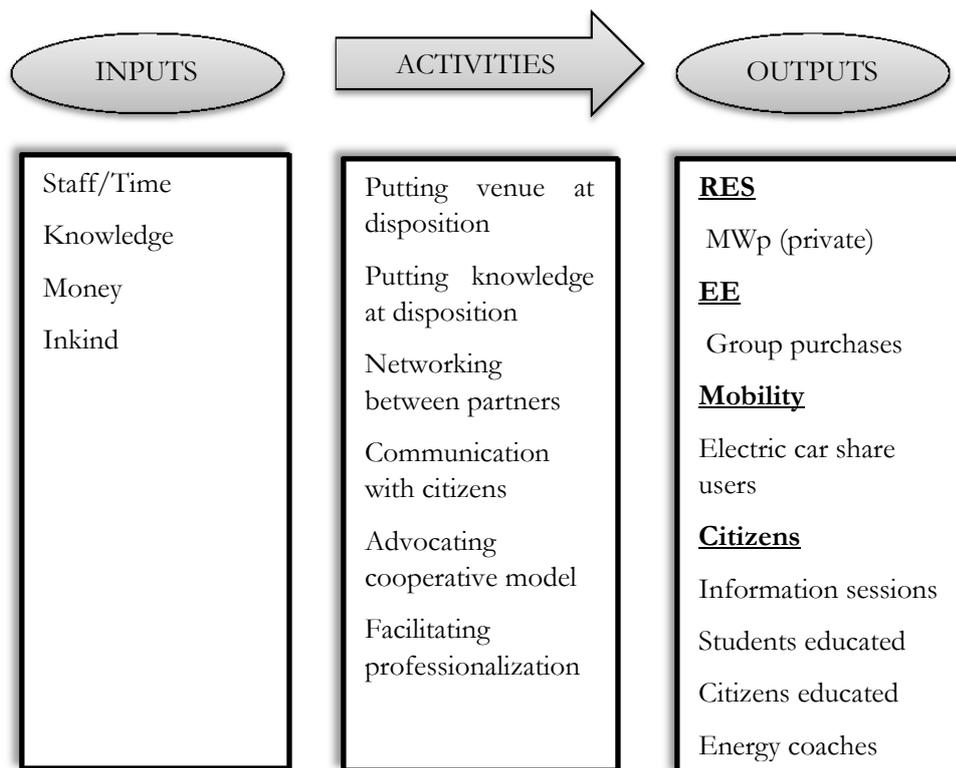
**Case: Halle-Pajopower**

In the case of Halle, the city wanted to implement an energy efficiency measure by changing the old lightbulbs of the public street lights. As it didn't have previewed this expenses in their municipal budget, they had to look for funding elsewhere. If external funding was needed, this could become an opportunity for the city to engage its citizens. A Call for Tender was published, with the request to finance the implementation of energy efficiency in street lights. This tender added specific criteria to give the opportunity to citizens to participate in this investment. Active efforts to mobilize and involve the citizens were core parts of the tender criteria.

In this collaboration, Pajopower committed themselves to take care of financing the investment through the citizens. The agreement was that the investment would be paid back over 7 years, through the savings on the energy bill. These savings were estimated around €45.000 per year. 10% of these savings remain in the hands of the city, the other 90% is used to pay back the cooperative's investment. After 7 years, all savings benefit the municipality. In order to reach out to the citizens, the city and the cooperative collaborated in setting up a campaign "adopt your streetlight". The cooperative's volunteers reached out to the citizens, talked to people in the street, spread fliers, and provided a way for citizens to participate financially by becoming member of the cooperative. Halle facilitated this by putting their communication channels at their disposition. They provided an empty shop in the main shopping street, which the cooperative could use to expose a prototype of the new lamp, and to address citizens passing by. The city also provided a venue for the cooperative's first general assembly.

Additionally the cooperative has received support by having access to technical and juridical assistance. If needed, Pajopower can use the expertise available within the city administration. As Pajopower, running on volunteers, still lacks the know-how, the city considers to pay for the feasibility study and investigate the juridical constraints.

Currently this collaboration scheme is being analyzed by the Flemish minister of Energy, to see if this scheme can be scaled up for other municipalities in Flanders. Some modifications on this collaboration are investigated right now, one of these modifications would be to have a leasing contract. This way the cooperative becomes the provider of the service, instead of merely being a financing vehicle. Lighting as a service is also in line with the tendency of municipalities to focus on their core tasks and have partners provide the other services.

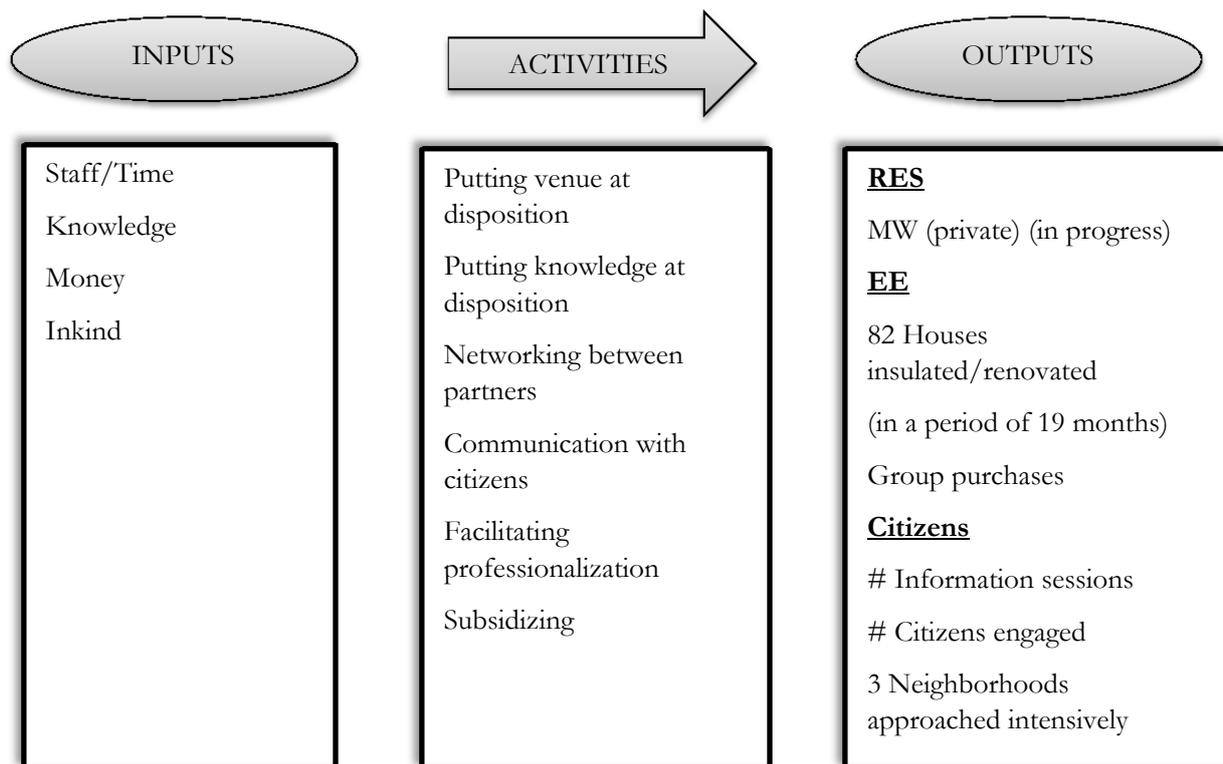


### Case: Lochem-LochemEnergie

The collaboration between Lochem and the cooperative has been there since the start. The municipality was eager to have a local energy cooperative to facilitate the energy transition and tried to find some enthusiast citizens. This has led to the start of the cooperative. Lochem supported the start of the cooperative and facilitated this process in different ways, it helped with the development of their website, offered space where the cooperative could have their meetings. The local authorities also facilitated the promotion of the energy cooperative. The official inauguration of the cooperative was during a big sustainability event organized by the local authorities, making the cooperative known immediately to a wide public. The local authority also facilitated the ‘energy coach program’ and refunds the transportation expenses of these coaches. This program consists of educating citizens to become energy coaches, who can give advice on how to save energy at home without major investments. These coaches then educate other citizens. On top of this, the municipality asked the energy cooperative to investigate the feasibility of potential projects and develop innovative projects. The municipality outsources these services and pays for these. However, these services are small, so as to avoid the regulation of public procurement. The municipality of Lochem, in collaboration with the province, helps the cooperative increasing its capacity by providing additional paid staff. Additionally, citizens applying for subsidies through the cooperative, are eligible to a subsidy of €750 instead of €500. This is made possible through a neighborhood subsidy provided by the province; when people collectively renovate their house, a bonus subsidy is received. Members of the cooperative do not necessarily live next to each other, but the municipality agreed that they can grant this additional fee to members of the cooperative as it was in line with the intention of the province to speed up the renovation of buildings.

The cooperative contributes in this collaboration by facilitating the energy transition. Its actions related to the group purchase of clean energy, solar panel group purchase, their training and education for citizens etc. make the cooperative a welcome partner in their effort to become climate neutral. LochemEnergie recently set up a project for electric car sharing, promoting clean mobility within the region. Also its list of engaged members are an additional resource and channel for the city to communicate with its citizens.

## Case: Ghent-EnerGent



The collaboration in the case of Ghent emerged out of a citizen initiative. The city was not actively looking for a partner in the energy transition, but the city has a strong culture of engaging citizens and fostering a bottom-up approach. When EnerGent proposed to contribute and complement the service the city already provides, they were seen as welcome partners. The city has already its own energy service: the “Energiecentrale”. This is a contact point for citizens to address all the questions concerning energy efficient renovation. Citizens can get a free energy audit of the house and get advice on which measures to implement. Additionally, EnerGent launched the project “Wijkwerf” (Neighborhood construction site), an initiative to facilitate the combined renovation of private houses by engaging a whole neighborhood. This project is facilitated by the city of Ghent in two ways. This first one is through technical advice: the city’s “Energiecentrale” has already the technical expertise and is freely available for its citizens. Energent uses this service, and complements it with a full support in the renovation process. Another way the city supports Energent is through subsidizing a part of the full time employee’s wage. This subsidy is part of the city’s support program for citizen initiatives which promote sustainability. Additionally, the city of Ghent facilitates the startup of the cooperative by providing a place for the cooperative to organize its meetings.

The service the cooperative provides in return, is addressing a neighborhood and engaging the people to do a renovation together. This way they take advantage of better prices and are facilitated by the cooperative along the renovation process. The cooperative goes from door to door to talk to the people, and communicates the message on a very personal level. The cooperative also supports the mission of the city to become climate neutral through their “solar city campaign”, facilitating the installation of PV on the roofs of citizens. The city facilitated this by providing a map with the solar potential of the rooftops in the city. Ghent also actively promotes the “solar city campaign” by using its networks, website, and spreads flyers to reach the citizens.

Another way how the city of Ghent facilitated the cooperative is through the project “Buurzame Stroom”. It is a project which emerged out of “sustainable neighborhoods”, a support program the city initiated to encourage citizen initiatives focusing on sustainability. The project consists of balancing out the energy consumption on neighborhood level, through generation of electricity (solar PV and Cogeneration),

energy storage (heat, cold, and electricity), Electric Vehicles, demand side management and demand response management to minimize the impact on the distribution network. The Cooperative was invited by the city to become a partner in the project. The city finances part of the project, assists and organizes some of meetings, and she has a networking role, connecting the different players needed to compose the consortium. The electric vehicles are provided by another cooperative Partago, an electrical car sharing cooperative. Partago works closely together with other REScoops and mobility cooperatives over Europe, such as SOM mobilitat. This too is a citizen initiative providing an answer to the challenge of clean mobility.

Having looked at different collaborations, it is time to further analyze what made these collaboration successful.

