

Learning Handbook

Citizen Financing Module

This module introduces citizen financing as a mechanism for financing sustainable energy and climate action projects, such as renewable energy resources (RES), in the European Union.

This module covers basic information on citizen financing, including definition, characteristics, opportunities and barriers, while, also, providing step-by-step guidelines on how projects can be financed and what can be learned from the best practices and case studies in the European Union.

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Date: May 2022



The PROSPECT+ project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101023271

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List of Abbreviations

CoM	Covenant of mayors
EE	Energy Efficiency
PB	Participatory budget
RES	Renewable energy sources
SECAPS	Sustainable Energy and Climate Action

Introduction

Module description



This handbook offers insight into the inner workings of the innovative mechanisms of “Citizen Finance” and attempts to serve as practical guidance for local and regional stakeholders. Citizen Finance is not a standardized mechanism for funding climate action projects and initiatives but could be seen as a practice. However, there have been several examples where Citizen Finance has been used for adequately funding Sustainable Energy and Climate Action projects, so-called SECAPs. In broad terms, Citizen Finance is a form of a financing instrument where citizens pool their financial resources to fund initiatives that create common goods. The two most common and relatively advanced forms of Citizen Finance are: (1) Crowdfunding and (2) Financing through cooperatives. These two forms of Citizen Finance will be the focus of this module. The module also provides step-by-step guidelines on how projects can be financed and what can be learned from the best practices and case studies in the European Union.

Module objective

Mentees

At the end of this module, mentees can achieve the following learning objectives:

- Understand the innovative financing schemes relevant under Citizen Finance
- Recognize the barriers, incentives, advantages, and disadvantages of the innovative Citizen Financing schemes
- Examine which sustainable energy and climate action projects can be financed by innovative Citizen Finance schemes; crowdfunding and cooperatives
- Analyse the success factors and lessons learnt from successful projects

financed by innovative Citizen Finance schemes; crowdfunding and cooperatives

Mentors

At the end of this module, mentors can achieve the following learning objectives:

- Share content knowledge on the topic of innovative financing schemes that are relevant under the Citizen Finance
- Share a practical experience in implementing sustainable energy and climate action projects and support others in overcoming different barriers
- Showcase sustainable energy and climate action projects successfully financed by innovative Citizen Financing schemes
- Learn from mentees' cities and regions about what projects they want to implement and which innovative financing schemes they want to apply

What is Citizen Financing?

Citizen Financing is sometimes referred to as citizen funding or public financing. It is an innovative financial scheme that uses people's investment for funding a project for the common good. In other words, it is a financing scheme where people (or communities) pool together their own financial resources to create an infrastructure for their common good. Citizen Financing can occur within all sectors of society and can help in addressing the impacts of climate change through financing innovative schemes, for example: Transportation, Agriculture, Energy, finance, Retail and Housing (OECD/UN/The World Bank Group, 2018). However, as an observation from various best practices, it can be concluded that citizen financing has been more widely adopted in climate actions related to Renewable Energy Solutions (RES) and in Food Security sectors. Some examples of sustainable infrastructure development through crowdfunding are also found in the literature. Therefore, this module particularly addresses the use of Citizen Finance within Renewable Energy Solutions (RES) and Food Security initiatives.

Arrangements in Citizen Financing

As stated above, Citizen financing is more of a localized practice than a standardized mechanism. It has been acknowledged that Sustainable Energy and Climate Action Projects are a European Union (EU) priority. However, financing these schemes through traditional channels can be challenging. To address the challenge of financing climate actions within the EU, one of the suggestions is for the Local and Regional Authorities to help generate demand and opportunity through the local communities, for which citizen financing could be a potential option (Rossi et al., 2017). Through a study of several cases and best practices in citizen financing, we have concluded that there are several ways in which Citizen Financing can be organised. However, it can be seen in literature that Crowdfunding and Cooperatives are the two mechanisms that have been most developed and are widespread across Europe in terms of financing climate actions and projects. Other forms of Citizen Finance exist, however, these are more ad hoc and localised actions. Therefore, in this module, citizen financing of climate actions is discussed specifically using Crowdfunding and Cooperatives.

Crowdfunding

Crowdfunding can be defined as a joint voluntary (collective) effort by individuals, groups, enterprises, or organisations to pool their money together. It can be initiated by either citizens or organisations (Europe Cooperatives, 2015). Although this form of Citizen Financing is not new, it became popular after the 2008 financial crisis. Additionally, it has benefited from technological advancements and wide internet availability, a favourable macroeconomic environment and relaxed regulatory financial controls in the online sector (in comparison to banks/ traditional finance routes) (Jenik et al., 2017).



