CitizEE Toolkit

CitizEE Toolkit

Author: EUROCROWD

CitizEE

Scaling up Public Energy Efficiency Investments via Standardising Citizen Financing Schemes

www.citizee.eu

TABLE OF CONTENTS

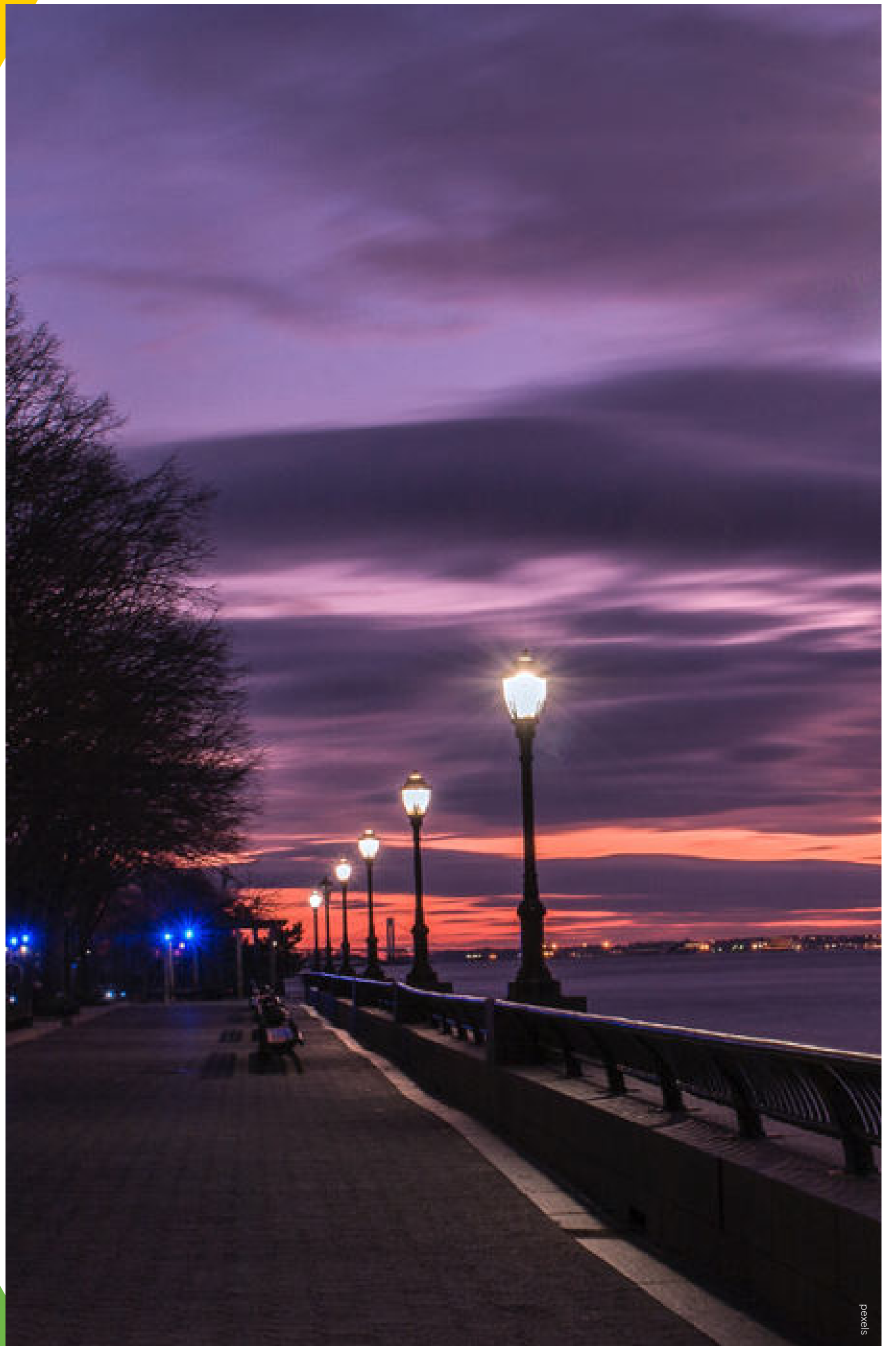
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 847147.

ACKNOWLEDGEMENTS

The work described in this publication has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement N° 847147.

DISCLAIMER

This document reflects only the authors’ view and not those of the European Community. This work may rely on data from sources external to the members of the CitizEE project Consortium. Members of the Consortium do not accept liability for loss or damage suffered by any third party as a result of errors or inaccuracies in such data. The information in this document is provided “as is” and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and neither the European Community nor any member of the CitizEE Consortium is liable for any use that may be made of the information.



EXECUTIVE SUMMARY

Energy efficiency is gaining importance in combating climate change, as one third of the EU's CO2 emissions are caused by inefficiency in the building sector. The challenge ahead needs new innovative funding schemes to bring more private investment onboard. On the following pages we outline in easy-to-understand terms what such citizens financing scheme might look like, what relevant investment platforms are, what type of actors are involved and what types of investment opportunities this market offers. We are aware that the target audience will have different backgrounds, varying knowledge and interests.

This toolkit provides an overview of how to set up and implement citizen financing schemes for energy efficiency, including several tools to help structure the initial outline. Aimed at managing and local authorities, the toolkit seeks to promote the opportunities of blending public finance with private and citizens investments. The content is based on work and outcomes of a project managed by a consortium of European organisations and co-financed by the European Commission, named CitizEE. All content used within this toolkit is taken from publicly available outputs of the work from the CitizEE consortium. The main aim to create a quick and simple overview of how Citizen financing Schemes work, how public authorities can set these up and support them and, in the Annex, a shortened overview of detailed steps to take. Additional information can be found on the CitizEE website

Abbreviation list

(AIFM)	-	Alternative Investment Fund Managers
(Coop)	-	Cooperative
(ESI)	-	Emergency Support Instrument
(EaSI)	-	Employment and Social Innovation Programme
(ESCO)	-	Energy Savings Companies
(EFSI)	-	European Fund for Strategic Investments
(EIAH)	-	European Investment Advisory Hub (now IAH, see below)
(EIB)	-	European Investment Bank
(ERDF)	-	European Regional Development Fund
(ESF)	-	European Social Fund
(FINcoops)	-	Financing Cooperatives
(HVAC)	-	Heating, ventilation, and air conditioning
(IAH)	-	InvestEU Advisory Hub
(IP)	-	Investment Platform
(MA)	-	Managing Authority
(MiFID)	-	Markets in Financial Instruments Directive
(NPB/NPBI)	-	National Public Bank
(NEZB)	-	Near Zero Energy Buildings
(PMU)	-	Program Management Unit
(PDU)	-	Project Delivery Unit
(PFI)	-	Public Financing Instruments
(REScoops)	-	Renewable Energy Sources Cooperatives
(SPV)	-	Special Purpose Vehicle

1. About the Toolkit

We believe that this toolkit might be of interest to stakeholders interested in speeding up investments in energy efficiency by enabling public private partnerships involving investment of citizens against a financial return to improve our planets sustainability. We understand that operators of energy efficiency equipment, so called energy savings companies (ESCO), providing a range of energy solutions (such as designs and implementation of energy savings projects, retrofitting, building efficiencies, energy conservation, infrastructure outsourcing and energy generation or supply) in need of financing – here especially smaller projects fall outside of the investment scope of established investment funds. Citizens finance for energy efficiency offers one possible solution and policy makers can support their development and rollout.

- Why – Citizens Finance Schemes, generally referred to as match-funding, are increasingly being developed across Europe by combining public funds with private direct investments. The increasing demand for participatory policy actions at local level has seen significant growth to crowdfunding and cooperative funding. The political discuss at European level on the use of European Structural Funds for local and regional development aligned with citizen's needs, showcases the need for a new role and model of such schemes.
- Who is it for – This toolkit has been written with a reader in mind who has limited time, a general understanding of funding options and an interest in developing either within government or from outside relevant Citizen Financing Schemes in order to speed up the roll out of Energy Efficiency projects.
- How to use it – Follow up by deep diving into literature referred to within this toolkit, by further desk research and by reaching out to the partners in the CitizEE Project. Start applying Citizen Financing Schemes and become a change maker for a sustainable future.

- The main body of the Toolkit will introduce the topic, in the annex you can find more details and tools to start evaluating your own citizen financing scheme and investment platform.

2. Introduction to Citizen Financing Schemes

The work delivered throughout the CitizEE project showcases that a vibrant citizen financing market, involving cooperatives, and crowdfunding platforms, presents an opportunity for interested parties in adding value to the energy transition. Citizen Financing Schemes channel private resources towards segments, such as energy efficiency projects, that are currently not or insufficiently invested even by traditional financing players.

Citizen financing schemes involve citizens as direct investors either alone or next to funds and institutions. Crowdfunding and cooperative funding are at the heart of citizens financing schemes, in combination and integrated with public financing instruments or public funds managed by private institutions.