## 6 What factors made the collaboration successful?

When a local authority is convinced about the cooperative approach and knows which actions to take, it is still important to know on which aspects to focus so that these actions bear optimal fruit. When analyzing the different case studies, the following five success factors were identified: 1) a long term Vision, 2) driven Individuals, 3) a Win-Win situation, 4) Mutual respect and Trust, and 5) Capacity.

### 6.1 Success factor: Vision

A first very important element to achieve a successful collaboration is the vision.

The local authorities, as they provide a framework in which the development takes place, need to have a clear long term vision, which addresses the sustainability issue with a holistic approach. The vision takes the city and its citizens on a long journey. The destination is not yet clearly defined, but is a joined effort. Eeklo is an example of a city which has this long term vision, looking beyond the short term financial gains concerning the topics of spatial planning, renewable energy production, mobility and the engagement of citizens. Citizens become more active players, take more responsibility and call their politicians to account and want to be involved in the policy making. This vision is human centered, recognizes its potential, and wants to engage them. **Political commitment to mitigate climate change** or the Covenant of Mayors, are factors which ignite this vision and convert ideas into action plans.

The city or municipality is easily seen as one identity. The reality, however, is that there are many actors involved with all different perspectives. It is important that this vision is **internally supported** over the different political parties to minimize the impact of political change. Both the city council members, the city officials and the opposition need to be committed to the same **long term vision**. If the long term vision is not clear, the pressure of reaching sustainability targets might compromise the connection of the local community with the project. The sustainability targets are indicators, but never the end goal, and vision is needed to see the picture beyond the targets. A long term vision safeguards the common good from exploiting resources for short term (financial) gains.

**Citizen engagement** is a third important element of the vision. In the case of Eeklo, there was a clear citizen participation. The citizen is the center, and the city council does not try to impose their climate policies, but has engaged citizens from the start in a participative process. One of the many examples to illustrate this was the “climate café” Eeklo organized, gathering over 600 last year high school students to brainstorm together about the future of their city. The cooperative is not seen as much as a tool to create public support for implementing the city’s vision, but rather a partner in involving citizens to co-create a sustainable future. The city Oostkamp, brought to life neighborhood ambassadors as an additional way to increase the connection with citizens. These ambassadors helped achieve to gather 250 citizens on an evening to brainstorm and envision the future of their city. Out of this 14 projects emerged. The city will not be able to facilitate and support all these projects, but chooses the projects which are most in line with the vision of the city’s policies. This way there is a nice balance between the citizens who can give input and be the driver behind the transition, while the local authorities guard the overall direction. There are already organizations who are specialized in facilitating local authorities in this participation process. The city of Ghent has a vision aligned with the cooperative. The city plays a coordinating role and the cooperative is to create support for the city’s policies. In the other cases, the cooperative is mainly seen as a tool to create support but the goal is to achieve the climate targets. However, from the commons perspective, the energy cooperatives are not seen as a tool to achieve sustainability. The goal is active engaged citizens ready to take up their responsibility, and renewable energy transition is seen as an opportunity for citizens to become more autonomous.

Despite this difference in vision, the common goals are clear and action is taken together to achieve these goals. Not all elements need to be present to have collaborations, but the vision, that citizens are a crucial element of the transition (whether as tool or goal in itself), together with a long term vision and commitment to mitigate climate change, enhance the partnership.

## 6.2 Success factor: Enthusiast individuals

In most of the cases, the collaboration was made possible thanks to a few very motivated pioneers. It is because a few people are committed to try something new, and manage to find the courage, that things actually change. In Eeklo it was the city planner official who proposed to the city council if it would not be possible to have a project which includes citizens. This was in 1991 and launched the start of renewable energy cooperatives in Belgium. In Lochem, it was a local politician who managed to inspire and engage the other local politicians and citizens to start an energy cooperative. Also Halle had to find political courage to try out something new, individuals decided to take on the challenge because they believed in its potential. The fear of failure is a typical constraint, which prevents politicians and officials to undertake bold action. These people have the vision, and that vision helps them to overcome that fear. When the vision is not yet clearly there, individuals can make the change.

With this aligned vision, it becomes easier to see the mutual benefits and come to a win-win.

## 6.3 Success Factor: Win-Win

Another factor identified for a successful collaboration is the need for a win-win situation. Both parties need to benefit the collaboration in order to have the commitment and enthusiasm to continue. The case studies explain in detail how this collaboration took form and how the benefits were shared.

### *Case: Ecopower-Eeklo*

The benefits for Eeklo successfully soften some of the challenges. In addressing the lack of public support, the cooperative helped in building public support for renewable energy projects and engaged citizens through awareness campaigns, information evenings, etc. Additionally, citizens were both financially and democratically engaged through the membership of the cooperative, according to the ICA principles. Finally, energy consumption reduction in private households was achieved, both through sensitization and implementation of EE measures, reducing the overall environmental impact of the city.

Addressing the lack of financial means, the cooperative offered a solution because the capital is raised by citizens. The profits flow back to community and its citizens, instead of oil producing countries.

The lack of human capacity is partly covered by Ecopower as it offered an extra employee which increases capacity for further development and implementation of energy efficiency projects.

An additional benefit is that through this collaboration, Eeklo became an international reference point for municipalities in the field of cooperative collaboration projects. People all the way from India have come and visited Eeklo to investigate its approach.

Benefits for Ecopower are that the collaboration allowed to realize their mission: keeping energy in hands of citizens and increase renewable energy capacity. Also in addressing the lack of access to projects, Eeklo enabled their competitive advantage, because citizen participation was highlighted through CfT. Eeklo supported Ecopower in addressing the legal framework at higher authorities, creating more favorable conditions for citizen cooperatives. Finally, this collaboration allowed the development of further projects.

In addressing the lack of familiarity of the cooperative model, the collaboration enabled the acquisition of new members, and Eeklo advocated the cooperative model to other municipalities.

### *Case: BeauVent-Kuurne*

Benefits for Kuurne are partly covering their different needs. In addressing the lack of public support, Beauvent managed to engage citizens. Through citizens becoming members of the cooperative, this engagement has a stronger momentum and inspires more people. This engagement can lead to future actions and projects. Also active campaigns to reach out to citizens are set up and citizens are incentivized to invest in their own solar panels at favorable conditions.

Addressing the lack of Human Capacity, the cooperative facilitated the municipality; with the single effort of writing out a tender, multiple objectives are achieved. The tender creates favorable conditions for the citizens to invest in renewable energy and stimulates them to put PV on their own roof. Through the tender, the municipality promoted themselves as a role model in the energy transition, they reduced their own energy bills and had an awareness campaign to make citizens think about the energy transition without additional cost. Also, with the same effort for the municipality, solar PV is not only installed on their own roofs but also on the roofs of the citizens and companies. Finally, BeauVent will provide all the data of private projects it realizes in the city's territory, and partly unburdens the municipality's efforts for reporting the actions and progress to achieve their CoM commitment.

In addressing the lack of financial capacity, the cooperative uses a third party financing scheme, and has a financial positive outcome for the municipality.

Beauvent's benefits are manifested in the realization of their mission. Also facilitated the municipality the development of new projects. Through the grouping of multiple small projects, economies of scale can be achieved. The municipality enabled a competitive advantage by highlighting direct citizen participation.

The lack of familiarity of the cooperative model has been overcome by the acquisition of new members. The new project is a tool to raise awareness to the wider public, especially when the municipality actively supports it.

#### *Case: Pajopower-Halle*

The benefits for Halle is that their challenges are partly covered. The lack of financial capacity is covered as the investment is budget positive. 10% of the savings directly benefit the city and at the same time the investment does not appear as a one-time investment on the balance sheet. The payment is spread out over 7 years.

The lack of public support is covered by the citizen involvement through financial participation. For this, an intense information and awareness campaign "adopting your street light" is set up with little effort and burdens from the city. If money was just borrowed from the bank, the public would hardly have noticed the change.

In addressing the lack of human capacity, the city's administration is unburdened; the cooperative takes care of the sensitization of the citizens through the street light project, as a first step to increase awareness about the need of energy savings. The city needs this awareness if it wants to reduce the energy consumption by 20% but lacks the capacity to launch this campaign itself.

Pajopower on the other hand benefited by having an opportunity to implement its mission. Their challenge of professionalization was partly covered by having a small but steady income over the next 7 years. It is a little start to professionalize the cooperative, but not enough to employ a staff member.

The lack of familiarity of the cooperative model is addressed as the city of Halle communicated the cooperative approach to the public and used its communication channels to spread the "adopt your streetlight" campaign. This resulted in the acquisition of new members for the cooperative.

#### *Case: EnerGent-Gent*

Ghent benefited from the collaboration in several ways. The lack of public support was partly countered by the cooperative as it is an additional channel to reach out to citizens. Secondly, the neighborhood approach can reach out to people who otherwise would be left out. Also the cooperative was considered as a tool to increase the public support of the city's policy.

In addressing the lack of capacity, a labor intensive work, which could not be done by the city, is performed through active volunteers of the cooperative. Also these people helped in implementing the city's climate action-plan through the campaign "Ghent Solar City", which installs PV on private households and through the renovation of private households.

EnerGent on the other hand benefited by having an employee's wage partly subsidized by the city. Also the operational costs were reduced as they have free access to a room to organize meetings. This facilitated their professionalization.

The lack of familiarity of the cooperative model is addressed through the city's support in the communication of their campaign "Ghent Solar City". Finally, the city supported the cooperative through networking and connecting with potential partners as the city has an overview of what projects happen in their region.

#### *Case: LochemEnergie-Lochem*

The municipality of Lochem benefited from this collaboration. The lack of human capacity was addressed as the cooperative takes care of feasibility studies of potential projects and climate ambitions are realized through the help of the cooperative: educating energy coaches, organizing group purchases, promotion of clean mobility, etc.

In addressing the lack of public support, citizens are more involved in the sustainability transition by having become a member of the cooperative. Finally also the stimulation of the local economy, especially the building sector, is also identified as an additional benefit

LochemEnergie on the other hand benefited from the collaboration by being enabled to embody the cooperative's mission. The lack of familiarity of the cooperative model was partly overcome by the municipality, who put the cooperative in the spotlight. They made the inauguration possible at a big sustainability event, presenting the cooperative to a broad public from the very start. Also the additional subsidy gave the citizens incentives to become member of the cooperative.

The challenge to professionalize was facilitated by the municipality providing additional paid staff. The municipality also addressed the lack of access to projects by networking and informing potential partners of the existence of a local energy cooperative.

## **6.4 Success Factor: Respect and Trust**

A fourth important factor is respect and trust. The cooperative approach fosters trust. It is very transparent and has a clear vision on benefiting the local community. The fact that the mission is put before the financial profit enables open communication. The collaboration is built around the human needs, and not the other way around. Human relationships are at the center, and a respectful open communication clears the way for hidden agendas, or the intention of maximizing private gain at the expense of the other partner. There is a high level of trust within the cooperative's organization as it uses transparent governance mechanisms, and this trust is passed on to other partners. When there is a lack of trust, it is often not related to the people's honesty, but rather to the doubt if they have sufficient capacity. Especially when there is no familiarity with the cooperative model, local authorities sometimes doubt the capacity of citizen initiatives or cooperatives. When the cooperative is more professionalized, and can present successful reference projects, this doubt melts away. These cooperatives have already proven their competence. For small cooperatives, this doubt is reasonable, and they need to earn their trust. When a cooperative mainly runs on volunteers, there is less guarantee for continuity, they have built up less expertise, and may leave the city council with an unprofessional impression. In the case studies the trust was present, but it takes political courage from a city like Halle, to decide to partner with a starting cooperative. Another factor which fosters trust is to have good reference projects. In the case of Ecopower, the cooperative implemented already a project in the same municipality 10 years earlier. They proved their capacity. Also a competent board of members is important. It fosters trust when the board's members are competent professionals, who, in their free time, use their professional expertise to support an organization with a cause. The board of member of both EnerGent and Pajopower has helped these starting cooperatives to gain credibility. Another factor which enabled trust was that the cities had

previous successful experiences with the services of the non-profit organization linked to the cooperative, as it was the case for BeauVent (VZW BASbouwen) and Pajopower (VZW Paddenbroek).