Crowdfunding is a non-traditional financing method using the personal investments of citizens. Oftencitizens and Sustainable Energy and Climate projects connect via online platforms. As this innovative financing mechanism is not standardised, there is no one clear definition. However, Jenik et al., (2017) recognised three key components “(i) raising funds in small amounts, (ii) from many to many, (iii) Using digital technology.” (p. vii)

Their publication (Ryu & Kim, 2016) summarised crowdfunding into four major categories:

- 1) Donations, where the sponsors expect no returns;
- 2) Sponsoring, where sponsors provide funds as a loan, with an expectation of returns;
- 3) Reward-based, where sponsors receive rewards by backing a project;
- 4) Securities-based investment where the sponsors are investors receive equity

stakes

In a crowdfunding scheme, anyone can contribute, but it is primarily aimed toward citizen/public engagement. The crowdfunding campaign generally collects small contributions from a large number of citizens, typically through an intermediary web-based platform also known as a crowdfunding platform (CrowdFundRES, 2018). Crowdfunding platforms are accessible to all but are aimed at large crowds of citizens (Jenik et al., 2017). It is documented that the success of a crowdfunding project relies on the participation of citizens as sponsors. Although crowdfunding platforms and Sustainable Energy and Climate Initiatives may benefit from the current relaxed regulations, this does pose a risk as this can make the process and delivery not transparent (Jenik et al., 2017). Additionally, as regulations are more relaxed, there is a need to generate trust between the crowd and the project. This can be met with a detailed project description, and by first launching a small project with a low funding limit (CrowdFundRES, 2018) to establish confidence in the project.

Crowdfunding can also be promoted by local authorities. When local authorities partner up with a crowdfunding platform, this allows for communication of citizens’ preferences through the financial support of a specific project, thus making them co-decision makers as well as co-founders of territorial development initiatives (Passeri, 2019).

Cooperatives

Cooperatives, also sometimes referred to as ‘coop’, have an established history. The following quote from the UN Secretary-General indicates that cooperatives have been established as a localised funding source:

“Cooperatives have long fostered inclusive and sustainable approaches to economic and social development at the local level. It is in keeping with this focus that cooperatives are expanding their development efforts creatively, into areas such as environmental sustainability and carbon neutrality, as communities around the world are struggling to adapt to climate change and strengthen their resilience against its impacts.”

(United Nations Secretary-General Ban Ki-moon: “Confronting Climate Change through Cooperative Enterprise”, Message on the International Day of Cooperatives, 5 July 2008, 2020)

Cooperatives are autonomous association with voluntary membership that works together for their mutual social, economic and cultural benefit (Europe Cooperatives, 2015). A cooperative business model is usually established by a not-for-profit community organisation, where citizens invest through a cooperative body. Typically, the organisational structure of cooperatives is governed by a general assembly, a board of directors with a committee system, a set of officers, and hired managers or paid employees. A cooperative can simultaneously act as an association and as an enterprise. Internally, cooperatives operate as an association but towards the outside world, they act competitively and dynamically like a business (Europe Cooperatives, 2015). Cooperatives are funded by the investments from the members, with or without external financial support (APEC, 2009). These members participate in decision-making processes as the cooperatives are managed collectively. This form of Citizen Financing seeks to address both members' and community needs. They raise financial support through collective membership fees rather than donations or external funding (Europe Cooperatives, 2015). The cooperative takes care of all administrative and operational functions, such as the installation, maintenance and safe operation of projects. It also manages the finance and payments between users, construction companies, and the cooperative (ADB, 2015). This autonomy of organisational arrangements means that the Cooperative has some flexibility. For example, there have been several cases where the mechanism has been used to fund local energy production. Both citizens and municipalities can purchase shares in the cooperative and so become members. They then have input and thus influence decisions such as investment action, product pricing etc. Furthermore, as well as being able to purchase shares, local authorities can also create political conditions and give support so that cooperatives can function (Covenant of Mayors for Climate & Energy EUROPE, 2019).

The organisation of Citizen Finance

The first step in organising a citizen financing initiative is the selection of an appropriate citizen financing scheme. It is entirely a contextual issue to know which one of the two most popular citizen financing mechanisms may be more suitable than another. This handbook recommends two tools that can help stakeholders decide when and whether it is suitable to use citizen financing and which one could be more appropriate in a specific case. A decision tree (see Figure 1) is one of the tools that can be used to assess if Citizen Finance mechanisms are appropriate for financing a particular initiative.

A decision tree is a matrix scheme that addresses specific situations illustrating funding dilemmas in a typical sustainable action project. This matrix scheme is not binding and in general, it is a mixture of financing schemes. An advantage of a decision tree is that it integrates several situations in one framework since most of the financing challenges and solutions are not stand-alone but a combination of situations and options. Moreover, a decision tree facilitates a combination of citizen financing with other financing schemes. This tool also shows that crowdfunding could be a viable option when the municipality has limited resources to fund a Climate Action project or initiative. Based on this tool, it can be seen that citizen financing, specifically crowdfunding schemes, is an appropriate alternative funding source to traditional financing institutions, in particular for a small-scale project, as there are fewer restrictions on the use of funds.