While cooperate- and crowdfunding models are not new, their application in energy efficiency finance in combination with public financing instruments and other private or institutional funds has not been deployed on large scale. There are public financing instruments, that are designed to overcome financial barriers in project finance, but their combination with cooperative funding models seems challenging at times. We aim to guide the reader to a better understanding of how Citizen Financing Schemes can be approached.

We will first introduce the two most common models of citizen direct participation in energy efficiency financing as well as outline several public financing instruments that can be used to create publicly backed citizen financing schemes. In the following chapter we will then showcase lessons learned from the

combination of cooperative funding, crowdfunding and public financing instruments.

2.1. Cooperative Funding model

The cooperative funding model is a model by which the citizen takes a stake in the capital of a company or assets through the purchase of cooperating shares. We distinguish two main models in the energy and/or energy efficiency sector. Renewable Energy Sources Cooperatives (REScoops) and Financing Cooperatives (FINcoops). The former are characterized by their cooperative business model in which citizens are involved in both the decision making and financial ownership. The latter are positioned in the middle between the REScoops and the commercial developers and offer limited financial participation to citizens.

Energy Cooperatives do not necessarily have the legal statute of a cooperative, but rather distinguish themselves by the way they do business. They are “autonomous associations of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise” as per International Cooperative Alliance definitions. Energy cooperatives typically develop all or some of the following activities: the generation, consumption, distribution, storage, supply, aggregation of energy from renewable sources, as well as the provision of other support services to members (for instance energy efficiency/demand side management services) and to other organizations.

In practice, Energy Cooperatives fall back on different legal forms such as partnerships (including public-private partnerships with local authorities), cooperatives, community trusts and foundations, limited liability companies, non-profit customer-owned enterprises, housing associations and municipal ownership. They also have different business models, representing the interest from a group of local citizens to a multi-stakeholder governance model.

2.1.1. Energy Cooperatives

A study conducted by REScoops Europe, mapping different co-operatives in Europe, categorized Energy Cooperatives into 6 clusters according to their business model:

- **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 needs. They develop small local projects. The funding of the co-operative mainly comes from the members.
- **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.
- **Fully integrated REScoop:** These REScoops integrate multiple services: generation, supply, distribution, and other 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.
- **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 takes advantage of the economies of scale.
- **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.
- **Non-energy-focused organization:** Typically, this form arises when local actors are not mainly concerned about the energy production. For example, a farmer's cooperative who put on a wind turbine on their land, or an educational institution who has a community energy program as a side project."

2.1.2. Financing Cooperatives

On the other hand, Financing Cooperatives (FINcoops) do not offer democratic participation nor ownership or any services to members. They are frequently founded by commercial developers as a financing vehicle associated with another company that owns the energy assets. The citizen participation is purely financial. Financing Cooperatives are mainly used by renewable energy project developers as a funding vehicle, but the model could also be used to finance energy efficiency projects, especially by large Energy Service Companies (ESCO).

2.2. Crowdfunding model

Crowdfunding is the process using open calls on the internet to raise many smaller amounts money from many individuals to fund a specific initiative, project or business. Such campaigns state the funding needs and the purposes of the project, while defining a limited funding period. The projects usually have relatively small funding targets and are capped at EUR 5m for both business loans and direct investment into shares, bonds and other financial instruments. Typically, there is a project developer who sets up a crowdfunding campaign on one side (campaigner) and citizens who invest their money to realize the project on the other side (contributors). A web-based crowdfunding platform, a fully regulated crowdfunding service provider (CSP) for loan or investments, acts as intermediary in publishing campaigns, reaching contributors and collecting funds. These crowdfunding service providers perform certain pre-screening and monitoring functions. They typically charge a fee for these services to the project developer. Broadly, crowdfunding service providers can be broken down into four categories: lending, equity, donation, and reward. For our purpose we will only consider crowdfunding service providers offering financial transactions, specifically lending and equity.

- **Lending:** With lending-based crowdfunding (also known as crowdlending), funders lend money to a company and look for interest payments as well as the full repayment of the principal.
- **Equity:** With equity-based crowdfunding, funders invest in the capital of a company with a view to earning a portion of the profits made by the company funded through the crowdfunding campaign. Most often this is done via share ownership but can also include other instruments, such as bonds issued by the company.

Additionally, there are non-financial forms of crowdfunding that can also be considered for matching public funds with private support, but for the purpose of this toolkit we did not include them further.

- Donation: funds from contributors who do not expect a monetary or non-monetary award in return. Their motivation is philanthropic and could include contributions to local community projects or global causes.
- Reward: non-monetary rewards in exchange for their contribution. Rewards are often used by businesses aiming to bring an innovative product to market.

Some crowdfunding platforms offer hybrid solutions, offering various campaign types, and that must also be considered. The most common combinations are debt-equity and donation-reward platforms.

2.3. Participants in Citizens Financing Schemes

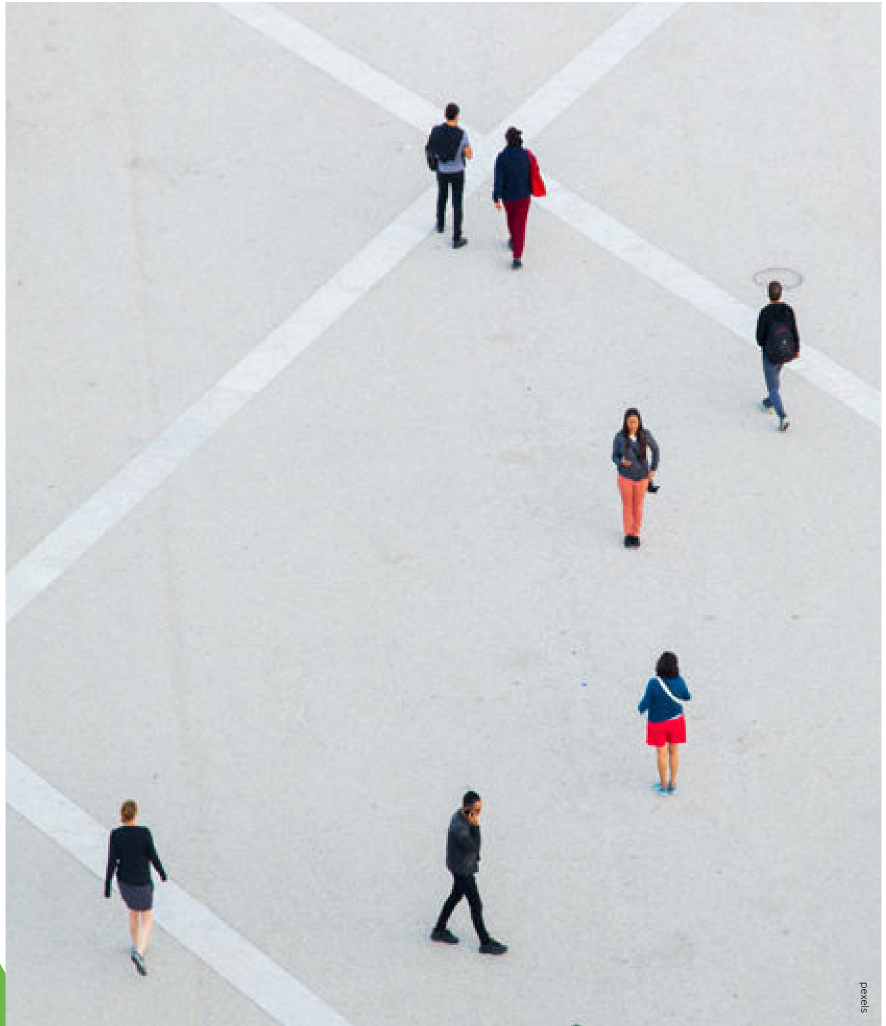
We can identify five possible participants in Citizen Financing and especially match-funding schemes. While citizens can invest directly in smaller projects and through intermediaries, such as cooperatives and crowdfunding service providers already, the added value of Citizen Financing Schemes comes from the involvement of public and private funds in match-funding or blended finance schemes.

Here we want to focus on what we call Citizen Financing Schemes for Energy Efficiency. There are broadly speaking up to three categories of participants we can outline, grouping different investor types together.

- Investors
    - o authorities controlling public funds needed to create adequate leverage for citizens,
    - o citizens willing to invest own money into energy efficiency projects
    - o private and institutional investors, such as fund managers, banks and other financial institutions
- Investment opportunities
    - o owners of energy efficiency projects or ESCOs
- Enablers
    - o crowdfunding service providers or cooperatives that can manage the investment flows from citizens

While investment structure can vary widely, we focus on the two that have a proven track record of managing and inspiring citizens to invest in a transparent and safe environment, cooperatives (which could also be project owners) and crowdfunding service providers. Both are regulated entities able to collect money from citizens for direct investment.