In the previous cases all partners were respectful. The good understanding and alignment of vision facilitated a mutual understanding. No one tried to take advantage of, or exploit the other partner. When there is a lack of respect, cooperatives might be seen as cheap labor. Cooperatives, running on volunteers, can develop projects at cheaper price, as they don't have wages to pay. When municipalities take advantage of these volunteers, these cooperatives will never professionalize.

## **6.5 Success Factor: Capacity**

A last element, important for successful collaboration, is that both partners need to have the capacity. This topic is linked to trust, as when the capacity is lacking, trust is undermined. The capacity of citizen initiatives should not be underestimated. Citizens have a lot of expertise and knowledge, from their professional life or passions, and many of them are willing to invest their capacity for a mission. When there is a framework which enables this, the untouched potential of citizens can be activated. If one wants to involve citizens as partners in a co-creation process, it is important that they can organize themselves in citizen initiatives. This is why the facilitation of these initiatives becomes a more important role of municipalities. Working groups of local volunteers can be the bridge between professional cooperatives and the local authorities. However, the capacity of a cooperative is not taken for granted. It is important to have a good view of the cooperative's capacity for the collaboration to work. Some project can get very complex, and how great citizen initiatives can be, this complexity involves expertise that volunteers cannot chip in. For starting cooperatives it is not evident to have all this experience in-house. In these cases, it is important that small cooperatives look for the support of their "big brothers" to realize a project together. These cooperatives have gathered the expertise and capacity over the years. Their biggest strength is their capacity to finance projects, involve citizens, and provide the technical expertise.

For example in the case of Pajopower, there was the doubt if the cooperative would succeed in finding all the needed investment. This was solved by involving the federation of Flemish energy cooperatives, REScoop Vlaanderen. In case the needed investment is not raised from local citizens, REScoop Vlaanderen will use the invested capital of other citizens to fill in the missing amount. Also other wind and solar projects have been realized in collaboration with cooperatives to guarantee capacity and reduce the risks.

The doubt about the capacity and the lack of capacity, is a serious threat for the collaboration. The city of Ghent mentioned that the cooperative needs to professionalize to become a partner in bigger projects. Lochem also revealed that the capacity of the cooperative is insufficient to deal with the implementation of big projects. This concern is real, and pushes municipalities to opt for commercial developers instead of citizen cooperatives. When big projects need to be developed fast in order to meet the targets, municipalities do not want to take the risk of having a partner lacking capacity.

## 7 Conclusion

The current communication technology enables new forms of managing organizations. Simultaneously, the neoliberal worldview is challenged. Its urge to privatize, its lack of democratic citizen participation, and the creation of many negative externalities undermine society. Citizens, everywhere in the world, unite themselves to take more control over their lives. The current crises defy our world view. A new paradigm of the commons unfolds, where not only the government and the market, but also citizens play an active role. Matters which used to be in the hands of the government or the market, are now claimed by citizens, calling on their right of self-determination. Where citizens unite to take care of a common good, and set up rules to govern this common good together, “commons” are created. If sustainability wants to become a reality, structural changes are needed. Not only structural changes concerning infrastructure and technology, but also the underlying business models, mentality and worldview.

Cooperatives are a corner stone in the transition towards this new structure. Citizens, who organize themselves in energy cooperatives, try to set up a structure to govern renewable energy as a commons. It enables to govern this resource in a democratic and socially inclusive way. They operate out of a principle of collaboration between all stakeholders. It is an organization with a mission, instead of merely pursuing profit. Cooperatives contribute to a structural change in the economy by operating in the market while exposing it to a mission-driven approach where transparency and democratic participation are crucial. By inviting the state to pursue a more participative policy it also impacts politics. Cooperatives also have the potential to help municipalities in achieving their targets. The identified challenges municipalities are facing in implementing their climate action plan are: a way to finance the implementation of their climate action plan, a need for additional human capacity, and a need for public support and commitment of citizens to realize their action plans. There is a clear reason why local authorities should collaborate with the REScoops. The REScoop model is able to address these challenges: cooperatives have the capacity and their expertise is to engage citizens and make them participate in a sustainable energy transition. They have the manpower and knowledge available to develop the project and manage to finance these projects through engaged citizens. This citizen capital allows the local community to benefit from the investments, and allows citizens to participate democratically in the cooperative.

Three elements facilitate the collaboration between local authorities and REScoops: (1) a political commitment to address the mitigation of climate change, (2) a political willingness to engage citizens in a participatory process, and (3) a long term vision, internally supported over different political parties. These elements embody the political vision, which are important for the collaboration to bear optimal fruits. When these elements are part of the local authorities’ policies and management, the vision of both partners are aligned and the other success factors are likely to be present too. Then the municipality understands the benefits and significance of the cooperative model and there is a clear win-win situation. There is trust and respect. The municipality is easily convinced of the cooperative approach and feels comfortable taking some action and fulfil its part of the deal. This strengthens the collaboration and the state takes up its role as a partner of the citizens.

Arrived at this point, the local authorities are eager to facilitate cooperatives through different actions, as they see the benefits for themselves and society. Municipalities can facilitate cooperatives in overcoming these challenges and work towards a climate mitigation and the implementation in the energy action plan in multiple ways. One important way is by focusing on citizen participation in their Call for Tender. This way, not only price is taken into consideration, but also how the project is realized to benefit the local community.

Another way is that local authorities can influence the legal framework by addressing the structural challenges (such as the private company approach, which excludes local participation and undermines public support for renewable energy) at higher government authorities. On private land, project developers don’t need to involve the local community. This can undermine the vision of local authorities

and undermine the public support. By advocating a better legal framework, local authorities give guidelines to private projects, while advocating the cooperative model.

Local authorities can also advocate the cooperative models amongst citizens and other municipalities. They take on a networking role, connecting different projects, people and businesses with the cooperative. Another facilitating role of local authorities is the active support for starting cooperatives through subsidies, providing knowledge, advice, and reducing start-up costs.

To summarize, it seems that a partnership between energy cooperatives and local authorities has great potential. All the essential elements for a fruitful collaboration are available and have already led to some successful examples. Having these collaborations implemented at large scale would be a great contribution to achieve the EU's climate targets and its implementation at local level. At the same time, this partnership uses this **climate challenge as a leverage** to unite different stakeholders (citizens, businesses, local authorities, etc.) and collaborates towards a common goal while fostering the development of a more just, social inclusive, democratic and responsible economy. The energy transition towards renewable energy sources will happen for sure. The question is however **“How this transition is going to take place?”** It is up to us to decide if we maintain the status quo with the business as usual, or do we create the conditions for a new, social, inclusive and responsible economy to rise, where citizens can reclaim ownership of the energy production and actively contribute to shape the society they live in.

## 8 Recommendations

### 8.1 Recommendations for local authorities

#### Part 1: Context

A good context is needed for collaboration. The first recommendations are for creating favorable conditions. A vision translated into tangible commitments is very important.

#### **1. Make a political commitment to take action in mitigating climate change**

A political commitment to address the mitigation of climate change has been a main driver for climate action. This commitment is very important because it forces the administration and politicians to put climate action on the agenda, and to take action instead of merely talking about it.

#### **2. Have a clear vision on citizen participation and communicate that vision openly and widely**

Engage citizens actively, this is very crucial. Even when the capacity is limited to engage citizens actively, create a framework where citizens have the possibility to participate and contribute. A cooperative is not a magic cure for citizen participation. The cooperative can contribute, but the effect will be bigger when a supporting framework is present. Both reinforce each other. The lack of vision is a threat for the collaboration, so make sure that citizens have a say in all of this. This not only enhances the collaboration, but also helps local authorities to address the political crisis and regain legitimacy from the public.

#### **3. Formulate a long term vision, internally supported, preferably formulated in a multiannual strategic plan**

Make sure that there is a long term vision. The lack of vision is a threat for the collaboration. Short term financial benefits will be preferred above a citizen based approach. The easy projects to implement are a potential resource to finance other, less profitable projects. Vision is needed to capture the value of these 'easy' projects and use them as resource for the continuation of the transition. Behavior change and structural changes in the economic framework are projects which occur over a long term, and vision is needed to start fostering these changes now.

A jointly-shared long-term vision by different political parties is needed to ensure commitment to the long-term vision in spite of changes in the leading political party. To have this multiannual plan, all parties; the city council member, the city officials and the opposition need to be committed to the same vision.

#### **4. Don't be discouraged if you are alone with the vision, one person can bring about big change. Believe in it and have courage**

Individuals can make the change. In the case studies, the transformation was often initiated by one person who had an unconventional idea, believed in it and had the courage to stick out his neck. He or she was not afraid to try new things but believed in the potential of the idea. The fear of failure, and the impact it might have on future votes, is a typical constraint which prevents politicians and officials to undertake bold action. This fear paralyzes and slows down the transition whereas creativity is needed to implement new things.

#### Part 2: Actions

When the conditions for a successful collaboration are more or less present, the municipality is very likely to understand the benefits and significance of the cooperative model. The municipality feels comfortable with taking some action. It understands how it benefits and fulfil its part of the deal. This strengthens the collaboration and makes the state a real partner for citizen initiatives.

#### **5. Use specific criteria in the Call for Tender procedure to embody the vision of the local authorities and to recognize the value of cooperative market players**

One of the most powerful tools local authorities have to implement their vision and enable cooperatives, is the selection of criteria in the Call for Tender. The criteria of price alone cannot reflect a vision. Especially when you know there is a player on the market with a similar vision which can help you achieving the targets, it is important to formulate these criteria and highlight the non-financial benefits too. The selection of specific criteria allows to manifest the competitive advantage of cooperatives over the non-cooperative market players. This Call for Tender benefits the municipality while recognizing the value of citizen engagement.

#### **6. Use these specific criteria to achieve simultaneously multiple targets in mitigating climate change**

Use specific criteria in the tender to combine different outcomes into one tender, this optimizes the limited capacity of the municipalities. Writing out a tender takes the same effort, but multiple objectives, such as the implantation of a RES project, awareness campaigns, EE project, etc. are achieved.

Examples of these criteria and the benefits cooperative can offer are extensively commented in the case studies, but everyone can choose their own criteria to highlight their vision. If one is not sure how to formulate the criteria, one can always ask a cooperative for advice.

#### **7. Engage other possible partners who have access to land to collaborate and enable new projects**

Another action local authorities should do when they want to take optimal advantage of tender procedure is to actively look for and work together with other institutions who are proprietor of potential project sites, to increase access to land. Actors like the Public Center for Social Welfare have land at their disposition to develop projects. The land linked to the church, owned by a public institution ('kerkfabriek' in Belgium) is also a potential partner to jointly develop a project. Private partners who share a similar vision and Intercommunales are interesting potential partners. A project in collaboration with these players can be formulated in a Call for Tender or in other ways.

To start, one can map public land in the area on which it would be possible to develop a RES or EE project, both land and buildings owned by the city or by other public institutions like the Public Center for Social Welfare. Next, private land which would be interesting to develop projects should be looked after and see if the proprietors would be interested in partnering with the city.

#### **8. Foster structural changes in the legal framework by addressing legal barriers to regional or government authorities.**

Local authorities' vision is compromised by projects on private land. Local authorities' Call for Tender is limited to projects on public ground. On private property, project developers are not required to engage with the local community, which can cause conflicts and opposition from the community. Although there is no legal requirement for these private developers to involve the community, the local authorities can add a moral obligation to these companies. When local authorities combine their voices and address obstacles at the regional or national level, this will help to foster a change in the policy framework promoting citizen participation, as it has been the case in East-Flanders. When presenting a vision which clearly defends the common good, it is very difficult for companies to defy this vision and still call themselves social responsible entrepreneurs.