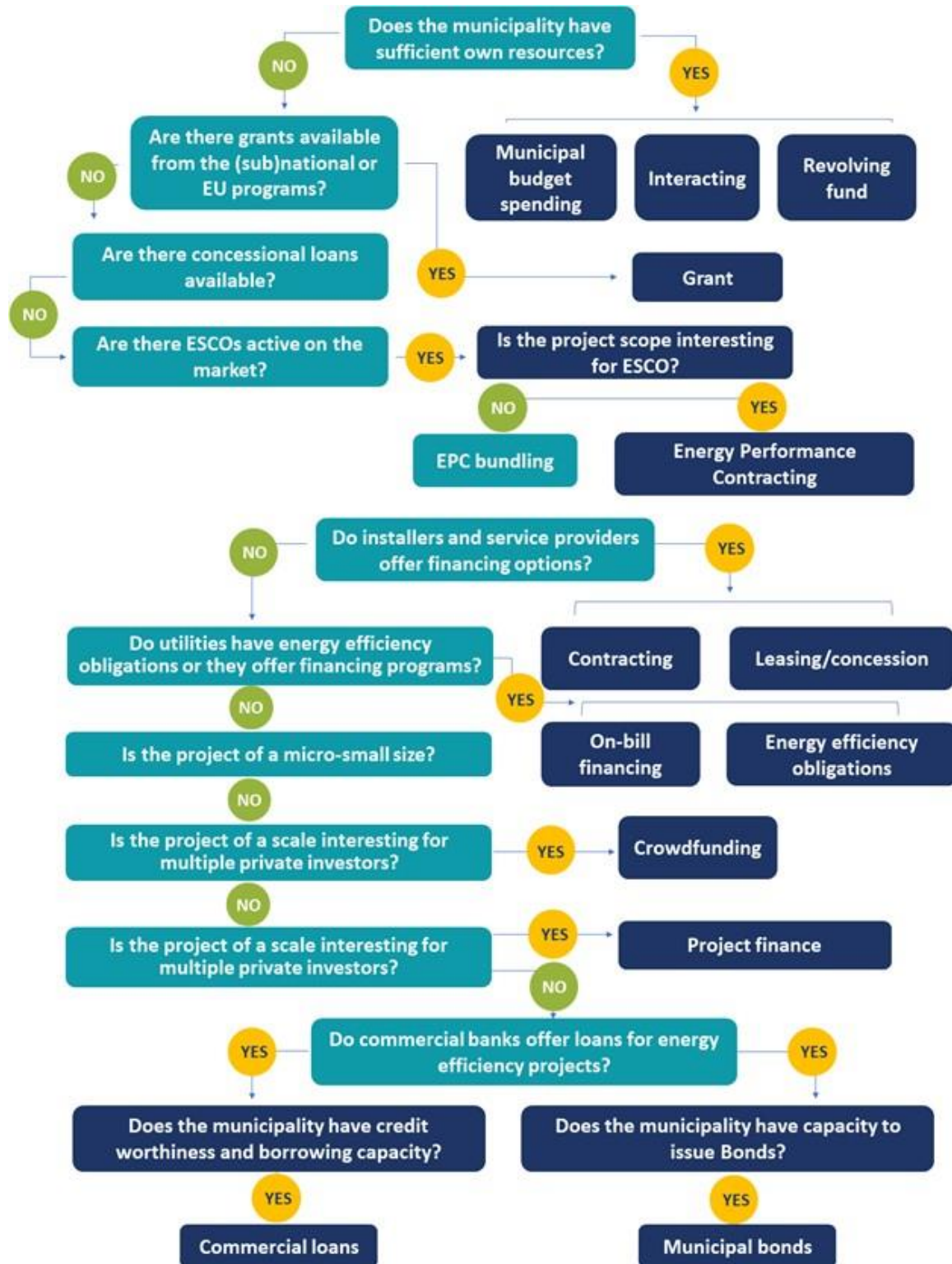


Figure 1. Decision Tree

Source: Novikova, et al., 2017

Figure 1: Decision Tree

Another tool to help decide on which Citizen Financing arrangement is most appropriate is a matrix with two indicators. This considers how restricted (and flexible) are the funds given the duration of project implementation. In other words, it intends to clearly outline the availability

of disposable finances during the project implementation period. The matrix considers the political and financial environment that could potentially influence the project. For example, if there are other appropriate innovative funding schemes also available, or if there are any restrictions and specific expenditure guidelines regarding the project funds, etc. Citizen Finance could be a funding mechanism for such projects where the funding source has more flexibility than traditional funding mechanisms.