If the scheme is large enough, it can also attract private or institutional investors, such as fund managers, banks and other financial institutions. It is therefore vital to understand that any Citizens Financing Scheme must be based on a clear market understanding, open discourse and sharing of expectations.



pexels

3. How to apply public and private funds to Citizen financing Schemes

There are a variety of public and private funds available to blend into Citizen financing Schemes. Public funds are matched with private funds in order to reducing the risk and exposure of private investors. This creates an incentive for private investors, especially citizens to allocate funding to energy efficiency projects that might otherwise be too risky. Therefore, in blended finance structures use in citizen financing schemes, public funds play an important role in creating incentives to private investors. But private investors also play an important role in reducing the funding needs of the public by adding significant amounts of funds to the investment, therefore reducing the overall exposure to risk by the public. This risk sharing works with a variety of financial tools.

In the table below, we show different types of funding that can be provided by various funding sources. We use five major funding types that are frequently used and that have common characteristics in financial transactions. Equity describes a direct participation in the investment with ownership rights. Debt describes an investment against repayment with interest, but without ownership rights. This can be senior, with a preferred repayment in case of a defaulting investment or junior with a deferred repayment in comparison to the senior debt. Similarly to junior debt, works Mezzanine, which is a type of junior debt that can include some qualities of equity investments at agreed turns of events. Guarantees are given to investors in the previous investment types and will only apply if the investment is not performing to agreed terms, i.e. they would cover losses of the investors as agreed in advance. Grants are funds provided by an investor, here the public investors, that are either provided in return for certain activities or as an interest free loan. Further details on the forms of funding follow after the table.

The following table details various sources of funding that could crowd in and/or leverage through an Investment Platform and the type of their potential contribution. A detailed explanation of an Invest Platform is following under point 4.

Mix of the potential co-investors and funding structures

Sources of funding	Equity	Mezzanine or junior debt	Senior debt	Guarantee	Grants
Public funds					
International Financing Institutions (e.g. EIB or EBRD)	✓	✓	✓	✓	✓
European Structural Funds (via Member State Managing Authority)	✓	✓	✓	✓	✓
National, regional and local public funds	✓	✓	✓	✓	✓
National Promotional Banks & public institutional investors	✓	✓	✓	✓	
Public institutional investors	✓	✓	✓	✓	
Private funds					
Private institutional investors (pensions funds, etc.)	✓	✓	✓		
Private investors	✓ (*)		✓ (*)		
Financial institutions & commercial banks			✓ (**)		
Debt and/or equity crowdfunding platforms	✓ (**)		✓ (**)		
ESCOs	✓ (*)		✓ (*)		
Citizen cooperatives (ESCOOPs & FINCOOPs)	✓ (*)		✓ (*)		

(*) At the Investment Platform level or alongside the Investment Platform at the project level
(**) As financial intermediary at the Investment Platform level or alongside the Investment Platform at the project level

3.1. Overcoming financial barriers by blending public funds with private investment

Public funds (or Public Financing Instruments (PFI)) aim to overcome financial barriers preventing investment projects by leveraging private financing. In the above table we have listed the most common Public Financing forms as well typical private funds matched within energy efficiency financing. These can be combined in different ways in order to achieve a variety of goals, usually to incentivise private investors and to reduce their risk. In the figure below we identify barriers to funding categorised into risk, access to capital and financial viability. All of these can be addressed by blending public funds with private investment in order increase the overall attractiveness of energy efficiency projects to citizens.

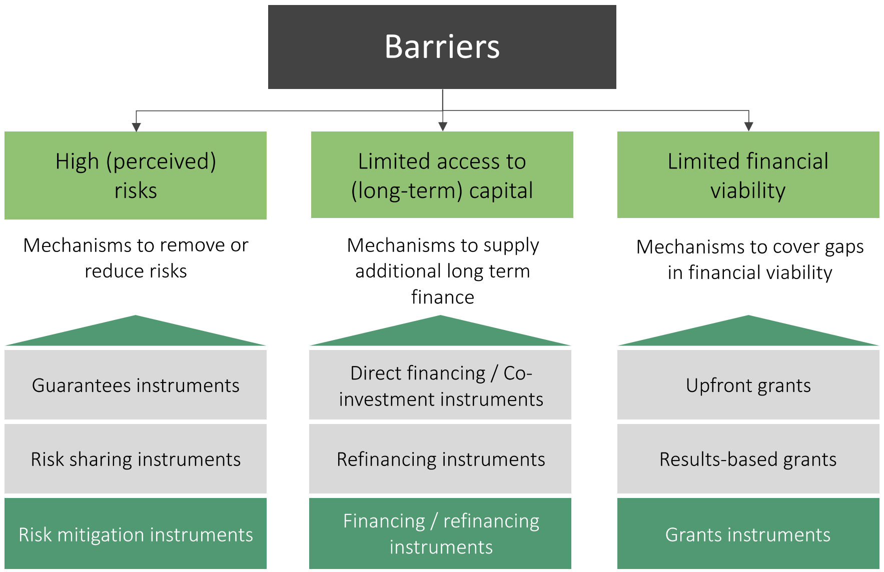


Figure 1: Key Financial Barriers and Related Rinancing Mechanisms

As we can see in the figure, we can differentiate between financial mechanisms that reduce risk, that provide access to long term finance and that cover shortcomings in financial viability. We will in the following explain how public funds can be applied to support private investment via risk mitigation, refinancing and bridging funding gaps:

- Risk mitigation instruments: public funds can be used as mechanisms to remove or reduce risks via guarantee agreements, risk sharing loans or junior (subordinated) debt.
    - A guarantee-agreement includes a public funder that will guarantee all or some part of the risk of loans (or equity) if the recipient fails or does not repay the investment. Such guarantees are usually given to banks or to project beneficiaries and/or project developers (ESCOs/ESCoops). They facilitate access to additional private funding and can be integrated with both, cooperatives, and crowdfunding. Advantages:
        - risk guarantees cover losses caused by specific risks such political, regulatory risks but also operational and technology risks
        - credit guarantees cover losses in the event of a debt service default regardless of the cause of default
        - allow for flexibility in risk sharing model in consideration with the beneficiary and grant authorities needs, such as equal risk (“pari-passu”), capped or pro-rata risks or fist loss based on predetermined conditions
    - A risk sharing loan is provided to a financial intermediary for on-lending to the borrower. The financial intermediary will add additional private funds. The risk sharing reduces the potential financial losses of the private

funds in case of default. It reduces the cost of the loan, but makes it difficult to integrate with direct financing by citizens other than with regulated co-investment structures, such as managed by crowdfunding service providers under European law. Advantages:

- reduce the cost of financing for recipients
- attract lenders to otherwise marginally creditworthy clients
- improve project cash flow and viability
- Increase debt-to-equity ratios allowing for financial leverage
- potential to reuse reimbursed and recovered funds

o Junior or subordinated debt is placed as public funds along-side senior debt from a private lender, absorbing losses up to the amount of the subordinate debt and acts as a credit enhancement for senior debt. The European Investment Bank, for example, offers this type of instrument. It can be used in combination with both, cooperatives and crowdfunding. Advantages:

- reduces risk for private investors
- lowers the cost of capital for the beneficiary
- higher impact through financial leverage
- credit enhancement capacity

• Financing and refinancing instruments supply additional long-term finance and are usually structured as concessional loans or as fund or holding structures.

o Concessional loans or soft loans decrease financing costs to the project owners through specific concessions within the terms, such as low interest rates, later repayment, or higher risk portions of an investment compared to conventional bank loans. Concessional loans are ideal for use in new or less established Energy Efficiency sectors, where a reduction in financing costs and greater flexibility can lead to financial viability of projects for citizens direct investment. Advantages:

- reduces risk for private investors
- improves project cash flow and project viability
- moderate impact through financial leverage
- potential to reuse reimbursed and recovered funds

o Fund and holding structures can also be used to leverage private investments in order to aggregate small- and medium-scale projects into a single asset portfolio. Such portfolio can combine projects with different risks. Crowdfunding cannot be used for multi-asset investment vehicles and therefore could not be used to involve citizens as investors in the fund itself, but a fund can invest alongside citizens via crowdfunding service providers. Advantages:

- aggregate various risk return profiles
- flexible deployment
- higher risk/return ratio, but limited leverage effect
- potential to reuse reimbursed and recovered funds

- Grants to cover gaps in financial viability, often in addition to direct investments, linked to performance or subsidising interest rates of commercial loans. Grants work well with projects that might have a positive economic rate of return yet are not attractive to private investors on their own. Grants are flexible in their application and can play a significant part in supporting direct investment from citizens. There are a few different grant instruments that can potentially be used in blended instruments:

    - Direct investments grants: can be used to cover specific parts of a project, which can be highlighted as items needing grant support.

    - Conditionality/performance-based grants: define goals which the beneficiary must fulfil in order to obtain the subsidy or the elements of the subsidy according to the level of service or performance objectives.

    - Interest rate subsidies: relieve the burden of debt service they help bringing down the cost of financing, making projects more bankable and less onerous.

    - Guarantee fee subsidies: have the same function and effect as interest rate subsidies but attached to the cost of guarantees.

Blended instruments with a grant component can also include the following:

- Convertible grants: make it possible to shift funding from a grant to a loan, or from a loan to a grant, depending on the objectives pursued.