The first action to be taken is to identify the barriers in your context, then share the findings with different municipalities in the region. Finally, join your voices/forces when addressing it to regional or national authorities.

#### **9. Explain and advocate the cooperative model and its advantages for citizens**

Not only the cooperatives and umbrella organizations, but also local authorities play an important role in spreading the cooperative model. Misunderstanding and suspicion about the cooperative model can be overcome when a third party, like a local authority, explains the cooperative model. Explaining why you as

a local authority choose to collaborate with cooperatives, and how citizens benefit from it, help to spread the cooperative mode and it fosters trust. This lowers the barriers for citizens in participating. Also advocating the cooperative model to other municipalities is a great way to facilitate cooperatives. Municipalities will be more likely to collaborate with cooperatives when other municipalities testify of successful experiences.

#### **10. Take the time to explain citizens why the municipality chooses for citizen financial participation**

Also local authorities benefit from advocating and explaining the cooperative model when starting a collaboration. When citizens are involved in the financing the project, it is important that the citizens receive the message that the city deliberately chooses for this option, not because she is lacking the money, but because it wanted to present an opportunity to the citizens who like to invest and reap the benefits. If the local authorities make the investment themselves (with or without a bank), it is the citizens who pay anyway, though the taxes. At least this way, people have the choice to invest or not, and benefit from the investment. Also, giving the local community the opportunity to invest, it creates a connection with the project and the possibility that it benefits the local community instead of a foreign multinational company.

#### **11. Facilitate the communication between the cooperative and the citizens, and provide networking with potential partners**

This can be done by the communication with local community, by making available the information channels like the website, newsletter, local newspaper, etc. to inform the citizens about the coming project. Local authorities can also facilitate the cooperatives through networking. Also providing an online tool or platform which makes visible different initiatives in the region, and allows potential partners to connect.

#### **12. Support starting cooperatives**

Especially starting cooperatives can use a helping hand. Generally any internal resource (knowledge, expertise in finance, legal advice, in-kind, subsidies, etc.) the local authority can put at the disposition is welcome. The previous cases give clear examples of how this could be done, but use creativity to see which resources the local authorities can contribute in their specific context. Having a long term vision helps to see the benefits of investing in the promotion of cooperative entrepreneurship. This initial investment might result in having a very competent partner, increasing the city's effectiveness in achieving the mission. A partner with a similar mission and vision. This support is also a political action to foster and enable citizen participation. Important is to respect the starting cooperatives and not to treat them as cheap, volunteer based work force.

#### **13. Look for creative solutions when doubting about the capacity of a cooperative.**

REScoops have gathered experience and expertise over the past years, and they have proven their capability in many projects. Nonetheless, there is often doubt whether the cooperative has sufficient capacity. In some cases this doubt might be legitimate, and when collaborating, it is very important that both partners are assured that the other partner can handle the task which is assigned to him. It is an important factor for successful collaboration and this should not be taken lightly. However, when there is this doubt, it is not necessary to abort the collaboration immediately. Cooperatives can form partnerships with external players to complement their capacity. Preferably this could be a more established cooperative, but also a partnership with other market players is possible. In the latter case, the local authorities should keep an eye so that the cooperative has a fair part in the partnership. The municipality should not only stand behind the cooperative, supporting it; also it should stand next to it and represent its interests together with the cooperative. This prevents that the cooperative is pushed into a corner by the other partner.

#### **Actions**

To prepare and create a favorable context, a list of potential short and medium term actions is given.

**Short term:**

- Get insight on the vision within the city council. Organize a meeting to bring this vision explicitly to the light, and see where the vision is aligned or not. Which leverages can be used to implement this vision?
- Make a rough roadmap to identify which actions and structural changes need to be made to implement the vision. Leave room for citizens to comment and modify its implementation.
- Make an overview of the internal resources available to start a participatory process to engage citizens. What is available? What is lacking?
- Make an overview of local resources and potential partners available who can help engage the citizens. Look for citizen initiatives, cooperatives, local businesses, etc. and see what their expertise is. Also online software tools (like Citizenlab or DemocracyOS), or agencies specialized in citizen participation (like Levuur in Belgium), can be great partners.
- Map potential lands (public, and secondarily private) on which projects could be developed
- Identify the main structural challenges your municipality is facing and share these findings with the surrounding municipalities and how they deal with it.
- Organize information sessions, a sustainability event, climate café, and/or a brainstorm where citizens can be inspired and give input. Involve local partners/initiatives in the organization
- Contact a local energy cooperative and citizen initiatives. Ask advice on what they think is possible to implement, how they the vision of the city and how they could contribute to that.
- Find enthusiast citizens who would like to become neighborhood ambassadors to strengthen the contact between the city and the citizens.
- 

**Medium term:**

- Sign the Covenant of Mayors
- Once mapped potential sites and projects, open up the discussion with the citizens on what would be desirable to implement. Show alternatives with their different impacts. Give them the possibility to give proposals, suggestions, advice, feedback, etc. Online tools can be a useful to lower the threshold of participation.
- Find a partner with a similar vision

## **8.2 Recommendations for REScoops**

### **1. Share expertise to increase capacity**

One of the biggest obstacles for cooperatives is the lack of capacity; therefore cooperatives are left out when bigger, and more profitable, projects are performed. Especially starting cooperatives lack the capacity. Established cooperatives can play an important role in exchanging expertise and increasing capacity by developing projects together.

### **2. Facilitate local citizens initiatives in organizing themselves to evolve into a cooperative**

Many municipalities do not have an energy cooperative yet. When there are motivated citizens, established cooperatives can play a catalyzing role in starting up these citizen initiatives and help them grow. Also the cooperative can facilitate the collaboration between different citizen initiatives in a same region, so that these initiatives don't end up competing against each other.

### **3. Help each other in financing projects**

Starting cooperatives sometimes lack the initial capital to implement projects, whereas bigger cooperatives might have more capital but not enough projects. Once the project is developed, the acquisition of new members and capital becomes easier. Therefore, it is important for cooperatives that they can borrow money from each other, or develop a project together. Once the project is implemented, the cooperative can pay back the money, or when the project is developed together, the cooperative could buy back the shares of the project.

## **8.3 Recommendations for the federations REScoop Europe and Coopkracht**

### **1. Facilitate even more collaboration between REScoop members**

What made the collaborative economy grow is exactly the possibility of having communication. Internet and ICT enabled this but the potential is still underused. The success or failure of the cooperative movement in becoming a bigger market player partly depends on its capability to collaborate and thereby increasing its capacity. Pooling the capacity of many small players needs to be done in such a way that it excels the capacity of commercial developers. Therefore it is very important for the federation to provide the ICT tools which enhance and enable collaboration to a further level! Collaboration is what gives competitive advantage, but the right tools need to be implemented. A tool to finance projects together can help to overcome the lack of financial capacity. Also tools for sharing knowledge and expertise in an efficient way, allow to collaborate over distances.

### **2. Advocate the cooperative model to local authorities**

REScoops themselves do not have the time nor the capacity to convince local authorities, however this research identified the importance of a long term vision. Federation organizations can facilitate this vision by raising awareness about the cooperative model and the importance of citizen engagement and climate action. A useful partner for this can be the federation network of local authorities (VVSG in Belgium) to address multiple local authorities at once.

### **3. Provide tools for local authorities to advocate the cooperative model**

Once local authorities are convinced, it would be good to facilitate them in connecting with cooperatives and advocating the model. Local authorities lack the capacity to find out the best ways to reach out to the citizens and need concrete examples and tools to get started. If local authorities are to advocate the cooperative model it needs to be made easy for them. Further investigation which tools would be most suitable, is needed. Possible ideas are delivering flyers, making yourself available to give presentations, etc. These tools can be passed on directly to the local authorities, or through a member cooperative when a collaboration is taking form.

## **8.4 Recommendations for Policy makers**

### **1. Make a minimum of 20% direct citizen participation mandatory in every new renewable energy project.**

Citizen participation is very important in achieving the climate targets and in using this targets as a leverage for raising awareness, fostering long term behavioral change and in transitioning society. If all projects are developed by private developers without any citizen participation, the opportunity to mobilize and engage citizens in a sustainable transition is lost. 20% of *direct* participation is still a little fraction, it is in line with the decision which was made in East-Flanders, and is a compromise that had been made in finding a balance between the policy interests and the interest of private developers. In the Walloon region, there the regional authorities argued for a 50% of citizen participation. The percentage of participation needs to be decided by taking the context into account. Policies for citizen participation in

renewable energy projects have to be put in place. Preferably more, but definitely not less than 20% of direct citizen participation is recommended.

## **2. Include cooperatives in the planning of new policies and ask their advice**

The cooperatives have a good insight in the challenges and needs of cooperatives and citizens, and what is preventing them from taking part more actively in the energy transition. Open up the discussion for them because their point of view might lead to new insights. Their approach is not for-profit, but mission-oriented. They represent the needs of the citizens, and therefore their discourse differs significantly from other conventional market players defending their interest.

## **3. Simplify the administrative procedures for local authorities to outsource services**

The collaboration with local authorities is always a time consuming procedure, and this makes it difficult and unattractive to collaborate with them. Simplifying the procedures means that collaborations can have their impact faster, it could speed up the collaboration process, and makes it easier for local authorities to implement their vision and policies.

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## Annexes

### Annex 1: Contact List of Interviews

<u>Institution/Function</u>	<u>Name</u>	<u>Contact</u>
BeauVent: Coordinator	Stefaan Soenen	Stefaan.soenen@beauvent.be
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Ecopower: Project Engineer and Board member	Karel Derveaux	Karel.Derveaux@ecopower.be
Ecopower: Project Engineer and Board member	Tom Willems	Tom.Willems@ecopower.be
Eeklo: Town-planning officer	Dirk Waelput	Dirk.Waelput@eeklo.be
Eeklo: Environmental officer	Ben Caussyn	ben.caussyn@eeklo.be
EnerGent: Coordinator	Jeroen Baets	Jeroenbaets@gmail.com
Ghent: Council Members Attaché: Climate and Energy	Veerle Dossche	veerle.dossche@stad.gent
Halle: City Council Member Sustainability	Peggy Massien	peggy.massien@halle.be
Halle: City Council Member Finance	Dieuwertje Poté	dieuwertje.pote@halle.be
Halle: Sustainability Officer	Sigrid De Temmerman	Duurzaamheid@halle.be
Kuurne: Sustainability Officer	Wim Dewever	Wim.Dewever@kuurne.be
Leuven: Coordinator Leuven 2030	Katrien Rycken	Katrien.rycken@leuven2030.be
Lochem: Policy Officer Environment	Marc Mobach	M.Mobach@lochem.nl
Pajopower: Coordinator	Bruno Moens	Bruno.moens@pajopower.be
Rescoop Europe: President	Dirk Vansintjan	dirk.vansintjan@rescoop.eu
Rescoop Vlaanderen: President	Jan De Pauw	jan.depauw@rescoopv.be
SOM Energia	Marc Rosello	marc.rosello@somenergia.coop
VVSG: Energy and Climate staff member of the Network of Flemish Cities and Municipalities	Cederic Depuydt	Cederic.depuydt@vvsg.be

### Annex 2: Other Types of Collaboration

Besides municipalities cooperating with REScoops, there are other types of collaboration. The following annex explains different types of collaboration mentioned in Figure 5

Depending on the kind of project which needs to be developed, citizen participation is more or less important. Especially with projects which have a big societal impact, it is important that citizens are involved in the project.

## **Local Authority outsources energy action plan: Citizen driven non-profit takes the lead**

The city of Leuven is also committed to take action against climate change. It has the ambition to become climate neutral by 2030. Currently it is in the running for European Green Leaf City award, together with Växjö and Ludwigsburg (Germany). Leuven has a long history of citizen participation in the field of sustainability. In 2013 this collaboration was formalized through the non-profit organization Leuven2030 and this increased the impact of the movement. At its start, over 200 citizens and businesses were present to brainstorm together about the sustainability of the city.