Secondly, this matrix considers the temporal element of the project itself, it takes into consideration whether a project has a short or long lifespan of implementation and impacts. This perspective also contributes to determining which type of Citizen Financing project is the most suitable.

Crowdfunding schemes are more suitable for short term projects as the arrangements are more suitable to manage for a short-term initiative. Crowdfunding governance frameworks do not define the long-term responsibility of assets created through a crowdfunding initiative. Typically, assets created through crowdfunding are transferred to the owners, who then reserve the responsibility to maintain the assets in the long term. However, the advantage of the crowdfunding mechanism is its fast implementation possibilities. The online platforms can quickly and directly inform citizens and also move funds to the project (Hasnan, 2019), thus supporting rapid implementation. They also reduce the number of intermediaries/agents and/or the management board. However, some crowdfunding platforms do charge a fee. In comparison to crowdfunding, cooperatives are more suitable for sustaining long term projects as they generally take a long-term financial view (Ilo.org.2020). Although a limitation of cooperatives is commercial viability, as cooperatives are not restricted to the short-term gain. Cooperatives are also economically more resilient than purely commercial enterprises, this is because cooperatives are collectively managed, which allows them some flexibility during times of economic instability.



Figure 2. Financing schemes matrix of flexibility and continuity

Organising Crowdfunding

In general, the crowdfunding process can be observed through the following steps. Firstly, the project owner (or developer) creates a contract between themselves and the crowdfunding platform (it can be either an external or private platform). This contract is made to regulate fees and conditions of the service. This can often include listing fees, which may be a one-off payment or an annual subscription. These contracts can include other financial service costs, for example, handling fees and marketing efforts. In addition to the financial arrangements, there are several other issues which need to be agreed upon which include the duration of the fundraising campaign; the minimum target amount that is intended to be raised; clear descriptions of terms and conditions (which includes the details of the project, legislation surrounding it and the risks and warnings). This may include the use of the 'All-Or-Nothing' approach. Which, if the funding target is not reached, then the amount invested is returned to each citizen that has contributed. Once these terms have been finalised then the project can be listed on crowdfunding platforms.

Next, the fundraising campaign runs through several stages, from pre-kick-off presentations to the crowd announcing the upcoming investment opportunity, to the kick-off of the campaign, with continuous updates to potential investors about progress in fundraising and a final all-out effort to reach the target, or even better, overshoot it. The pledge and contract phases check the financial criteria of the initiative. Often the project initiative needs to be cleared in accordance with money laundering regulations and crowdfunding legislation, which is a service that is often provided by a bank or payment services provider. However, the regulations here are not standardised and this can vary greatly from country to country. Once cleared, the investor(s) and the crowdfunding platform (or in some cases the project itself), enter into investment agreements.

Not every project needs to use the same crowdfunding method. Literature has identified four main modes of crowdfunding, namely: "*donation-based, reward-based, loan-based, equity-based*" (Hasnam, 2019 p26). Hasnam (2019) gives definitions of each of these. Firstly, *donation-based* crowdfunding is where investors do not expect a return on investment. This can be seen as a charitable donation. Secondly, *reward-based* crowdfunding is where there are non-financial rewards for donating. These rewards in kind are acknowledgements of the contribution. Thirdly, *loan-based* crowdfunding is where an investor gives a loan to the project funders and the investment will be repaid. Finally, *equity-based* crowdfunding means that those who gave financial contributions are seen as stakeholders and so receive a share of the profits.

During the implementation phase, the total amount raised from the crowdfunding scheme is transferred to the project account. From the project account, regular payments are made for the project development and management activities. Project updates are shared with the investors regularly through reports that are prepared in accordance with the signed project agreement. During the implementation phase, an annual fee is paid to the Certified Financial Planner (CFP) (here 1% p.a. on the original fundraised amount) for monitoring and continued investor communication (von Ritter & Bley, 2016).