- Technical Assistance: finances or provides support to improve project preparation and planning, accelerate the start of projects, project implementation and management as well as the sustainability of the investment.

3.2. Intervention models

Combining the cooperative funding or crowdfunding model with public financing instruments has shown relevant impact and benefit in those cases where it has been done. Looking at studies on this topic we can identify three main areas where public funds can be applied:

- Supporting market operators – Using grants, concessional debt or equity to directly support cooperatives or crowdfunding service providers will help lowering their operational costs. They will in return be able to offer better or more extensive services to investors.

- Supporting project owners – Grants, concessional debt or equity provided on top of citizen financing reduce the risk/return ratio of investments, making them more competitive and attractive to citizen and private funds. They can decrease the financing costs for the project owners and improve the credit risk rating of the projects.

- Supporting investors

    - Guarantees cover the investment made by all citizen-investors in any specific project that satisfies the eligibility criteria set by the public authority. They lower the financial risk for individual investors, hence increasing their appetite to invest through the cooperative of the crowdfunding platform and limits the financial outlay of the authority to the worst case only.

    - Co-investment - Public funds are invested in parallel to citizens within individual projects managed by a crowdfunding service provider, to whom the public authority delegates the full decision-making process according to pre-agreed terms and conditions.

For public authorities interested in not only supporting individual projects, cooperatives or crowdfunding service providers, there are also options to engage in co-investment structures such as Investment Platforms, who can mobilise large amounts of capital and therefore have a broader impact. Still, in the funding terms of such Investment Platforms it is also possible to fix a percentage of citizens investment schemes that should be supported, ensuring that capital allocation is partly done on collaborative terms with citizens. We are going to explain Investment Platforms in more detail in the following part.

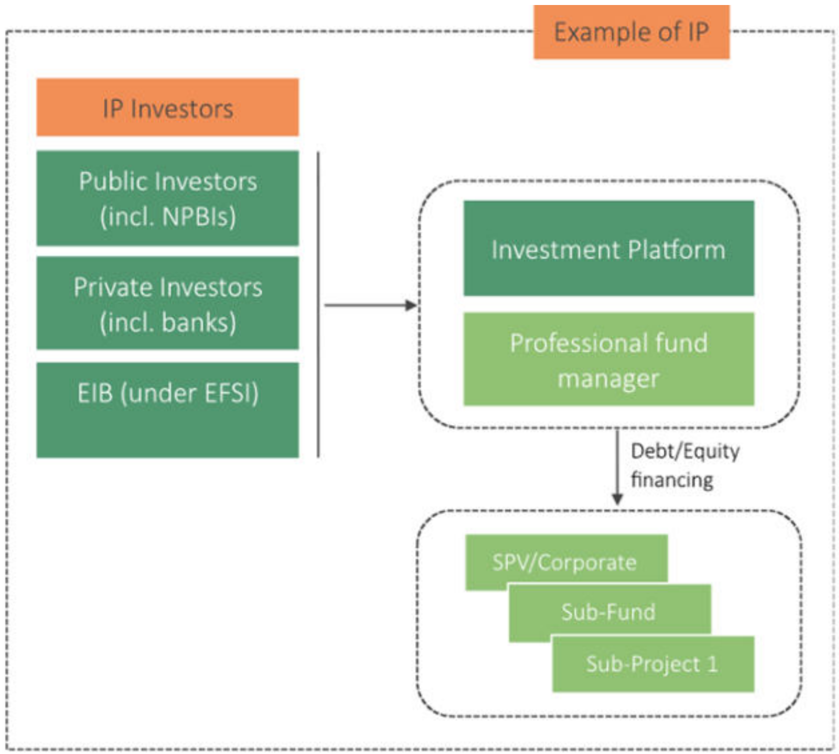
The most established Financing Instruments are risk mitigation instruments to remove or reduce risks within an investment, financing or refinancing instruments to supply additional long-term finance and grants and grant-like instruments to help cover gaps in financial viability. There is an immediate relationship between the financial barriers of an investment opportunity and the financing mechanism used.

4. Exploring Investment Platforms for Citizen financing Schemes

Investment platforms are investment facilities which pool smaller and/or higher-risk projects by geographic location or sector. This helps to better share risk, make it easier to attract private investors and eventually unlock financing for individual projects. A platform can combine EU funds, national support, and financing from private investors. The platform itself can then provide loans and/or equity financing to the underlying projects, depending on their specific needs.

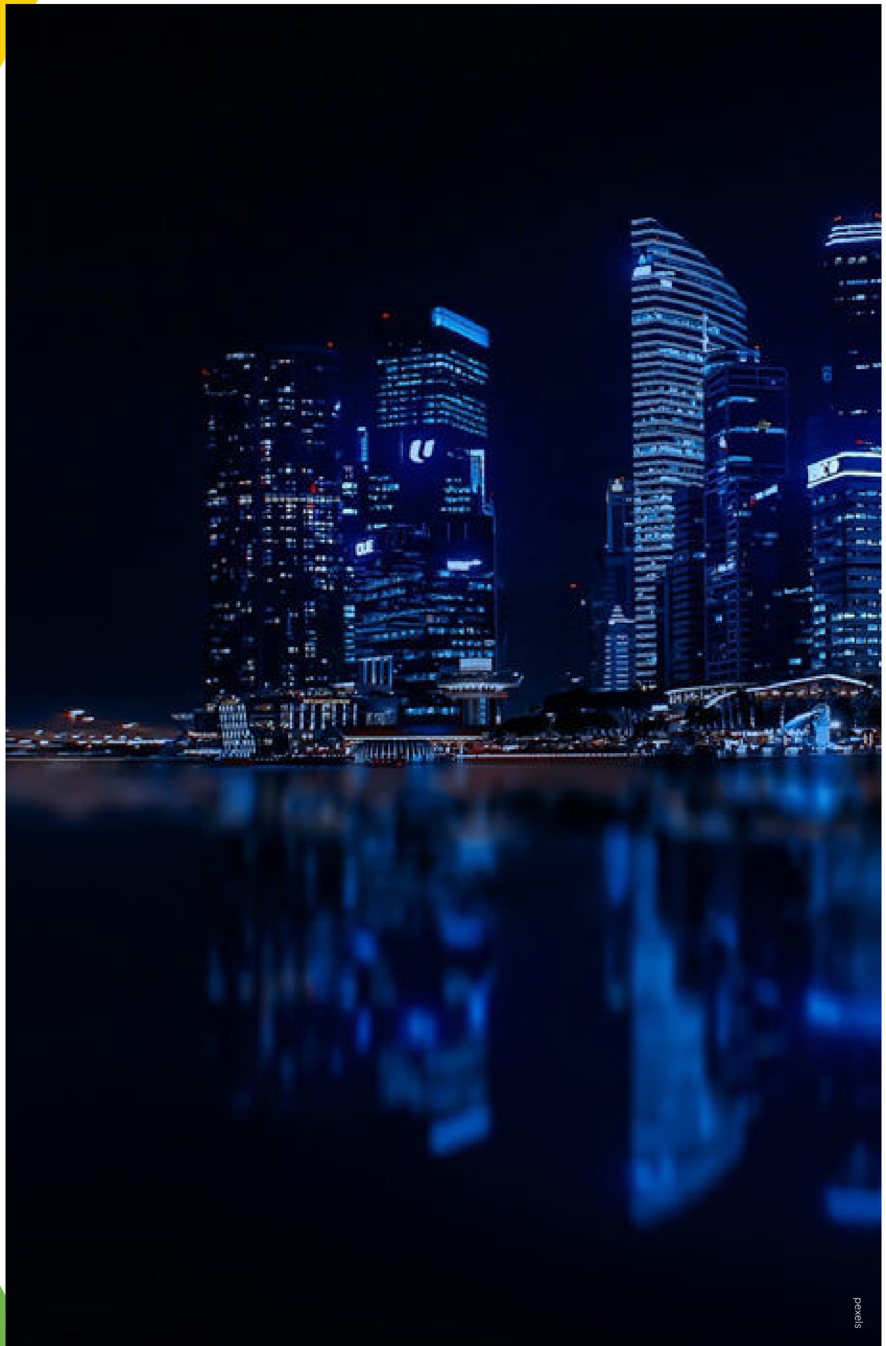
4.1. Background of Investment Platforms

The European Fund for Strategic Investments (EFSI), the financial pillar of the Investment Plan for Europe, a partnership between the European Investment Bank (EIB) and the European Commission were prepared to provide financial support to such investment platforms until the end of the EFSI programme in 2020. The EIB and the Commission also provided advice on how to set up an investment platform through the European Investment Advisory Hub. Under the current Multi-Annual Framework for 2021-2027 the InvestEU programme will be continuing to support Investment Platforms through the EIB.



Example Structure of an Investment Platform using debt or equity finance

An Investment Platform in line with the above support by the EIB combines funds of public investors,
private investors and the EIB to provide funds into the platform, which is linked to a professional fund manager managing assets of special purpose vehicles and bespoke sub-funds in which the equity or debt investments of the Investment Platforms are held.