The way how the city of Leuven facilitates the bottom up approach is unique. It has outsourced its climate policy and action to the non-profit organization. The non-profit organization is an independent a-political body focusing on the sustainability. The city becomes a partner and uses their strengths to achieve the goal. For example, one of the priorities identified is the renovation of houses. The city engaged itself as a partner to take care, promote and facilitate the collective renovation of neighborhoods, where other partners committed themselves to talk and engage syndicates in the renovation of apartments. The city puts the energy policy in the hands of an organization where all stakeholders are represented; the city, the civil society, the citizens, the local businesses, and the knowledge institutions have all equal shares in the board of directors. This facilitates citizen participation as they have more direct input. Half of the non-profit's finance is provided by the city, and the other half is provided by other partners. This is an example of a city who really takes the position of an enabling partner in the transition process.

The Leuven2030's core business is providing the scientific data to determine the priorities and focus of action, it monitors the evolution of CO2 and small dust particles. It has a role of sensitizing the citizens and engaging them. Additionally it is a neutral central body where people can meet, network, exchange information, and collaborate. They look for opportunities in the city, look for funding of the projects, and make sure this transition happens in a way that everyone, also the people at the edge of society, are included. It is an organization which facilitates and coordinates the actions, while everyone can contribute and give input. Based on the technical knowledge and priorities, action is undertaken together.

One of its strengths is that it has a board of experts; 12 university experts from different fields, who voluntarily meet once a month to provide the knowledge, insight, and help define the way to move forward. They keep the helicopter view to see the long term development, and which actions are to be taken for it.

It is not because the city has outsourced the energy action plan, that it escapes its responsibility. The city still plays a very important, even more difficult role as a facilitator. Eventually the city still carries the responsibility to some extent. The city contributes to the realization of the goal but she leaves the non-profit to set out the vision and action plan. Leuven2030 connects all different partners to implement this vision. One of the partners is the cooperative Ecopower, but also the city, the university, and private and public companies are collaborating together. This is a strong example of a city with a bold vision on citizen participation.

Strengths:

- Citizens are really the driver behind the transition
- City has outsourced this service, and plays an enabling role
- Wide range of experts, volunteers and partners contributing to the outcome
- Less dependence on political changes
- Neutral organization facilitates the collaboration between partners
- Bottom-up approach creates public support

Weakness

- The non-profit is still in starting phase and needs to increase capacity to speed up the process.

## **Local Authority creates public company**

Besides the cooperative model, another model identified in Barcelona and Växjö is the municipalization of the energy company. This approach goes against the current tendency of privatizing public services. Analysing this from the perspective of the commons, this creation of a public company, originates from the paradigm where there are only two players; state and market. The state here takes control to organize the common good, instead of facilitating citizens to organize the common good themselves. However, depending on the context, it can be a wise choice. In the case of Växjö, the local politics seem to very democratic. There is a short feedback loop between the citizens and the local government. Citizens know the local politicians, can contact them personally and it is easier to keep them accountable. Transparency of the local politics as well as the functioning of the public company is a crucial prerequisite to make it work and keep the support of the local people. Since the municipality is in control of the transition and is on track to achieve its climate targets, there is less focus on the active input of citizens. A political choice to empower citizens more and make them partners in driving the transition could be a next step.

In the case of Barcelona, the legal framework for renewable energy is unfavorable. Therefore the market is not able to perform the role it should play in the energy transition. The city of Barcelona tries to balance this out by creating the public company supported by the city. This way the city has more control over achieving its targets; increasing the renewable energy production in the city, and reducing the energy consumption. In a major city like Barcelona, the cooperatives don't have the capacity to implement all the actions. They are only a small player, and a bigger company with the necessary capacity was needed to implement the targets in time, while at the same time being socially inclusive.

### Strength

- Municipality has more control over the allocation of profits, the projects to develop and the steering transition
- Municipality can speed up the implementation of targets
- Municipality creates a player in the market with the specific capacities it needs.
- Mission oriented, service to citizens is priority

### Weakness and threats

- It is very susceptible to political changes. If a different political party comes to power, the whole structure can change, and the company might even get privatized.
- Top-down approach does not guarantee citizen ownership or participation. Bottom up initiatives can be integrated through open consultation and approaching the local politicians, but the final decision remains in the hand of politicians and not the citizens.
- Indirect democratic participation. The citizens are represented by the people they elect, but have no direct way of influencing the energy transition
- Politicians in the board of directors do not always have the right expertise and capacities.
- If there is lack of transparency in decision making, allocation of profits or managing investments, it can lead to distrust with citizens
- Lack of transparency can lead to a conflict of interests, local politicians private good is not necessarily aligned with the public good.

## **Local Authorities collaborate with non-cooperative project developers**

### Strength

- Established project developers have a lot of experience and capacity
- These project developers are a financially strong

### Weakness

- Financial benefits go to the corporation's shareholders and are not used to benefit the local community. Even when a municipality is shareholder of this corporation, the profits are mostly reinvested and dividends are low. The municipality will have financial benefits when it sells its shares. As an example; Aspiravi is a project developers company with many municipalities as shareholders, as before the privatization of the energy market, it used to be a public company. In the year of 2010, for every 4 euro's profit, 3 parts were added to its own capital and 1 part was paid out to its shareholders (Aspiravi, 2010). Profits that could be used to finance the energy transition are kept in private hands.
- If the headquarter of the multinational is based outside the country, it still drains the local economy through the payment of the energy bill. Instead of paying to the oil producing countries, it is paid to another foreign country that has no link with the local community.
- The opportunity to communicate with the public to engage them in the energy transition is lost. Even worse, public support for renewable energy (especially wind) is reduced because citizens only experience the burdens of the projects, but do not share in the benefits.
- There is no democratic participation, nor is there financial participation of the community involved. Citizens have therefore no participation nor influence on the exploitation of a resource which in essence is a common good and belongs to all.
- Profit-driven instead of mission-driven, which makes it harder to align visions

### **Local authorities collaborate with FINcoops**

FINcoops are a financial cooperative founded by the non-cooperative developers, to allow financial participation for citizens and to improve the public support. The majority of the cooperative's shares is owned by the mother company.

#### Strength

- FINcoops have the same strength's as the non-cooperative project developers, as they are often cooperative structure of these developers, a financial vehicle to allow financial citizen participation and to increase public support for their projects.
- Financial participation of citizens, although indirect

#### Weakness

- Indirect financial participation means that the members of the FINcoop are not owners of the project. The FINcoop gives a subordinated loan to a non-cooperative project developer and gets a return on investment. This implies that the risk is transferred to the FINcoop, and when the project developer goes bankruptcy, the members will only be compensated when the bank and other investors have got their investments back.
- There is no real democratic participation. Generally the majority of the board members is a member of the non-cooperative project developer, members of the FINcoop can be member of the board but will never be able to decide something which goes against the interest of the mother corporation. There is no autonomy in the FINcoop and the profit driven mother corporation controls the FINcoop. If the mother company is sold to a foreign corporation, there is nothing the cooperative can do.
- The focus on engaging the citizens it to get new members in the FINcoop to finance the project, not to engage them in the energy transition. The communication campaign and additional benefits to help the municipality in achieving their climate targets are limited.
- The energy is not really in hands of the citizens, and therefore less commitment and engagement from the citizens.

## Annex 3: Extended Case Studies

### Eeklo-Ecopower

City	Eeklo	
	Inhabitants	20.449
	Climate Action Commitment	Covenant of Mayors, signed in November 2016
	Vision citizen participation	Strong participation
Cooperative	Ecopower	
	Type Cooperative	REScoop (ICA)
	Year Establishment	1991
	Full time eq employees	30
	Number of Cooperants	50.000
	Type of Projects	Sun, Wind, Cogeneration (WKK), small Hydro, small Biomass, Energy Efficiency, Supplier of Energy
Type of Project	2 Wind turbines (type E-82) of each 2,3MW	
Year of Project	2009, operational in 2011	
Type of agreement	Call for Tender with Specific Criteria	
	Fixed condition: Yearly fee for the exploitation per wind turbine: €25.000	
	Criteria of Evaluation	
	Information and communication campaign, set up by the contracted, during and after construction	20 Points
	Possibility for citizens for <i>direct</i> financial participation in the project	25 Points
	Additional benefits offered by the contracted; like the commitment to realize or finance other project concerning Renewable Energy or Energy Efficiency	35 Points
2 Reference projects where the information and communication campaign, and direct financial participation were elaborated and implemented	20 Points	

#### **Background Eeklo:**

Eeklo, a small city with 20.500 inhabitants, was one of the pioneers in sustainable energy planning. Back in 1999, Eeklo created a vision on the development of wind energy and published a tender for the installation of a wind turbine on public ground. The city of Eeklo already had a strong vision about citizen participation and actively involved its citizens in the process of the energy transition, asking for

information and feedback. On top of this, there was a long term vision for the energy and special planning. This vision was reflected in the Call for Tender (CfT). It published a CfT with the specific request to give the largest amount of the project open for direct citizen participation. Ecopower, back then still a very small cooperative, participated and won the tender with a proposal of a 100% citizen participation.

Later, in 2009, a second CfT was published for 2 turbines on the area of Eeklo [reference case mentioned above]. Again here in the selection procedure was that, besides a fixed amount of money for the right of exploitation, that there needs to be citizen participation and additional benefits for the town and its citizens. The project was again granted to Ecopower.

In 2016, Eeklo joined the Covenant of Mayors and actively engages its citizens achieving its targets. It organized several “energy cafés”, an afternoon in a pub where citizens can brainstorm and think about the future of their city and its sustainability. Also Eeklo organized specific actions to engage the younger generation, since they will be the ones facing the consequences of these choices. Through the schools, and with the support of the province East-Flanders, over 600 last year high school students participated in a brainstorm event on how to shape the future of their city in a sustainable way. A panel of 100 voluntary citizens helps the city with proposing and giving feedback on the city’s policies.

The main challenge for Eeklo is still the public support, everyone knows that something needs to happen, but as soon as the city takes action and people are confronted with some of the disadvantages there is a lot of opposition. Involving the citizens early on in the project and having them supporting the changes is still a difficult process.

### **Background Ecopower:**

Ecopower is, with its 50.000 members, one of the biggest energy cooperative in Europe. It was founded in 1991 and is the oldest one in Belgium. It started with the renovation of an old water mill in Rotselaar and added a generator of 70 kW. Ecopower realized its first bigger project in 1999 with two wind turbines in Eeklo. Back then, Ecopower was only a cooperative of 400 members. Long before renewable energy became popular, the founders of Ecopower already had a vision of how the energy of the future should be 100% renewable, and citizens had to be part of it. Ecopower develops renewable energy projects, such as wind, solar, small biomass and small hydro. Besides generating electricity, is also supplies its members at marginal cost as a service to the members. Ecopower also offers a service to accompany citizens and companies in implementing energy efficiency measures and renovation. Now, as an established cooperative, Ecopower is supporting starting cooperatives to professionalize, sharing their expertise.

Ecopower is also one of the founders of the REScoop Europe organization, connecting the different renewable energy cooperatives throughout Europe. The REScoop movement shares and implements the ICA-principles (International Cooperative Alliance). As a REScoop, it allows, both financially and democratically, *direct* citizen participation in the cooperative. This means that members can invest in projects, and be co-owners of the project. The democratic participation follows the principle of one-man-one-vote and control in the board of directors.

### **Description of collaboration:**

The collaboration is contractually agreed upon through the Public Purchase Procedure. Local governments are obliged to use the CfT and, in order to implement their vision, they have to put specific criteria that reflect their vision instead of focusing on the price as the only criteria. Their vision of citizen participation and engagement in the energy transition process was translated into the following criteria:

- Yearly fee for the exploitation per wind turbine: €25.000
- Information and communication campaign, set up by the contracted, during and after construction (20 Points).
- Possibility for citizens for direct financial participation in the project (25 Points).