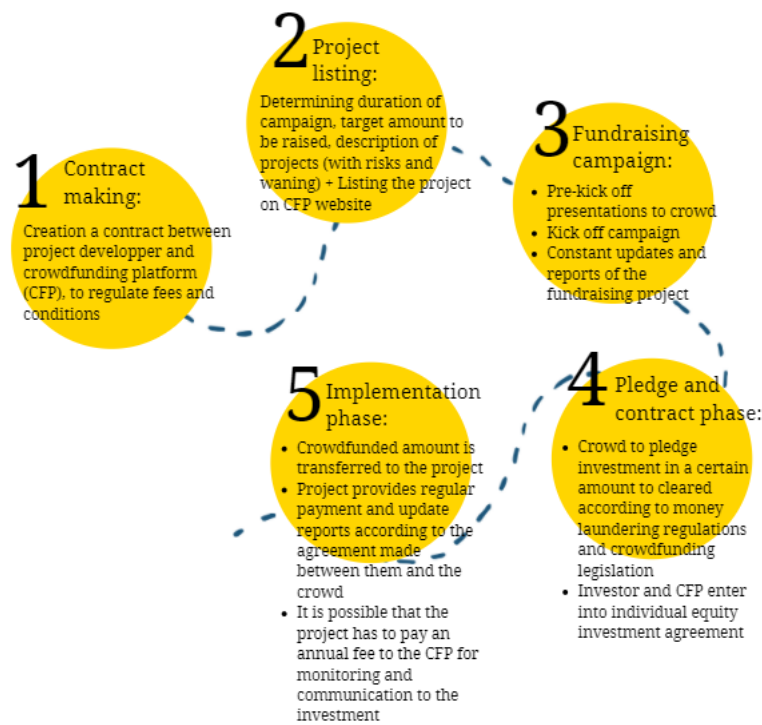


Figure 3. Step by step diagram of a crowdfunding financing scheme, Source: von Ritter & Bley (2006)

Organising Cooperatives

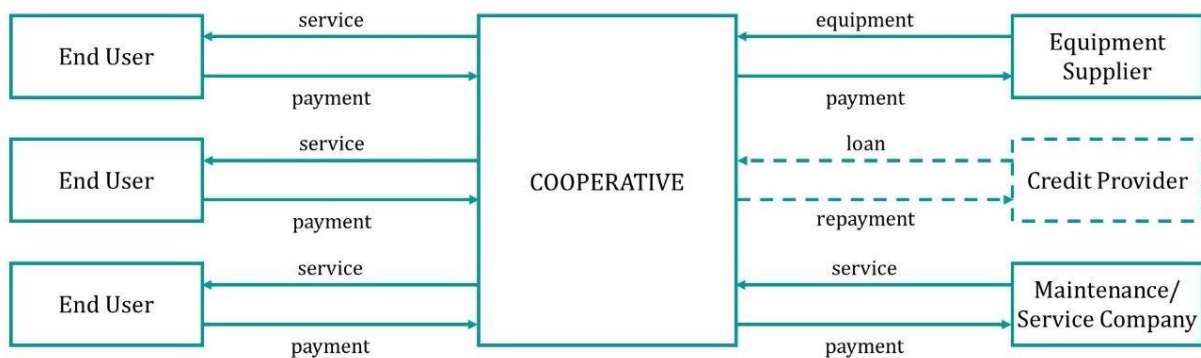
The business model of the project has to be feasible. This includes a skilful project leader, and the main authorisations to launch the project. Generally, the projects must fulfil the ethical expectations of the cooperative members. Moreover, the goal of a cooperative fund is to make sure that the governance within the projects will meet the ethical expectations of the participants and that it is transparent (REScoop, 2014). The goal is to assist the project leaders with the legal and economic aspects when required, but not to take control of the project.

To achieve this, they have a governance model where cooperative members contribute as a collective and the funds are not used for speculative purposes. Additionally, the project has to demonstrate that it is both economically and technically viable as well as socially and environmentally beneficial. There often needs to be a charter signed by all of the cooperative members. Some initiatives may require portions of the investment from local investors to ensure that there is local acceptance by the citizens to have a guarantee for the projects (REScoop, 2014).

As mentioned, cooperatives invest in long term visions. Therefore, a return on investments is mid-to-long term. This may mean that for a wind or solar energy project the return of investment is 5-7 years, and for Biomass is between 7-10 years (REScoop, 2014). These returns of investment are directed back into the cooperative, and as shown in Figure 4 they can be used for investments, payment of services or repayment of funds.

Cooperative

A cooperative business model is usually **established by a not-for-profit community organization**. It is **funded by member investments, with or without external financial support** (Asia-Pacific Economic Cooperation Energy Working Group, 2009). The **cooperative takes care of all administrative and operational functions**, such as the installation, maintenance and safe operation of projects. It also manages the finance and payments between users, construction companies, and the cooperative (Asian Development Bank, 2015).



Main features of the cooperative business model

Source: Asian Development Bank, 2015

Figure.4: Main features of the cooperative business model

Common Barriers to Citizen Financing

The practice of crowdfunding gained popularity in Europe after the financial crisis following the globaleconomic recession in 2008. As an estimate, there were about 200 general crowdfunding campaigns in Europe alone in the year 2012 (CrowdFundRES, 2018). Citizen Financing is a viable non-traditional way of raising funds when there are limited financial resources to fund a project. This financial scheme enhances the local economy as funds are invested in local initiatives which will ultimately benefit the local community. This method of engagement enhances the collective governance of a project.

Moreover, it ensures wider acceptability of the project as the citizens are directly engaged at all stages of the project development. However, financing climate action through citizen financing may face typical barriers.

The typical barriers to citizen financing could be categorized into three broad categories:

- (1) Policies and frameworks;
- (2) Implementation capacity and procedures;
- (3) Financial and economic barriers.