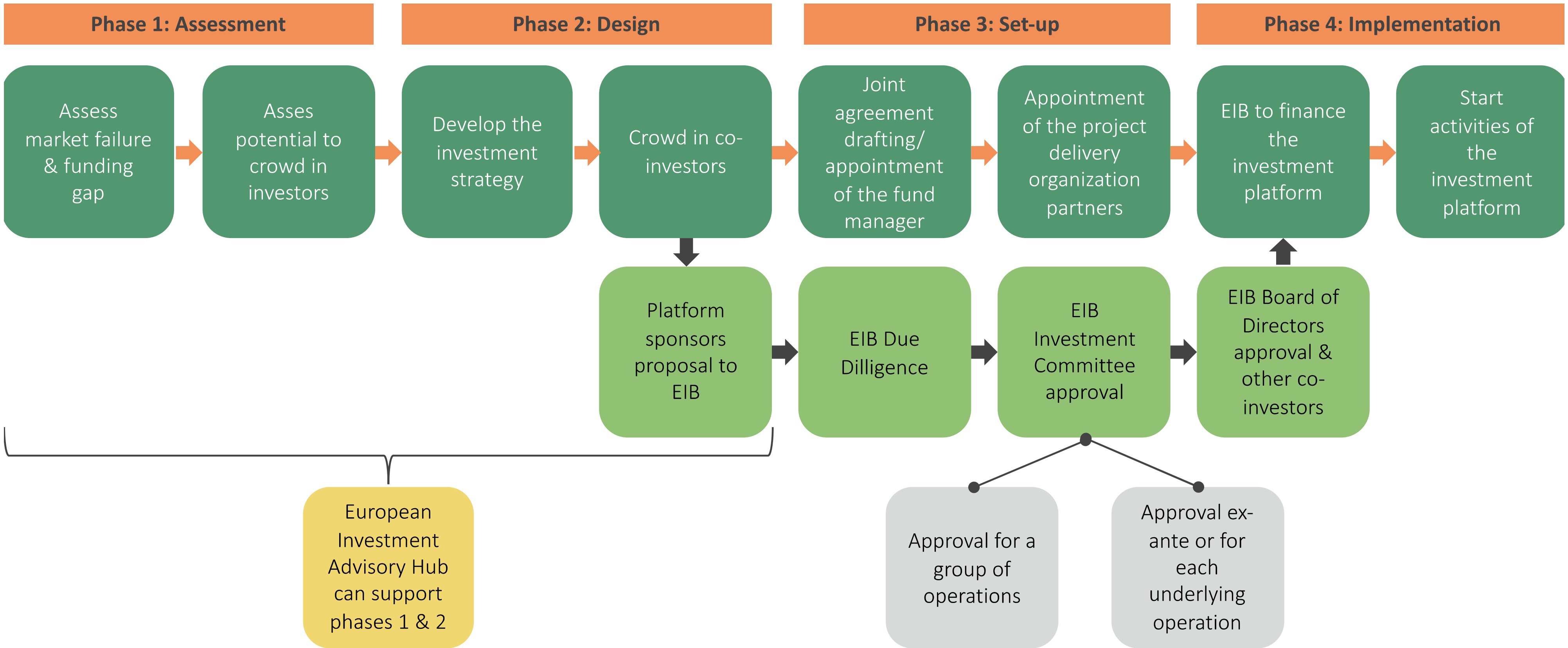
4.2. Set-up of Investment Platforms

To set-up an Investment Platform supporting a Citizen Financing Scheme, regional authorities will have to drive the process and the option to involve crowdfunding and cooperative funding. You can find a more detailed overview in the Annex of this toolkit. There are four phases:

1. Assessment (of market, funding gap and citizens involvement),
2. Design (of investment strategy, citizens involvement and EIB supported Investment Platform potential),
3. Set-up (of agreement drafting and finalisation of the partners and in case of Investment Platform set up the EIB Due diligence and approval), and
4. Implementation (starting of activities with citizen involvement and EIB support in case of an Investment Platform).

Within an EIB supported Investment platform the use of direct citizen financing will need to be managed according to the structure of the investment either as a direct investment into the underlying asset and in parallel to the funds managed by the Investment Platform – for example in case of ECSP regulated crowdfunding service provider – or at Platform level with investment options offered by either the fund manager or another regulated third party. For direct involvement of citizens equity and debt structures are possible, while depending on the legislation both senior and subordinated debt will be possible.

The process to set-up an InvestEU-backed Investment Platform



An Investment Platform is a relevant tool for regional and market development if and where relevant deal flow of energy efficiency projects can be sourced over a relevant time horizon. It is designed to allow funding of ECSOs, cooperatives and use crowdfunding, but it must be clear that the size of an Investment Platform is significantly larger than that of the above outlined citizen financing schemes.

5. Energy efficiency measures to be supported by Citizen financing Schemes

Within our work we focused on energy efficience installations within buildings. Identifying building types that would be eligible for receiving funding within the pilot cases proposed in this project was the first step in the decision-making process. For our purposes we were able to identify three main types:

- Commercial buildings (leased or owner-occupied)
- Public buildings (leased or owner-occupied)
- Residential buildings (leased or owner-occupied)

Within each of these building categories, different types of intervention could be applied. For instance, for public buildings, energy conservation measures and financing mechanisms would vary depending on whether the program targets administrative or educational buildings, or leased or owner-occupied buildings. Similarly, for the housing sector, it would be appropriate to distinguish between single-family and multi-residential houses. Following this, a specific target group of buildings in terms of age band or energy performance rating can be defined.

These criteria should relate to the nature of the energy efficiency measures to be supported. The financial eligibility criteria is a different aspect and explained seperately. For instance, the EIB requests that measures must achieve at minimum cost-optimal refurbishment levels defined by Directive (EU) 2018/844 amending Directive 2010/31/EU on the energy performance of buildings.

The following list could be a starting point to set-up appropriate criteria:

- Energy Performance Certificates (EPCs) with a specific grade to achieve;
- National building codes and/or National EPBD obligations;
- National or international building labels and certifications with a specific grade to achieve;
- Energy bills reductions with a specific amount to achieve per month/trimester/year/lifecycle;
- Energy savings with a specific % to achieve in kWh/m2/year;
- Energy demand or consumption capped at a certain level in kWh/m2/year
- Carbon emission savings with a specific tCO2 per unit or kgCO2/year/€ invested
- A renovation roadmap or certified list of eligible works to be performed;
- Retrofit costs and Net Present Value

5.1. Categorization of renovation and energy savings packages

Based on the work we can fall back on the experience of the pilot regions project within the CitizEE project when identifying potential energy efficiency categories for citizen financing schemes. We can therefore categorise the levels of renovation and energy savings possibilities of energy efficiency projects into four packages of measures and performance thresholds, excluding renewable energies such as solar photovoltaic, solar heating and geothermal, while biomass heating or cogeneration can be integrated: Single Measures, Light Energy Refurbishment, Comprehensive Energy Refurbishment, Near Zero Energy Buildings (NEZB) Energy Refurbishment.