- Additional benefits offered by the contracted; like the commitment to realize or finance other project concerning Renewable Energy or Energy Efficiency (35 Points)
- 2 Reference projects where the information and communication campaign, and direct financial participation were elaborated and implemented (20 Points)

Ecopower proposed a 100% citizen participation, prioritizing citizens of Eeklo. Ecopower set up a plan to engage the citizens through information campaigns, website, private consultation sessions, and information evenings. The financial participation offered by Ecopower is also a great tool to reach out to people, make them have a share in the profits, and get their support. The additional benefits Ecopower proposed, was to have a full time engineer at their disposition, paid by Ecopower, to implement energy efficiency measures in the city, to increase the city's capacity to further develop projects like a district heating network, energy efficiency measures in public buildings, contact point for information on renewable energy, cooperative entrepreneurship and visits, etc. A dynamic working list is yearly revised to keep collaborating together towards the common goal. Additionally, smaller investments were financed by Ecopower with the revenues from the turbines, and were paid back to Ecopower through the savings on the energy bill. Examples of these investments are the renovation of the boilers, a heat recovery in the ventilation system and a solar installation with charging point for electric mobility.

An additional way how Eeklo supported the REScoop is by addressing challenges to the higher authorities. Because of the limitation of the CFT to the land owned by the municipality, Eeklo cannot implement its vision in her whole region. Project developers, developing on private property did not share the same vision of citizen participation and were undermining the vision of the local community and the public support for wind energy. Convinced by the importance of the cooperative approach, Eeklo took a Municipal council decision which reserved up to 50% of the wind projects for the community and addressed the issue to the authorities of the district. The approach of project developers would increase the opposition of renewable energy in the region and does not share the benefits with the local community. The district authority took a democratic decision upon the societal relevance of citizen participation in this processes and recommended a minimum of 20% *direct* citizen participation in all wind projects. This recommendation is not legally binding, however, it has moral authority because companies cannot afford to lose public image and opposition from local government and citizens in relation to Corporate Social Responsibility. A strong political will and courage was needed to address these issues. To convince higher authorities the benefits from previous projects had to be clear.

### **Mutual benefits:**

Benefits for Eeklo:

- Creating public support for renewable energy projects
- Citizen engagement
- Profits flow back to community and its citizens, instead of oil producing countries
- Extra employee: increased capacity for further energy efficiency projects
- International reference point for municipalities in the field of cooperative collaboration projects. People all the way from India have come and visited Eeklo to investigate its approach.
- Energy consumption reduction in private households, both through sensitization and implementation of EE measures, reducing the overall environmental impact of the city
- Implementation of vision city through Call for Tender
- Value created beyond financial gain

Benefits for Ecopower:

- New project
- Acquisition of new members
- Mission: Energy in hands of citizens

- Agreement with possibility for new projects and collaboration

**Evaluation success:**

The factors which made this collaboration a success was a shared vision between Ecopower and Eeklo. Eeklo had a clear long-term vision on energy, spatial planning and the role of citizens. A long term vision, beyond the short term financial benefits. This resulted in the choice not to go for the highest remuneration fee per turbine, but for the additional benefits and participation of the citizens. This vision was supported over the different political parties, so that political elections did not affect this vision significantly. The city agrees on the importance of the input of citizens. The vision of the city is in line with the values of the REScoop. Engaging citizens is not just a means to achieve the objectives and get public support for the city’s policies. Citizens are encouraged to actively shape the future of their city and Eeklo plays an enabling role in all of this.

There was a relationship of trust established in the first collaboration in 1999. This trust facilitated the second collaboration. There was an atmosphere of transparency and honesty which is much appreciated and facilitated the communication between the partners. Good communication from both parties to the citizens and stakeholders was also an important factor, resulting in almost no complaints and opposition action committees. A possible threat identified in the collaboration is a narrow minded vision within the city administration, a unified vision and collaboration between the different departments can create synergies and multiple benefits.

A win-win situation was achieved; action, capacity and benefits were discussed and mutually agreed upon in the contract.

**Results:**

- Project realized in 2 years from public procurement procedure to operation.
- Together, the 2 turbines generate around 10.000 Mwh yearly, an equivalent to the consumption of 5.000 Ecopower’s members.
- Continuation of collaboration between Ecopower and Eeklo
- Active involvement of citizens in the climate actions of Eeklo
- Model is being internationally examined and replicated

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## Kuurne-BeauVent

City	Kuurne	
	Inhabitants	13.105
	Climate Action Commitment	Covenant of Mayors, signed in October 2013
	Vision citizen participation	Weak participation
Cooperative	BeauVent	
	Type Cooperative	REScoop
	Year Establishment	2000
	Full time eq employees	5
	Number of Members	>3000
	Type of Projects	Solar, Wind, District Heating, Energy Efficiency, CHP, ...
Type of Project	Solar PV installation on municipal rooftops	
Year of Project	2017	
Type of agreement	Call for Tender with Specific Criteria	
	Right of exploitation of PV panels of the rooftops for a period of 20 years, leasing service.	
	Criteria of Evaluation	
	Price	50 Points
	Amount of total installed capacity offered	20 Points
	Guarantee of production kWh/kWp	20 Points
	Methodology for financial citizen participation <ul style="list-style-type: none"> <li>Scale of action to integrate citizens: how many stakeholders are they trying to reach</li> <li>Depth of action: how intense is the intended action</li> <li>(Financial) return for stakeholders</li> </ul>	20 Points
Methodology for Third Party Financing of PV installations on roofs not owned by the municipality; reaching out to its citizens and businesses who also would like to invest in solar on their roof: <ul style="list-style-type: none"> <li>Scale of action to integrate citizens: how many stakeholders are they trying to reach</li> <li>Depth of action: how intense is the intended action</li> <li>Financial benefit for stakeholder</li> </ul>	30 Points	

### Background Kuurne:

In the region around Kuurne, the 13 municipalities, decided to join the covenant of mayors as a region in October 2013. Instead of an individual climate action plan for every municipality, there was a combined action plan for the whole region, so as to combine efforts and capacity. There was a political commitment, adhered by the different parties to commit to the covenant of Mayors. Active citizen engagement is less promoted by the municipalities, but it did not prevent the municipality to come up with a CfT which provided a space for citizens to be engaged more actively. A few ambitious people can start this and stir up the participation process.

The plan to put solar panels on the municipal roofs was already there for 15 years. Once a Call for Tender was organized, but due to the cutting back of the governments support for solar energy it had to be cancelled. Now, the municipality wanted to invest themselves in solar panels. Due to its budget constraints, it decided to use a third party financing scheme and considered the cooperative model as a way to move forward. In order to implement the covenant of mayors already several actions were undertaken; increasing the cycle pathways and changing the road circulation in the center to promote walking and cycling, charging points for electric vehicles, revising the public lighting system etc.

Financing the implementation of the plan is a major obstacles for the municipality. This was one of the reasons why it contacted the cooperative instead of doing the investments themselves. Another obstacle faced is the complexity of the energy landscape. There are so many different options and players in the market; private companies, public companies, network operators, cooperatives etc. who all offer different services and it is very difficult to know what the best for each case is.

### **Background BeauVent:**

BeauVent, founded in 2000, is together with Ecopower one of the first energy cooperatives in Belgium. The vision that led to the start of the cooperative was a drive to help achieve the Kyoto targets. Now the vision is renewed, contributing to a 100% renewable energy in Belgium by 2050. BeauVent mainly focusses on projects in renewable energy projects and energy efficiency.

In their project portfolio they have 3 wind turbines, several large roof top PV installations, 2 cogeneration projects and are in the development of a district heating network. The cooperative's first project were two wind turbines owned by the cooperative in Nieuwkapelle. During this project citizens were actively engaged in the process. A second wind project was realized later, in cooperation with Ecopower. In total a capacity of 2.3 MW. Later on, BeauVent mainly focused on solar projects. The total installed capacity of the solar projects combined is 3.5 MWp. These projects include private households, schools, rooftops of municipalities, and private corporations. Currently there are 6 people working for the cooperative, equivalent to 5 people full-time working.

To achieve their mission, the cooperative also founded the nonprofit organization ZonneWinDT, which was later renamed as "BASbouwen". This organization now gives consulting to private households, SME's, schools, for both optimizing energy performances and sustainable building. Additionally it calculates the energy performance and indoor climate of buildings, and provides education about energy efficiency in buildings. This organization has become the official knowledge partner of the province West-Flanders in advising and implementing energy efficiency measures in buildings. The nonprofit organization employs 7 people, a 5 people full-time equivalent. Part of BeauVent's profits were used to finance the nonprofit, now it is more established and can finance itself.

### **Description of collaboration:**

The collaboration took form under the Call for Tender (CfT). The call was for a third party to finance, install and maintain the solar PV installation on the rooftops of the municipality's buildings. The exploitation rights are attributed for 20 years and should have a positive financial outcome for the municipality. Additionally, specific requirements were formulated:

The criteria for this collaboration were:

- Price (50 Points)
- Amount of total installed capacity (20 Points)
- Guarantee of Production (kWh/kWp) (20 Points)
- Methodology for financial citizen participation (20 Points)
  - Scale of action to integrate citizens: how many stakeholders are they trying to reach
  - Depth of action: how intense is the intended action
  - (Financial) return for stakeholders
- Methodology for Third Party Financing of PV installations on roofs not owned by the municipality; reaching out to its citizens and businesses who also would like to invest in solar on their roof (30 Points):
  - Scale of action to integrate citizens: how many stakeholders are they trying to reach
  - Depth of action: how intense is the intended action
  - Financial benefit for stakeholder

The benefit of this is that the municipality has control over its vision was able to reflect this in the CfT, while at the same time be aware about the needs and strengths of the cooperative approach.

The municipality of Kuurne supported the cooperative in the campaign to reach out to the citizens through their communication channels; local newspaper, newsletter, email and their website. Also the municipality provides a room where information session can be held to communicate with the citizens. Kuurne provides a framework where the cooperative can act.

The non-profit organization BASbouwen, also received support, not from the municipality but from the authorities of the province. Private households, schools and non-profit organizations can get advice for free. The provinces has a collaboration agreement with BASbouwen, paying a fixed fee for these provided consultancy service. The benefits for the authorities here are that they don't need to get the expertise in-house while still having a neutral contact point for the citizens to facilitate energy efficiency in existing and new buildings.

### **Mutual benefits:**

#### **Benefits for Kuurne:**

- Citizens are engaged, and through citizens becoming members of the cooperative, this engagement has a stronger momentum and inspires more people. This engagement can lead to future actions and projects
- With the single effort of writing out a tender, multiple objectives are achieved. The tender creates favorable conditions for the citizens to invest in renewable energy, it stimulates citizens to put PV on their own roof, promotes themselves as a role model in the energy transition, promoting themselves as a municipality that involves citizens and acts in their interest, reduces its own energy bills and has an awareness campaign to make citizens think about the energy transition.
- Impact is increased; Solar PV is installed, not only on their own roofs but also of the citizens and companies
- CfT as a tool to implement their vision
- BeauVent provides all the data of private projects it realizes in the city's territory, and partly unburdens the municipality of the efforts for reporting the actions and progress to achieve their CoM commitment.
- As finances were a constraint for the municipality, this collaboration led to a financial positive outcome for the municipality

#### **Benefits BeauVent:**

- New Project
- New members of the cooperative

- Because of the bundling of PV projects, economies of scale can be realized whereby a lot of smaller solar projects still can be financially profitable.
- CfT gives the cooperatives security that a project is going to be developed and that the time invested is less likely to be wasted.
- Embodying their mission

### Weaknesses

- Municipalities take time to make decisions, and the process takes often more time than expected.
- Setting up a CfT is time consuming process.