Further explanation of each kind of a typical barrier is given in Table 1 below.

Table 1: Key barriers to Citizen Finance

Policies and frameworks (e.g. Institutional, political and regulatory barriers)	Implementation capacity and procedures	Financial and economic barriers
<ul style="list-style-type: none"> • Cultural and political factors • Lack of knowledge creates a lack of legitimacy as a market player. This will cause a low trust in alternative financing • Dependent on the current political climate and power that shows the citizens' interest in supporting citizen-led energy transition and climate initiative • It may be challenging to fulfil commitments to a multitude of small investors • project planning, project identification, feasibility study, business plan draft, and legal agreement barriers • Not standardized or regulated i.e. There are regional differences 	<ul style="list-style-type: none"> • Technical, legal and administrative factors • Difficulty in accessing public support schemes and access to equity capital • Administrative barrier (cost and accessibility) to access infrastructure (for example the electrical grid) • Investors may be inexperienced or wish to exit • The process is not regulated • Insolvency of the platform operators • Misinformation or insufficient information to price the invested securities correctly • As cooperative tasks are performed by managers selected among the members, management skills and capacity may be limited • The participation of cooperative managers is voluntary, so a lack of commitment can sometimes be a problem 	<ul style="list-style-type: none"> • Economic and management factors • No guarantee of sufficient funding • The lack of a secondary market • The risks of the loss of a portion of the capital or failure to obtain the expected returns • Lack of investment in the pre-planning phase due to lack of guarantees of success and returns

(REScoop, 2013; CrowdFundRES, 2018).

Citizen Finance in the EU

Good Practices from around the EU

1. Mouscron's community energy model (COOPEM) "Joint investment cooperative"

COOPEM is an example of a joint investment cooperative. This cooperative engaged the citizens, businesses and municipality of Mouscron, Belgium. The cooperative offered technical and financial support and assistance to households and businesses at all stages of investing in solar energy (Bolle, 2019). Therefore, making it a 'one-stop-shop' in order to change to renewable energy and help support the city of Mouscron in meeting its commitments to the EU Covenant of Mayors as well as reducing energy costs for all involved.

COOPEM assisted both individual households and businesses through an innovative service model. For individual households, COOPEM assisted stakeholders with the payment of the upfront costs of asolar PV installation, giving technical assistance and administrative support, as well as monitoring and validating the installations. COOPEM helped to manage high investment and start-up costs as they advanced regional solar subsidies which were normally spread over a fixed time frame (normally five years). Additionally, COOPEM helped manage costs by jointly buying equipment from local suppliers. Furthermore, a return of 6% on investment was expected (Bolle, 2019).

For companies, COOPEM offered both leasing and renting plans. In both instances, the company finances 10% of the initial installation costs. The other 90% of the initial investment was covered by COOPEM and the costs were paid back over a period of 10 years by selling green certificates (Energy Cities, Friends of the Earth, Greenpeace and REScoop, 2019). Moreover, the initial costs for the company were typically recovered in the savings from electric bills as the companies pay a lower fee for electricity than if they would have bought the electricity from the grid.

As well as aiding both individuals and companies. There was a mix of stakeholders and shareholders who were involved in the COOPEM cooperation. Both the city and the citizens had shares in the cooperative. The city-owned 15% of the cooperative and the citizens owned the majority shares 55%, and the remaining 30% was owned by a green investment cooperative. Company shareholders benefited financially from the positive returns on their investments and they were able to directly influence the transition to sustainable energy and cooperatives decisions (Bolle, 2019).

The project admits that there was a favourable political will and good structural conditions which helped the project flourish. There was also an active citizen engagement in the form of two meetings which pre-existed the launch of the cooperative. The Mouscron municipality officers have also suggested that similar initiatives should start in other cities, initially by checking the actual demand from their citizens and companies for such initiatives, for example, through citizen meetings (Energy Cities, Friends of the Earth, Greenpeace and REScoop, 2019). Citizen engagement and financing were an important part of the cooperative. However, the city itself was still able to play an active role as a shareholder and benefited from this scheme. In this case, the municipality mobilised funds from the regional government.

2. Smart grid development partnership - A fair and smart grid project in Ghent, Belgium

'Buurzame Stroom' or 'neighbourhood power' was an example of a smart grid pilot scheme that was developed at a neighbourhood level. It was initiated in 2018 by the city of Ghent. This project aimed to develop a smart and fair approach to investing and benefiting from renewable solar energy through the "*promotion and demonstration of innovative and smart technologies*" (WiseGRID demonstration site Smarter systems. Empowered citizens). This pioneering project was developed in the Sint-Amandsberg district, Belgium.

The city partnered with several stakeholders including: two energy cooperatives, Ecopower and

EnerGent, the local energy cooperative and partners Energie-ID and Partago (Wisegrid, 2020), Ghent University, a social protection association and a local distribution operator (Bolle, 2019). The city of Ghent supported the overall coordination in the multi-stakeholder cooperation and the connection with other projects.