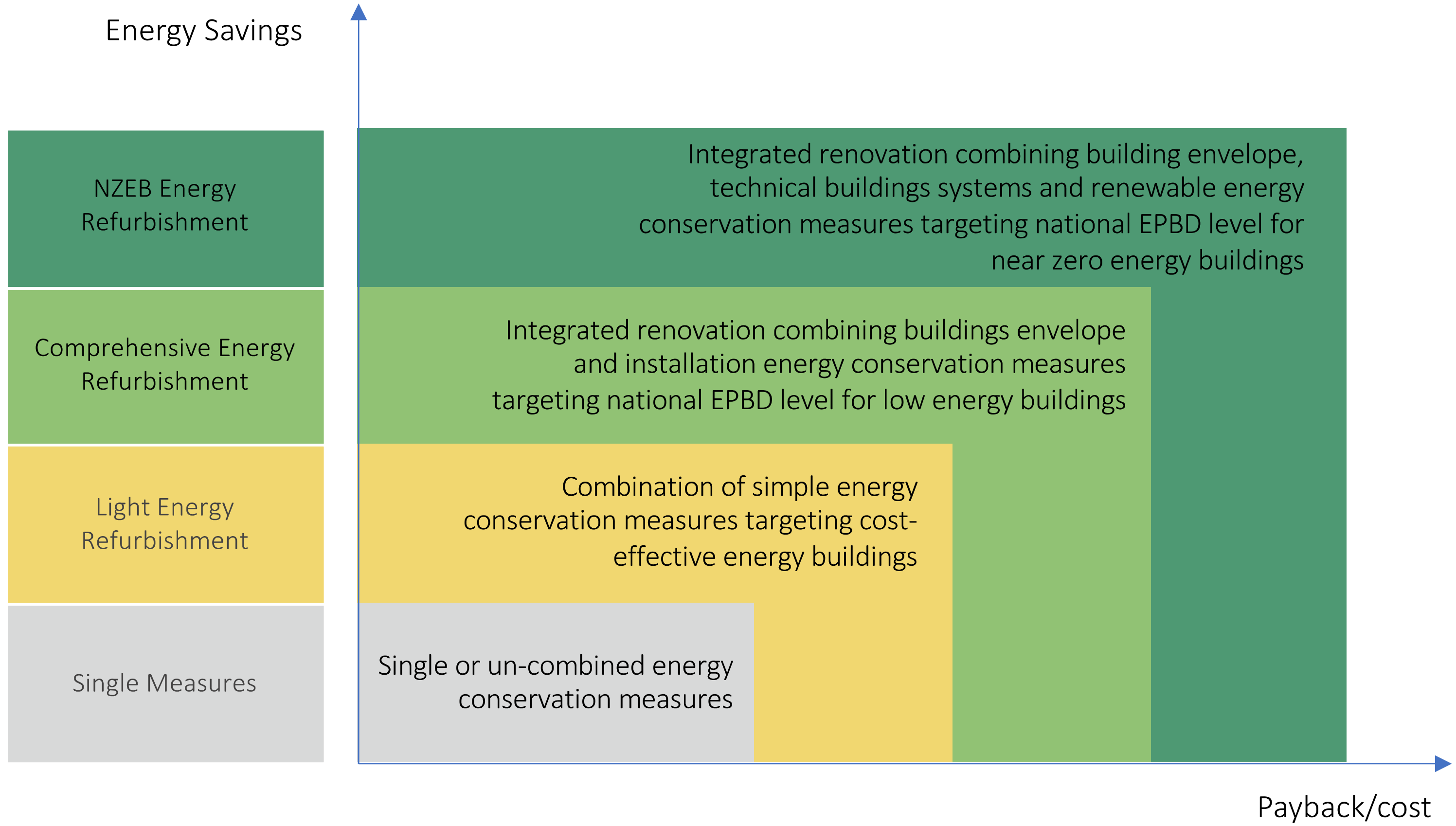


Figure 2 Categorization of renovation and energy savings packages

5.1.1. Single Measures

Implementation of single or non-combined energy conservation measures, such as improving the building envelope and thermal insulation (windows replacement, roof insultation, etc.), replacing or improving technical buildings systems for heating, domestic hot water, ventilation or cooling and lighting upgrades.

5.1.2. Light Energy Refurbishment

This involves the simultaneous and combined implementation of a certain number of individual energy conservation measures. Typically, energy savings ranging from 20 to 40% can be achieved, depending on the climate conditions and the energy performance of the building prior to renovation.

5.1.3. Comprehensive Energy Refurbishment

Sometimes also called deep energy renovation, comprehensive energy refurbishment refers to integrated energy conservation measures on the building envelope and the technical building systems. Typically, savings of up to 60% can be achieved, depending on the climate conditions and the energy performance of the building prior to renovation.

5.1.4. NZEB energy refurbishment

Near Zero Energy Buildings refurbishment refers to integrated energy conservation measures on the building envelope and the technical building reaching energy savings up to 80%, of course depending on the climate conditions and the energy performance of the building prior to renovation.

6. Conclusion

It has become clear, that by integrating citizen financings though cooperative funding or crowdfunding models, it is possible to create blended financing mechanisms for energy efficiency which can allow using public funds as incentive for private investment. As a result, public funds can be leveraged not only financially though private funds, but also on a political level through the involvement and support of citizens.

This alignment of public and private, both on institutional and citizen level, can generate attractive investment opportunities for all involved parties for energy efficiency projects that otherwise may not be attractive for private investment, while limiting the risk exposure of public funds. Creating citizen financing schemes is therefore a relevant objective for public authorities interested in maximising impact of public funds and citizen engagement.

In addition, we have shown that additional funding from European sources could be integrated alongside intitutional private funding though investment platforms. This would allow for significant financial leverage of public funds available at regional or local level for energy efficiency measures, especially with regard to renovation of existing infrastructure and buildings.

Annex: Supporting Tools

Following on from the main part of this toolkit, the following Annex continues in the exploration of a number of aspects and includes practical tools for setting up citizen financing schemes and examples of their application.

We will provide further details on how to create an investment platform with the support of European funds, with relevant guidelines through parts of the process and preparations, as well as details on different approaches for support to citizen financing operators, such as crowdfunding platforms, taken from current expertise.

We will then outline how to set up a funding action plan for potential citizen financing schemes, with relevant tools provided and finally share four examples of the approach and set up of citizen financing schemes across Europe from different entities, both public and private.

A. Roadmap for the creation of an Investment Platform

To set-up the Investment Platform supporting Citizen Financing Schemes, you will have to manage a dedicated process, which we outline below. The reader should note that Investment Platforms were originally set up under the previous European fund for strategic investment (EFSI) plan which ended in 2020. The new InvestEU Programme has taken over from EFSI and some details in implementing structures similar as outlined here might change in some details, but no relevant information had been provided at the time of writing.

The Process We can list the process of creating a citizen financing scheme with an Investment Platform, into four phases. First, the Assessment of market and opportunity, followed by, second, the design of the investment scheme. In phase three the actual set up and requirements of the scheme follow and in phase four the implementation.

Figure 3 Roadmap to design the business model

I. Overview of implementation actions for Investment Platforms

There are of course many aspects that can be covered in detail and which we can not sufficiently describe here. But lets start with we need to test the rationale behind such effort:

- the recognition that there are many potential, economic projects that may not receive funding from conventional, private sector equity providers and debt providers
- insufficient public financing to invest in all economic projects

- project funding requires a catalyst of development assistance and low-cost capital which a public-private scheme can provide.

Once you understand that there might be a need to address the above, there are four levels to consider when designing the business model of your Citizen Financing Scheme:

II. Market to address

The first step is to define the beneficiaries and the final recipients of the Citizen Financing Scheme, the type of projects eligible to funding, their characteristics and their eligibility criteria.

Identifying the building types that will be eligible for receiving funding is the first step in the decision-making process for evaluating the Citizen Financing Scheme. For the ease of use, buildings can be classified into three main groups:

- Commercial buildings (leased or owner-occupied)
- Public buildings (leased or owner-occupied)
- Residential buildings (leased or owner-occupied)

Within each building category, specific building types can be further defined, as this will condition the type of intervention that can be applied. For instance, for public buildings, Energy Conservation Measures and financing mechanisms may vary whether the program targets administrative or educational buildings or leased or owner-occupied buildings.

The second key element that might condition the type of intervention depending the cost and the Key Performance Indicators of the projects is the level of ambition of the envisaged renovation and energy savings. We can categorise the levels of renovation and energy savings possibilities of energy efficiency projects, as already outlined in the main part of this toolkit, into four packages of measures and performance thresholds: Single Measures, Light

Energy Refurbishment, Comprehensive Energy Refurbishment, Near Zero Energy Buildings (NEZB) Energy Refurbishment.

The implementation model is the method by which the projects are technically and operationally implemented in the field, most often by using engineering consultants, contractors or subcontractors. The implementation model is the key element in determining the potential Final Recipient of funding and therefore has a significant impact on the design of the funding scheme. Typical implementation models in the Energy Efficient Buildings sector are Energy Performance Contracting, Energy Supply Contracting and Separate Based Contracting.

Depending the implementation model used, a distinction could be made between the beneficiary and the final recipient of the scheme such as figured out in the table below.

Beneficiaries and final recipients depending the implementation model

Implementation model	Beneficiary & Final recipient
Separate Based Contractor (SBC) model	Final recipient is the beneficiary
Energy Supply Contracting (ESC) model	Final recipient is the contractor of the beneficiary
Energy Performance Contracting (EPC) model	Final recipient could be either the beneficiary or the contractor of the beneficiary

i Investment strategy

The investment strategy forms a key link between the assessment of a market gap and the financial instruments put in place to address that gap. Identifying the financing gaps of projects is important to find a relevant financial structure for support of the investment targets and criteria to be used and to evaluate the potential portfolio of the scheme in order to estimate the inputs for the financial forecasts.

The analysis for the existence of markets failures and sub-optimal investment situations within the targeted market allows to determine the financing gaps to be filled by the Financing Instrument and later on the type of appropriate financing mechanism to be put in place to cover the gap. The following table helps to better understand potential financing gaps.