### Evaluation Success

The vision of citizen ownership and citizens as a more active role in today's society is not always aligned, but the targets to work towards a sustainable future are aligned, which makes the collaboration possible. The cooperative model is more a tool for municipality to achieve their targets, rather than seeing the values of the model itself. The cooperative needs to prove that its model is the most convenient for the municipality to achieve its goals. The CfT assures a clear commitment from both sides with clear expectations and targets. The communication with the municipality was a success; as the municipality of Kuurne was convinced about the cooperative approach, no energy was lost in trying to persuade the city council. There was a clear Win-Win situation: the city works towards its sustainability goals with relatively little effort, and is able to raise an awareness campaign to inform the citizens of the actions of its municipality and to mobilize them to join in the sustainable transition. The cooperative takes care of this campaign, and if this campaign had to be performed by the city itself, it would have cost a lot more resources and energy. At the same time, by providing the opportunity for citizens to install PV at favorable conditions, it increased the total installed capacity compared to publishing a CfT which only takes the public roofs into account. Through the project, sustainability is highlighted and this creates new enthusiasm and action for the citizens to work toward the sustainability goals. The cooperative wins by having a new project and revenues. The citizens win through participation, and the environment also wins.

The collaboration also testifies of a level of trust, also for the citizens, the trust in both parties is increased; the citizens trust the cooperative because the municipality has screened it first through the tender procedure, and the trust in the municipality is increased as it reached out to the citizens to facilitate the PV installation service.

### Results:

Beauvent offered to install in total around 500kWp. The savings the municipality achieves, is estimated around 5.000-10.000 per year, and this for a period of 20 years. Citizens are all invited through mail, to join an information evening on the financial participation for the public PV installation, and how they can invest in PV on their own roof. Also facebook and the communication channels of Kuurne are used to reach out to citizens. The overall aim is to raise €250.000 of citizen capital.

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## Ghent-EnerGent

City	Ghent	
	Inhabitants	251.133
	Climate Action Commitment	Climate neutral 2050 Covenant of Mayors: Member since 2009
	Vision citizen participation	Strong participation
Cooperative	Energent	
	Type Cooperative	REScoop
	Year Establishment	2013
	Full time eq employees	1
	Number of Cooperants	+100
Type of Projects	Solar, Wind, Energy Efficiency	
Type of Project	Sustainable renovation in neighborhoods	
Year of Project	2016-ongoing	
Type of agreement	Subsidy for promoting sustainable action at neighborhood level	

### Background Ghent:

Ghent is the second biggest city in Belgium, with its 251.133 inhabitants. As the first city in Flanders, Ghent signed the Covenant of Mayors in 2009, and has the ambition of becoming climate neutral by 2050. The city's ambition is translated into an elaborate climate plan, focusing on 6 priorities; building stock renovation, city as role model, renewable energy, mobility, food, and business sector. Concerning the building stock renovation, the city has elaborated different services for its citizens to implement its plan. One of these services is the "Energiecentrale", a central body and contact point for citizens to address all the questions concerning energy efficient renovation and a free energy audit of the house and advice which measures to implement. "Sustainable neighborhoods" is a facilitation program put in place to get sustainable citizen initiatives of the ground. When these initiatives need support, advice, expertise to the city provides financial support in this first phase so that they can become autonomous afterwards. Concerning renewable energy, the city of Ghent openly supports citizens who organize themselves in citizen initiatives like energy cooperatives. The city also facilitated citizens investment in renewable energy through the development of energy maps; showing the energy solar potential of rooftops and through thermal pictures, the potential for rooftop insulation.

Ghent is marked by its history of a strong cooperative economy. Citizen participation has been a key element in Ghent's politics over the last years. This is reflected in the many projects and participation tools the city has put in place; from participation fora and platforms, and budgets available for citizens to implement a project in their neighborhood, to the active support for pioneer citizen initiatives and organizations concerning sustainability. Also the study conducted by the city to map all the Commons initiatives, is an example of its progressive vision. The city gives itself a coordinating role, enabling and coordinating different initiatives, while keeping control to some extent, and guarantying that the overall direction remains within the vision of the city.

### **Background Energent:**

Energent was founded in 2013. Currently, one full time employee is employed. Energent started with the vision to contribute to the energy transition in a democratic way. Everywhere wind turbines were erected by big energy companies but there was no democratic participation. In countries like Germany and Denmark, back then, 150 cooperatives per year were started. Belgium was lagging behind in this transition and Energent wanted to join the transition, keeping the power in the hand of the people.

The process of developing a wind project in Belgium is a time consuming process and so far, no project has been realized. Currently one wind project is under development. Energent mainly focusses on energy efficiency measures in existing buildings and solar projects. Energent manages the project “Wijkwerf” (neighborhood construction site), a project that unburdens citizens in the process of renovating their house. A lot of knowledge and expertise is needed to find the right technology, the right contractors, compare the contractors etc. Wijkwerf engages a neighborhood to do these renovations collectively so that they can all benefit a better price. The whole process of knowing what to renovate, contacting contractors, comparing offers, and following up the works are coordinated and facilitated by Energent. The “solar campaign” of Energent reaches out to the citizens of Ghent and facilitates the installation of solar PV. This group purchase approach leads to favorable price conditions for the citizens.

Both the cooperative and the city mentioned professionalization as an obstacle. The cooperative struggles to professionalize because it need a steady revenue to pay more staff. The city needs to be convinced first of its capacity before it hands out significant projects to the cooperative. The subsidies received are welcome but in the renovation sector, the margins are too low for the cooperative to make substantial revenues. Further professionalization is difficult. Wind projects would be the perfect source of revenue for a starting cooperative to professionalize but the situation in Belgium makes this complicated.

### **Description of collaboration:**

The project “Wijkwerf”, launched by Energent, is facilitated by the city of Ghent in two ways. This first one is through technical advice: The city’s “energiecentrale” has already the technical expertise and is freely available for its citizens. Energent uses this service, and complements it with a full support in the renovation process. Another way the city supports Energent is through the subsidizing part of the full time employee’s wage. This subsidy is part of the city’s budget set apart for the program which encourages neighborhood actions who promote sustainability and was not aimed specifically for energy cooperatives. This support is necessary for the project to continue because energy renovations do not pay themselves back. The main reasons why people invest in the renovation is to increase the comfort and, and to increase the value of the property with the prospect of selling it in the future.

The cooperative in return goes to the neighborhood, and engages the people to do a renovation together with the neighbors to take advantage of better prices. The cooperative goes from door to door to talk to the people, and communicates the message on a very personal level.

Additionally, the city of Ghent facilitates the startup of the cooperative in several ways. It provides a place for the cooperative to organize its meetings. The city also actively promotes the “solar city campaign”. The city uses its networks, website, and spreads flyers to reach the citizens. The solar campaign needs less support from the city to be financially viable because solar projects pay themselves back more easily than energy renovations.

Another way how the city of Ghent facilitated a project where the cooperative also is involved is “Buurzame Stroom”. “Buurzame Stroom” is a pilot project and came about through the collaboration of citizens, the city of Gent, the local energy cooperative and the Distribution System Operator (DSO). Citizens went to the city with the question: “We would like to install some solar panels for the neighborhood on the garage boxes. Not everyone here has a good roof to put PV but there we have plenty of space. Would it be possible?” The city realized that this would be a more complex issue and that energy experts, a knowledge institution (Ugent) and the DSO (Eandis) should be present in this discussion.

Out of this situation a consortium emerged, of which Energent would be the general coordinator. One of the technical problems is that the network is on low voltage 230/400V, and therefore it has a limited capacity. If a lot of electricity is generated on site, the network might be overloaded. The challenge of this project is to implement in this neighborhood a smart grid so that the capacity. The projects consist of balancing out the energy consumption on neighborhood level, through generation of electricity, cogeneration, storage (heat, cold, and electricity), Electric Vehicles, demand side management and demand response management to minimize the impact on the distribution network. Also the social aspect of this project is important. The neighborhood has areas with energy poverty. An important target of this project is to include them into the energy transition and give them chances to participate in this project.

Buurzame stroom is a great example how a city can support citizens and use the citizen's enthusiasm to bring about successful and innovative projects. It is the convergence of active citizens, an enabling and supportive local government, and mission driven partners like, Energent and the University, that bring about innovation and sustainable change.

### **Mutual benefits:**

#### **Benefits for Ghent:**

- The cooperative is another channel to reach out to citizens, the neighborhood approach can reach out to people who otherwise would be left out.
- The cooperative is a tool to increase the public support of the city's policy.
- A labor intensive work that could not be done by the city is performed through active citizens.
- Action towards targets for climate neutral city
  - In terms of renovating building stock
  - In terms of increasing installed capacity of renewable energy

#### **Benefits for Energent:**

- Part of an employee's wage is subsidized
- Support in the startup phase of the cooperative
- Mission

### **Evaluation success:**

The aligned vision of the city is one of the success factors. The city wants to engage all stakeholders to achieve its ambitious climate goals. Both companies, organizations, universities and citizens. Participation is not a goal in itself, but rather to have the tool to achieve their sustainable goals and to gain public support for their policies. The city knows that public support is realized by giving the citizens opportunities to co-define the future. Both on city as on neighborhood level dialogues and debates are encouraged. The presence of a subsidy for neighborhood action was an opportunity for the cooperative

The city of Ghent would prefer the cooperative to be professionalized already. The collaboration has been limited until now for two reasons, which are interlinked. One reason is internal support of the city's administration; even with progressive politicians, the administration can be suspicious of citizens' initiatives. Perceptions that citizens are incompetent, amateurs, etc. can result in a reluctance to collaborate with them. The administration prefers to keep in control instead of putting it in the hand of citizens. On the other hand, as a starting cooperative, Energent's capacity is limited. Small solar projects have been proposed to be developed by the cooperative, however these small projects, with the current legislation, are generally financially not viable investments. A board of members with competent people is a factor which inspires trust, but the cooperative needs "to prove" itself as a competent market player to get hold of bigger projects.

The city of Ghent supports the cooperative through the subsidies but is limited in its contribution to professionalize the cooperative. The city needs to have reliable benefits in return to justify its public expenditure. Communication between the partners is good, however sometimes a bit slow. The

cooperative would like to see the city to act faster, but they need time to arrange themselves internally and create the needed support.

Although the collaboration is not perfect, there is a clear win-win situation, moving towards a common goal. Energent is positively perceived by the city. The subsidies and the fact that Energent is considered a partner in the journey towards the sustainable city testify this.

**Results:**

The project of Wijkwerf, after running for 19 months, has achieved the following realizations:

- 282 people applied for the service, out of which 171 asked for a bid.
- In total 70 renovation projects are finished, and 12 are still going on.
- 3 different neighborhoods were approached intensively

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## Halle-Pajopower

City	Halle	
	Inhabitants	37.500
	Climate Action Commitment	Covenant of Mayors, signed in June 2014
	Vision citizen participation	Medium Participation
Cooperative	PajoPower	
	Type Cooperative	REScoop
	Year Establishment	2014
	Full time eq employees	0
	Number of Members	120
	Type of Projects	Solar, Energy Efficiency
Type of Project	Energy Efficiency of Public Street Lights	
Year of Project	2017	
Type of agreement	CfT for financing placement of LED in the public street lighting, with the specific request for financial participation of the citizens.	

### **Background Halle:**

Halle, a city with 37.500 inhabitants, signed the Covenant of Mayors in 2014 together with 56 other municipalities in the province. The commitment to mitigate climate change and its long term action plan, was a political choice supported over the different political parties. The main focus of the city's action plan is being a role model for the citizens, mobility, and spatial planning and living. The city of Halle has less of a tradition to engage citizens in the shaping the future of their city. However, the commitment to climate action has fostered new interest to actively engage citizens. To have the LED lights for the public lighting system, financed through a citizen cooperative, was seen as a great opportunity to involve the citizens in the climate mitigation actions. Not only does it make citizens reflect about their own energy consumption and helps it to reduce energy consumption, but the city's vision to support and collaborate with the cooperative is to use this as an indirect way to leave space for citizens to implement their own policy. Citizens, through the cooperative, have money and capacity available to shape their city. And as the citizens are organized in a cooperative, the communication between citizens and local policy makers is facilitated.