This project investigated how energy can be generated and shared at a neighbourhood level. It focused on using solar power on large roof spaces such as school buildings and apartment buildings etc. The energy produced from the solar panels was then shared with households who do not have access to suitable roof space but want to invest in sustainable energy production (Klimaatstad Gent, 2020). The project assisted all households within the neighbourhood that wanted to participate in the transition to renewable energy. Particular attention was paid to those households who wanted to participate but were unable to due to various socio-economic barriers and/or who belonged to social groups who otherwise would have had difficulty accessing this resource. This included vulnerable social groups and households with various types of building ownership status.

So far, the project has listed several successes. The business model proves that the transition to solar energy is profitable. Moreover, it shows that the transition of a whole neighbourhood community to solar energy is possible and affordable. Furthermore, energy production and consumption were optimized. Local energy production addressed the demand and supply needs using an existing grid infrastructure. Finally, this project highlights that it used a strong collective and participatory approach, managed through a cooperative which has developed a sense of community (Bolle, 2019).

3. Green Energy Cooperative (ZEZ), Križevci, Croatia

Križevci is a town in central Croatia and acts as a satellite city for the Croatian capital Zagreb. The Green Energy Cooperative (ZEZ) launched the first crowd-investing initiative in Croatia, which was supported by Križevci local authorities to install solar panels as sustainable energy and climate saving projects.

Green Energy Cooperative was the initiator and implementing partner for this initiative. The project was developed together with partners from the city of Križevci, Regional Energy Agency North, Greenpeace Croatia, Solvis and ACT Group. The project successfully installed 30 kWh solar panels on the roofs in Križevci, with an estimated cost of 30,000 Euros. The City of Križevci provided administrative and financial support during the preparation phase of the project and has guaranteed an energy-saving annual fee for 10 years to the investors. The cooperative used the crowd investment, which was a micro-loan model to involve the citizens in the sustainable development of their city. The fund was raised within 10 days of the fund-raising campaign, with more than 50 investors including 30% of local citizens and each investment ranged between 100-1,500 Euros. Through this system, citizens were able to lend money to the cooperative which is paying them back with a 4.5% fixed interest within 10 years.

In Croatia, normally, renewables are developed almost entirely by individual companies and with minimal engagement from citizens, local communities and local authorities. Public interest in Renewable Energy Solutions (RES) is quite high, but citizen participation is mostly limited to roof-top solar power systems, and cumulative installed solar power accounts for only 6% of all

RES in Croatia.

The main reason for this current state is due to the Croatian legislation, which does not look favourably upon active citizen participation in the development of renewable energy. Local authorities are willing to invest in RES but are facing issues such as financing and lack of technical capacities to handle and kick start the projects.

The main success factor of this campaign was the desire from citizens to be part of something new and innovative and their belief that the project is good for their community. But besides that, ZEZ also utilised a crowdfunding campaign strategy which led to the citizens' willingness to be involved using these stages:

- 1) Preparatory activities,
- 2) Launching a fundraising campaign, and
- 3) Realization of the project.

ZEZ also had competent teams which had a crucial influence on the success of the fundraising campaign, especially in communication, management, technical, and legal aspects. To make their crowdfunding communication campaign a success, several tools were utilised such as using:

- 1) A storytelling platform to share in detail their project goals and motivations,
- 2) YouTube as a media for visual communication
(<https://www.youtube.com/watch?v=ZniuH00dnOw&t=94s>.)
- 3) Social media platforms such as Facebook.

4. The Lisbon Climate Citizen Commitment, Portugal

The city of Lisbon launched The Lisbon Climate Citizen Commitment, a local government-led initiative that put together climate projects into its Participatory Budget via a “Green Seal”. The Green Seal was a platform that made Lisbon’s Commitment for Resilience to Climate Change material and attracted new private funding sources.

To implement commitments, Lisbon launched its Green Participatory Budget (PB), a new variant of its traditional PB, doubling its value from 2.5 million in 2019 to 5 million in 2020. The Green PB follows the same civil society engagement process as the traditional PB, with the main difference that, throughout its annual cycle, participants can present projects which have measurable and achievable climate mitigation and/or adaptation goals and targets. All the selected projects related to environment and climate change were awarded Lisbon’s “Green Seal”, including two projects related to mobility with bike lanes and green spaces.
(<https://cfl.southpole.com/solutions/lisbonGreenPB>)

The Green PB enables two citizen-led initiatives:

- A “Green Corridor” in Monsanto Parque Eduardo VII Total investment: EUR 1 million
- Bike lanes and a citywide “Green Plan” to connect urban green spaces Total investment: EUR 2.8 million



Figure 5: Lisbon Green Participatory Budget funding process

5. Windcentrale, The Netherlands

Windcentrale is one of the top renewable energy crowdfunding platforms in The Netherlands. It has successfully raised around 14.3 million Euros from its launch in 2010 to 2014. Once they managed to raise 1.3 million Euros within 13 hours. The investors were coming from private individuals who wished to own windmills and use the energy generated in their households. On average, each investor received around 500 kWh per year, which is sufficient to cover their energy costs for the next 12 – 15 years. Windcentrale offered an attractive return of 7%, especially if the energy costs steadily increase each year (Renewable Energy World, 2014).