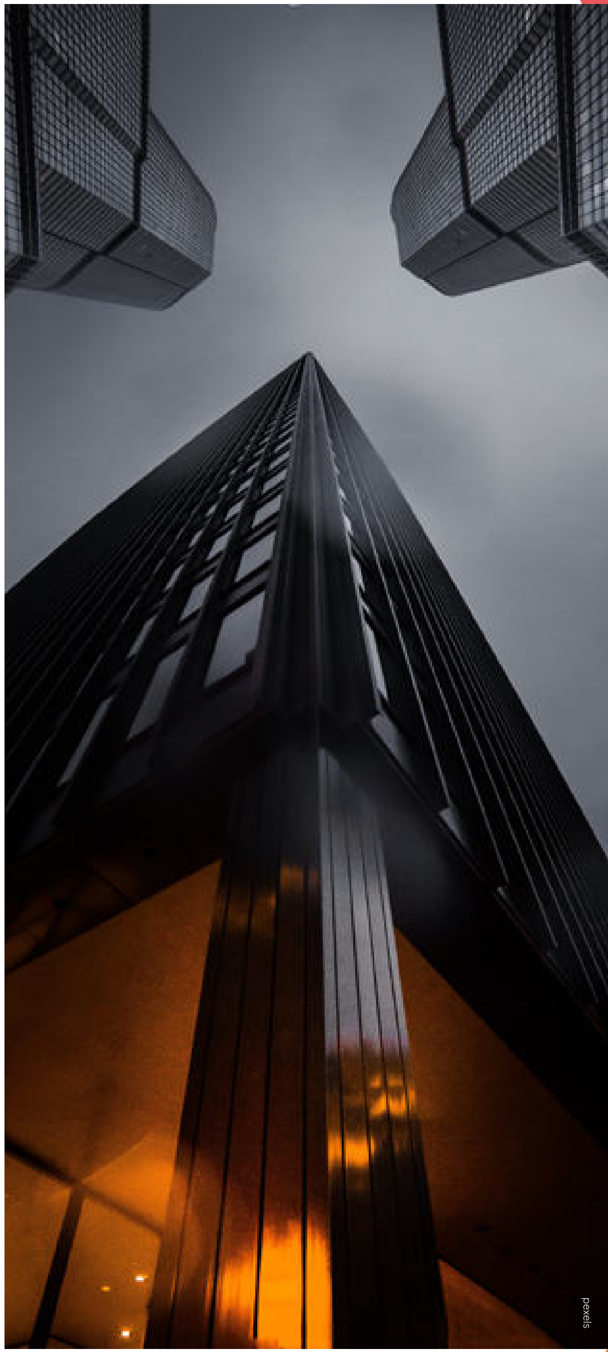
Classification of the potential financing gaps

	Main issue		Potential cause	Financing gaps
FINANCING GAPS	The profitability of the projects is not in line with the market requirements despite a positive ERR (Economical Rate of Return)	Form low to high impact	High upfront costs affecting the profitability	Despite a good economic return, the high upfront (over-) costs of the projects make the IRR unattractive for the private sector financing.
			Tenor not suited to long payback periods of projects	The market tenors are too short to make the projects affordable for the Final Recipients.
			High financing costs affecting the profitability	The market interest rates are too high to make the projects affordable for the Final Recipients.
	The projects are bankable but local financing options are limited or unsuited	Form low to high impact	Lack of commercial finance/liquidity	The amount of finance available in the market is not enough to cover the demand for reaching the targets in the long term.
			Limited balance sheet/ borrowing capacity	The Final Recipients have no access to off-balance sheet financing options (with “Maastricht neutrality” in case of public sector).
			Limited access to commercial finance	The Final Recipients have difficulties to access to appropriate financing due to: · a lack of appropriate commercial debt financing products for EE projects; · and/or high interest rates for commercial debt financing of EE projects; · and/or short loan tenors for commercial debt financing of EE projects.
			High transaction costs	The transaction costs supported by the market players limit their capacities to increase the number of projects. This (could) affect either the project holders, the project developers and/or the lenders.
	The private sector avoids investments due to high real or perceived risks of project failures	Form low to high impact	Performance & technical risks of the projects	The lenders are reluctant to finance Energy Efficiency projects where they are exposed to performance risks. This will be particularly the case for EPC/ESC projects and more particularly for “Maastricht Neutral” EPCs.
			Low creditworthiness of the Final Recipients	The Final Recipients have difficulties to access appropriate financing due to low creditworthiness.
			Lack of financing offering	There is no offer of financing available on the market for Energy Efficiency projects due to the risk perception or the available offering of financing is rather limited and subject to high interest rates and high collateral requirements.

Once the financing gaps are identified, the type of financing instrument to be used needs to be consider. An outline of possible instruments is presented below:

Logical model of suitable financing products for lenders, project developers and project beneficiaries depending gaps to address

Gaps to address	Through a fund structure	Through a Financial Intermediary
Viability gaps (the profitability of the projects is not in line with the market requirements)		
High upfront costs affecting the profitability	· Capital grants · Interest rate subsidies · Loans · Subordinated loans	· On-lending loans · Risk-sharing loans · Interest rate subsidies
Tenor not suited to long payback periods of projects	· Subordinated loans · Loans	· On-lending loans · Risk-sharing loans
High financing costs affecting the profitability	· Loans · Interest rate subsidies	· On-lending loans · Risk-sharing loans · Interest rate subsidies
Financing gaps (the projects are bankable but local financing options are limited or unsuited)		
Lack of commercial finance/Liquidity	· Loans	· On-lending loans · Risk-sharing loans
Limited balance sheet/borrowing capacity	· Loans Forfeiting	· On-lending loans · Risk-sharing loans · Forfeiting
Limited access to commercial finance	· Loans Guarantee	· On-lending loans · Risk-sharing loans · Credit risk guarantee
High transaction costs	· Grants for TA	· Grants for TA
Risk gaps (the private sector avoids investments due to high real or perceived risks of project failures)		
Performance & associated risks of the projects	1. Performance risk guarantee	2. Performance risk guarantee
Low creditworthiness of the Final Recipients	3. Credit risk guarantee	4. Credit risk guarantee
Lack of financing offering	5. Credit risk guarantee	6. Credit risk guarantee



Once the financing gaps are identified and the suitable financing products assessed, a clear overview of the financial blend of financial instruments and the potential co-funders needs to be created, including the nature of their potential contribution and their requirements.

ii Institutional and operational structure

It is important in all citizen financing schemes involving public and private partners to determine the legal arrangements of the operations under applicable national and EU laws, especially if a separate entity is being created, such as a fund manager within an Investment Platform. A clear governance model needs to be defined and implemented into the operational structure.

iii Delivery process and partnerships

In a last step, citizen financing schemes involving public and private partners, and especially Investment Platforms, need to clearly assess the business cycle and define how to deliver operational services amongst all partners. This also related to the chosen intervention model.

III. Implementation check list

To help implement this more complex process, we provide you with a checklist for the four phases that you can use as a guideline to prepare and work through.

i Phase 1: Assessment

Steps/Tasks for establishing Investment Platform (IP)
Step 1: Assess market demand/market failure(s) and existing financing supply-funding gap(s)
1.1. Analysis of the targeted investment sector (beneficiaries/final recipients/investment program).
1.2. Analysis of market failures and suboptimal investment situation for the targeted investment sector. • Identify the market problems existing in the targeted investment sector. • Establish the evidence of market failure, by analyzing the gap between supply and demand and identify suboptimal investment situations. • Quantify the investment gap to the extent possible.
1.3. Evaluation of the financing needs of the targeted investment program.
1.4. Evaluation of the Financial products to address the financing needs.
Step 2: Assess potential to crowd in investors in the Investment Platform
2.1. Evaluation of the barriers to investment in the targeted investment sector. Objective is to design the right terms and conditions for the IP.
2.2. Evaluation of the public and private resources to be potentially raised by the IP: • Identification of the potential investors, either public investors (NPBIs, international financial institutions, public-owned companies...), strategic private investors (owners of existing facilities, conglomerates) or financial investors (investment funds, insurance companies, banks, family offices, High Net Worth individuals, sovereign wealth funds) that could eventually contribute to the IP. • Evaluation of the leverage effect of the IP. • Assessment of the indicative timing of additional contributions.
2.3. Start discussions with co-investors to define what role they can play in supporting the IP: • EIB/InvestEU: validate eligibility for InvestEU funding. • IAH: validate eligibility for advisory support. • NPB: validate potential for co-financing. • MAs: validate potential for ESIF co-financing. • Other: validate potential for co-financing.