The obstacles the municipality is facing in implementing their energy action plan is a lack of capacity; both financing the implementation as well as the amount of staff that can be dedicated to this. Another obstacle is achieving public support and committing citizens to save energy. This is needed to achieve the 20% energy consumption reduction.

### **Background Pajopower:**

Pajopower was founded in 2014, as a reaction to the 'wind rush'. Where project developers contracted the sites and left citizens out of the picture. By starting the cooperative, its members wanted to make a statement that citizens are active and want to be active players in the energy transition. First the idea was to develop their own wind project, but when there was no support for a project as such in the local

community, it started looking for other feasible projects. Currently Pajopower works with schools to reduce their energy consumption. This is done in 2 phases: the first phase, the low hanging fruits are identified and implemented. The costs are usually less than 10.000€. The cooperative pre-finances this and gets the money back through the reduction of energy (ESCO-model). Parents have the opportunity to invest in the school of their children through buying shares in the cooperative. In a second phase, when a relationship of trust with the school is established, and the measures have proven their success, more measures can be implemented, with higher investments. The cooperative also looks together with schools if they can get subsidies to reduce the investment cost. This same approach can be used with public buildings. Pajopower is also investigating to implement solar projects. One of the main innovative projects of Pajopower is their collaboration with municipalities for replacing the public street lights to LED. Their campaign “adopt your streetlamp” was used to engage citizens to invest in changing the public street light.

Pajopower originated from the non-profit organization Paddenbroek, which was founded in 2009. It has 3 full time employed staff. Paddenbroek collaborates with Halle and 13 other municipalities in the region and mainly focusses on the sensitization of inhabitants of these municipalities through information events, group purchase for LED lights, insulation material, etc. In 4 of these municipalities they also launched the project “Kyotomobiel”, a mobile office stationed in the neighborhood they are addressing, assisting private households in the energy renovation process. The approach is similar to “Wijkwerf” in Ghent. In the past two years, over 300 households have been assisted, out of which around 120 implemented the renovation.

One of the main obstacles Pajopower faces is the professionalization of the cooperative. When working with volunteers it is important not to overload them, volunteers have a limited capacity and for the long term healthy functioning of the cooperative, this capacity must be respected.

#### **Description of Collaboration:**

A Call for Tender was published, with the request to finance the implementation of energy efficiency in street lights. This call highlighted in its criteria to give the opportunity to citizens to participate in this investment. Active efforts to mobilize and involve the citizens were core parts of the tender.

Pajopower committed themselves to take care of financing the investment through the citizens. Halle facilitated this by putting their communication channels at their disposition. They provided a space in the main shopping street to have a pop-up shop, sensitize and inform the citizens about the possibility to “adopt” their street lamp by buying a share of the cooperative. The city also provided a venture for the cooperative’s first general assembly.

The cooperative has received support from the municipality by giving technical and juridical assistance. The contact between the Halle and the cooperative allows that, if needed, the expertise in the city can be used to support Pajopower. As Pajopower, running on volunteers, still lacks the know-how, municipalities can pay for the feasibility study and investigate the juridical constraints.

Every year, 92 tons of CO<sub>2</sub> is saved. The yearly energy saving on the city’s expenses is estimated at €45.000. 10% of the savings stays with the city, the other 90% goes to the cooperative to pay back its investment. The members can then decide how and in which projects the rest of the money can be allocated. After 7 years, 100% of the savings goes to the municipality.

#### **Mutual benefits:**

Benefits for Halle:

- The investment does not need to be paid at once but is spread out over 7 years.
- The investment is budget positive, as 10% of the savings directly benefit the city
- Citizens are involved in the financial participation, “adopting” their street light. For this an intense information and awareness campaign is set up with little effort and burdens from the city. If money was just borrowed from the bank, the public would hardly have noticed the change.

- Unburdening the city’s administration; the cooperative takes care of the sensitization of the citizens through the street light project, as a first step to increase awareness about the need of energy savings. The city need this awareness if it wants to reduce the energy consumption by 20% but lacks the capacity to launch this campaign themselves.
- Little risk involved

**Benefits for Pajopower**

- A steady source of revenues over 7 years, but not enough to employ a staff member.
- New member of the cooperative and increased its profile
- Achieving mission through citizens engagement

**Weakness**

- Currently, this collaboration is only a financial construction, it would be better when this construction would be a leasing contract where the cooperative offers the service of lighting. This way the cooperative is owner of the assets.
- The financial benefits of this collaboration are limited. Multiple projects like this need to be realized to foster professionalization and so that 1 FTE staff can be employed

**Evaluation Success**

The collaboration is still ongoing. So far it has been a great win-win situation. The strengths of both parties were used. The cooperative contributed the financial and human capital, whereas the city provided the juridical and technical assistance. Political courage, vision and will to act to mitigate climate change was a factor which enabled the collaboration. Also the previous collaboration of Pajopower with the province was also a factor which inspired trust and facilitated the collaboration. The communication between the two parties is facilitated through the local group of volunteers and the city’s sustainability official. The vision of the city is that citizen participation is crucial to achieve the climate goals. The empowerment of citizens in itself is secondary to the achievement of the climate goals. The vision of the REScoop is slightly different, where the sustainability action is a tool for achieving a societal change and empowerment of citizens. However, the targets are aligned, allowing a good collaboration.

**Results:**

92 tons of CO<sub>2</sub> are saved yearly.

As the campaign is still running, not all shares are sold yet, but so far, over 400 out of the 900 shares are taken by citizens.

**Contact details**

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### Lochem-LochemEnergie

Municipality	Lochem Netherlands	
	Inhabitants	33.000
	Climate action commitment	Climate neutral 2030
	Vision citizen participation	Strong participation
Cooperative	LochemEnergie	
	Type Cooperative	REScoop
	Year Establishment	2011
	Full time eq employees	4
	Number of members	800
	Type of Projects	Sun, Wind, small Hydro, Energy Efficiency, Mobility, experiments such as Home Energy Systems and SmartGrid
Type of Project	Facilitation service of requesting subsidies	
Year of Project	ongoing	
Type of agreement	Additional subsidies for energy renovation for cooperative members	

#### **Background Lochem:**

The municipality of Lochem aims to be climate neutral by 2030. It was the ambition of a driven local politician, Thijs de la Court, to make the city climate neutral. He had a strong vision on what a sustainable municipality could look like, and so he stirred up citizen initiatives related to sustainability. Out of this enthusiasm, 4 people decided to start the cooperative LochemEnergie. The city supports the cooperative and its vision, and tries to make the cooperative participate in the projects and discussions whenever possible. The municipality has fostered the development of “town councils”; citizens in the small villages organize a meeting from time to time where they can give recommendations about how they would like to

see their town develop. The citizens here have an informative and advisory role but they do not set out the policies. However they are strongly engaged in the development of the municipality.

### **Background LochemEnergie:**

The energy cooperative was founded in 2011. It started with the focus on local production of renewable energy, developing their own renewable energy projects. Lochem gained its expertise by hiring experts for their first projects, so as to learn from them and use the knowledge to develop their own projects. This way the money and knowledge remains within the community. The cooperative also facilitated the energy supplier for its members through a collaboration with Eneco, who provided a favorable contract for the cooperative's members. The cooperative was initiated in close collaboration with the local authorities and the collaboration between the two has remained. The cooperative has developed solar, wind and hydro projects. One of its first projects was a test pilot for smart grids in a neighborhood in Lochem. Also on the municipality's rooftops, a collectively owned solar PV project was realized on the city hall. The cooperative is active in schools, combining the installation of solar panels with the sensitization of primary school students by monitoring and making the energy production visible. The student's parents have the opportunity to invest in the project and receive a return on investment. A main contribution of Lochem Energie to the community is the energy coach program, providing advice to the citizen on how to reduce their energy consumption and advice in getting access to subsidies when renovating the house. Besides this, it is also active in the field of sustainable renovation and isolation of buildings, electric mobility, and energy efficiency. LochemEnergie collaborates with the cooperative "Opgewekt Lochem"; a collaboration of local contractors, installers and energy advisors. Together they apply the ESCO-model to achieve energy reduction in private households. The municipality in cooperation with LochemEnergie cooperative trains citizens to become energy coaches, these volunteers help other citizens in saving energy.

### **Description of collaboration:**

The Municipality of Lochem wants to increase the energy efficiency of the houses of the region. In order to facilitate and increase the numbers of subsidy applications, 'LochemEnergie' bundles the application process for subsidies. This service is free for the members of the cooperative. The city of Lochem, in collaboration with the province, helps the cooperative increasing its capacity by providing additional paid staff. Additionally, citizens applying for subsidies through the cooperative, are eligible to a subsidy of €750 instead of €500. This is made possible through a neighborhood subsidy provided by the province; when people collectively renovate their house, a bonus subsidy is received. Members of the cooperative do not necessarily live next to each other, but the municipality agreed that they can grant this additional fee to members of the cooperative as it was in line with the intention of the province to speed up the renovation of buildings.

The cooperative's added value to the local authority is that it has a list of engaged citizens, and are an additional channel for communication to its citizens. But also the actions related to the purchase and advice of clean energy, solar panel group purchase, their training and education for citizens etc. make the cooperative a welcome partner in their effort to become climate neutral. Lochem supported the start of the cooperative and facilitated this process in different ways, it helped with the development of their website, offered space where the cooperative could have their meetings. The local authorities also facilitated the promotion of the energy cooperative. The official inauguration of the cooperative was during a big sustainability event organized by the local authorities, making the cooperative known immediately to a wide public. The local authority also facilitated the energy coach program and refunds the transportation expenses of these coaches. On top of this, the local authorities ask the energy cooperative to investigate the feasibility of potential projects and develop innovative projects. The municipality pays for these services, however these services are small, so as to avoid the regulation of public procurement.

However the municipality realizes that the capacity of the cooperative is limited. Bigger cooperatives/companies are needed in order to achieve projects of bigger scale, which are needed to

become climate neutral by 2030. Only 20% of the electricity consumption in the region is by private households, the industry consumes the majority of energy and the cooperative has no impact on this.

**Mutual benefits:**

Benefits for Lochem:

- Through the engagement in the cooperative, citizens are more involved in the sustainability transition
- Means to achieve climate ambitions
- Smart use of provincial subsidies
- Stimulate the local economy; especially the building sector

Benefits for LochemEnergie:

- Citizens are given incentives to become member of the cooperative
- Receiving support in the start-up phase, and receive additional paid staff
- Achieving their organization mission

Weakness

- Even with the support, the cooperative has not yet managed to professionalize to be able to handle bigger projects.

**Evaluation success:**

There is a clear shared vision. The municipality envision itself mainly as a directing role, coordinating and facilitation different players. Its political vision and ambition to address climate change was an important factor the success of the collaboration. Citizens and companies are crucial players in this story. Citizens are becoming more equal partners in the transition and the city needs to handle the initiatives and active engagement of the citizens in a flexible way. The communication between the Energy cooperative passes through the city’s officials, and these communicate internally with the city council. Both parties benefit from this collaboration, however there is the risk that cooperatives become a cheap labor force for the municipality which prevents further professionalization of the cooperative. The capacity of the cooperative is limited, and for the implementation of bigger projects, the municipality plans to contract other market players.

**Contact details**

LochemEnergie	No specific person from LochemEnergie is interviewed, but the city official of Lochem was also member of the cooperative and was able to provide insight from both perspectives.  <a href="https://www.lochemenergie.net/">https://www.lochemenergie.net/</a>	
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<ul style="list-style-type: none"> <li>• <a href="https://www.lochem.nl/">https://www.lochem.nl/</a></li> </ul>		