These funds were geared toward local municipalities that signed the Covenant of Mayors (CoM) but faced difficulties in writing their Sustainable Energy Action Plans (SEAP). They used the revenues of wind projects in Eeklo, Asse and Beersel to pay the monthly wages of a SEAP expert who initiates Renewable Energy Sources (RES) and Energy Efficiency (EE) projects at the local level.

6. The Krk Island Energy Cooperative, Croatia

This initiative aimed to be a pioneer in the European transition towards a 100% renewable energy future. A wide variety of actors engaged in the project, from the municipality to local small to medium enterprises and individual citizens. The Krk Cooperative successfully managed to lower the costs of permits and installations of renewable energy sources in households through a lengthy process of negotiation and the help of citizen mobilization. As a result, the costs of PV solar systems in the region were also reduced. The cooperative also actively raised awareness and encouraged citizen engagement to conduct renewable energy source projects as they affect the local economic growth and create new jobs (Community Power, 2018).

Table 2 summarises the highlights of the European examples of financing climate actions through citizen finance.

Table 2: Summary of citizen finance good practices across the EU countries

Financing Scheme	City/Region	Good Practice	Source of Funds
Joint Cooperative	Mouscron, Belgium	A cooperative jointly owned by the city (15% share) and the citizens (45% share). The cooperative helps households in installing rooftop solar PV, The cooperative (Coopem) subsidized high upfront costs of PV installations by advancing the payment of regional solar subsidies (which are normally granted over five years). The cooperative also facilitated the entire technical and administrative processes for all the beneficiaries (Energy-cities.eu., 2020).	“Coopem” (Cooperative Energy of Mouscron)
Partnership with cooperatives	Sint-Amandsberg district, Ghent, Belgium	A model partnership between two cooperatives, the University of Ghent, a social protection association and the local energy distribution systems operator. This partnership model aimed to maximize the use of locally generated energy at the neighbourhood level while adopting a fair approach “sharing equal costs and equal benefits”. https://energy-cities.eu/wp-content/uploads/2019/06/EnergyCities_RNP_Guidebook_Web.pdf	EnerGent Cooperative
Crowdfunding & Cooperative	The Netherlands	A crowdfunding platform where citizens invest in buying parts of a windmill. The energy generated is delivered to these households as a return on investment. On average, each investor received around 500 kWh per year.	Windcentral crowdfunding platform

Financing Scheme	City/Region	Good Practice	Source of Funds
Cooperative	Eeklo, Asse and Beersel (BE)	Shares and investments in renewable energy production installations (wind turbines and solar PV). Members bought local, green energy at a fair price. Wind project revenues funded an expert in Sustainable Energy Action Plans (SEAP) to help assist the Covenant of Mayors (CoM) to initiate renewable energy products at the local level. (CITYNVEST: http://citynvest.eu/content/cooperative-case-ecopower)	Ecopower CVBA (Cooperative)
Cooperative	Krk, Croatia	The Krk cooperative successfully managed to lower the costs of permits and installations of renewable energy sources on the Island of Krk. The Krk cooperative raised awareness in the region and also encouraged citizen engagement to conduct renewable energy source projects as they affect local economy growth and create new jobs. (Community Power, 2018).	Krk Island Energy Cooperative
Cooperative	Križevci, Croatia	Cooperative facilitated and realised citizen engagement in solar panel energy projects. They acted as an initiator and implementer of these projects which helped citizens to overcome administrative, financial, political and technical challenges. This included the use of crowd investment, micro-loan model.	Green Energy Cooperative (ZEZ)
Cooperative	United Kingdom	The Abundance cooperative is a regulated Crowdfunding platform (regulated by Financial Conduct Authority) which gives citizens the opportunity to invest in three sectors; Green Energy, Transition to circular economy, and Housing. Their business model allows investors to receive a percentage of revenue that has been generated from the sale of the electricity produced by the projects. This relies on the success of the project(s). (https://www.abundanceinvestment.com/)	Abundance
Participatory Budget	Portugal	The city of Lisbon launched The Lisbon Climate Citizen Commitment, a local government-led initiative that put together climate projects into its Participatory Budget via a "Green Seal". The Green Seal was a platform that made Lisbon's Commitment for Resilience to Climate Change material and attracted new private funding sources.	Green participatory budget

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