ii Phase 2: Design of the Investment Platform/Citizen Financing Scheme

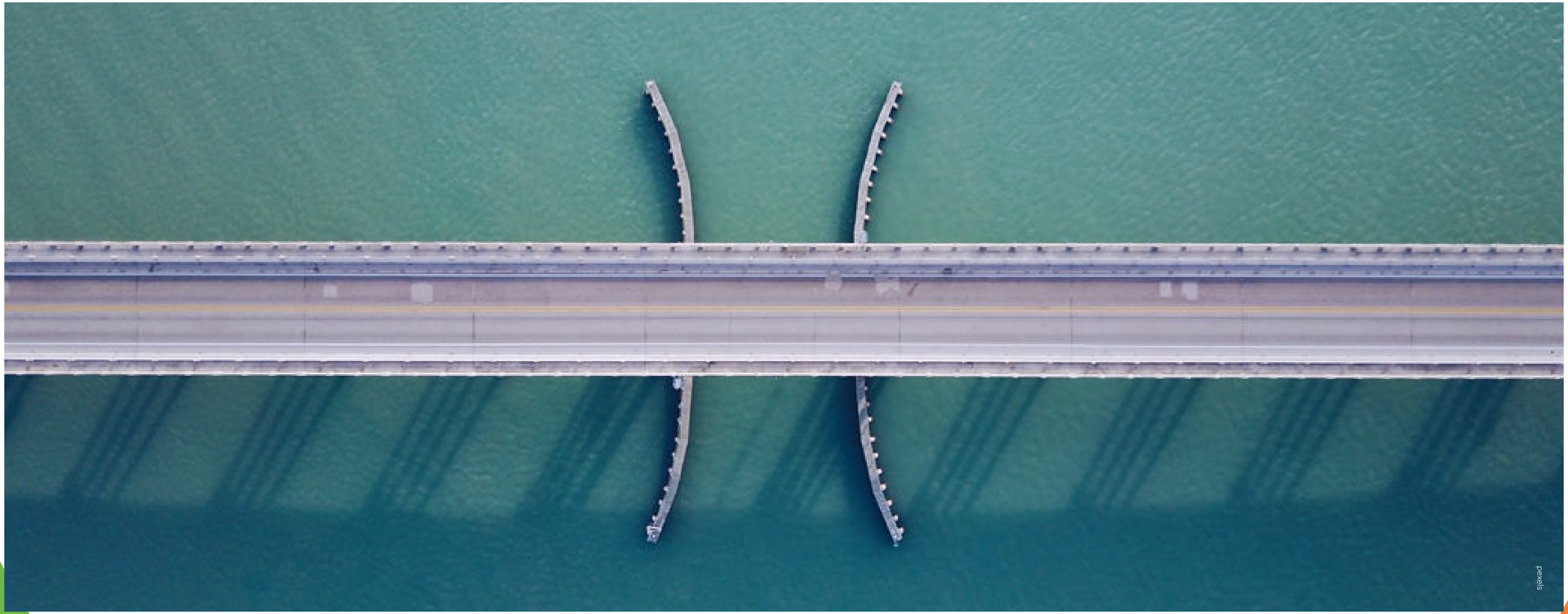
Steps/Tasks for establishing Investment Platform
Step 3: Develop the investment strategy of the Investment Platform
3.1. Analysis and design of the Project Delivery Process to support the investment program.
3.2. Selection of the co-investors to crowd-in and analysis of their requirements to co-invest in the IP, including need for, and level of, preferential remuneration for private co-investors.
3.3. Selection of the financial products to be offered to the Beneficiaries/Final Recipients and evaluation of the IP funding resources requirements.
3.4. Analysis and selection of the appropriate structure for the IP (managed account, contract-based co-financing, risk-sharing arrangement, Special Purpose Vehicle) and definition of co-financing structure, including validation of the sponsor(s) of the IP.
3.5. Elaboration of the investment guidelines of the IP, including terms and conditions for the co-investors, management fees and costs of the IP.
3.6. Set up and quantification of the expected results of the IP by means of output indicators, result indicators and IP-performance indicators as appropriate.
3.7. Definition of the monitoring and reporting systems to monitor the IP operations.
3.8. Assessment of risks and mitigation strategies for the IP.
3.9. Elaboration of the Business/Financing plan of the IP.
Step 4: Crowd in co-investors
4.1. Analysis of the appraisal criteria for applying for an EIB loan.
4.2. Assessment of the additionality of the InvestEU-backed guarantee.
4.3. Assessment of state-aid implications of the IP (in case of co-funding by InvestEU, State own funds, including NPBI).
4.4. Drafting of co-funding agreements with selected co-investors.
4.5. Drafting of InvestEU Financing request, in line with EIB loan procedures.
4.6. Start EIB loan process & co-investors appraisal & approval process. EIB process is the following: • EIB Appraisal (financial, economic, environmental, social and technical assessment). • EIB Management Committee approval. • InvestEU Investment Committee assessment. • InvestEU Investment Committee approval. • EIB Board of directors approval. • Signature (financing contract is agreed).

iii Phase 3: Set-Up of the Investment Platform/Citizen Financing Scheme

Steps/Tasks for establishing Investment Platform
Step 5: Set-up the investment platform and operational partnerships (platform manager & project delivery organization)
5.1. Support EIB appraisal process and get first approval of the EFSI Financing request: • EIB Management Committee approval
5.2. Development of the detailed Business Plan.
5.3. Design of the governance structure of the IP and drafting of the joint agreement (in case of managed account, contract-based co-financing or risk-sharing arrangement).
5.4. Selection and appointment of the fund manager (in case of a Special Purpose Vehicle).
5.5. Selection and appointment of the Project Delivery Organization partners (Program Management Unit, Project Delivery Unit, Project Aggregators) in line with the IP investment guidelines.
Step 6: Finalize approvals and legal documentation establishing the investment platform
6.1. Get EIB final approval of the InvestEU Financing request: • Approval by the InvestEU Investment Committee on the use of the EU guarantee for the project and the conformity of the IP with the rules applicable for operations with IPs and National Promotional Banks or Institutions as set by the EFSI Steering Board. • Approval by the EIB Board of Directors for the EIB financing the operation.
6.2. Get co-investors final approval for financing the operation (depending on their own approval processes). In case of National co-funding or co-funding by Managing authority or NPB, specific approval steps will be required!
6.3. Draft legal documentation and disbursement agreements.

iv Phase 4: Implementation of the Investment Platform/Citizen Financing Scheme

Steps/Tasks for establishing Investment Platform
Final step: Signing, closing and first investments
7.1. Sign legal documentation.
7.2. Disbursement from the co-investors to the IP (depending the disbursement agreements).
7.3. Design and set-up of the monitoring and reporting processes of the IP.
7.4. Start of activities of the IP (in line with the Citizen Financing Scheme).
7.5. Follow-up and monitoring.



IV. Conformity check list with the Common Provisions Regulation - Ex-Ante Assessment evaluation requirements

In the Common Provision Regulation, Member States/Managing Authorities (and assimilate, e.g. NPB) willing to use European Structural Funds to develop Financial Instruments are required to conduct ex-ante assessments before supporting their implementation, including: rationale/additionality against existing market gaps and demand/supply, potential private sector involvement, target final recipients, products and indicators.

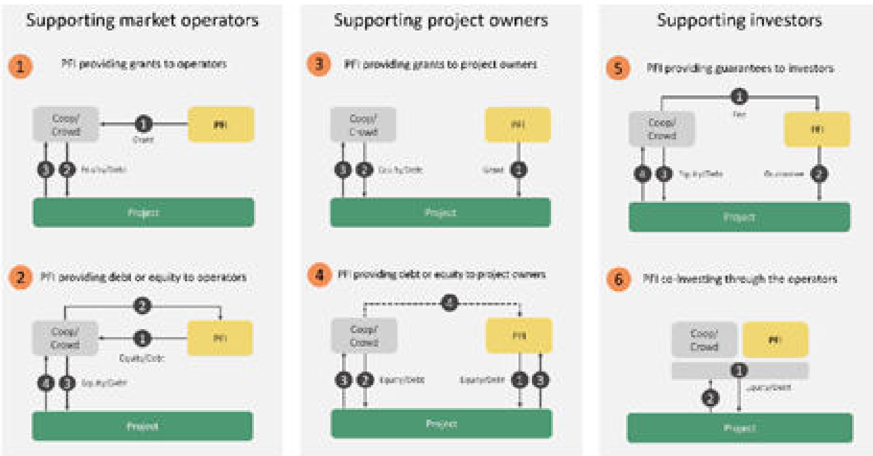
The following table summarizes the requirements for ex-ante assessment and give you space to address these by linking them to specific tasks and your business plan.

Ex-Ante Assessment requirements
Analysis of market failures, suboptimal investment situations and investments needs
1. Identify the market problems existing in the country or region in which the Financing Instrument is to be established.
2. Analyse the gap between supply and demand of financing and by identifying suboptimal investment situations.
3. Quantify the investment gap to the extent possible.
Assessment of the value added of the financial instrument
1. Identify the quantitative and qualitative dimensions of the value added of the envisaged Financing Instrument and compare it with the added value of alternatives approaches.
2. Assess the consistency of the envisaged Financing Instrument with other forms of public intervention.
3. Consider the State aid implications of the envisaged Financing Instrument.
Additional public and private resources to be potentially raised by the financial instrument
1. Identify additional public and private resources to be potentially raised by the envisaged Financing Instrument and assess indicative timing of national co-financing and of additionality contributions (mainly private).
2. Estimate the leverage of the envisaged Financial Instrument.
3. Assess the need for, and level of, preferential remuneration based on experience in relevant markets.
4. Choose an approach for alignment of interest with private co-financing.
Lessons learnt
1. Gather relevant available information on past experiences, particularly those that have been set up in the same country or region in which the envisaged Financing Instrument will be established.
2. Identify the main success factors and/or pitfalls of these past experiences.
3. Use the collected information to enhance the performance of the envisaged Financing Instrument (e.g. mitigate and reduce risk, ensure a faster set-up and roll-out of the Financing Instrument).
Proposed investment strategy
1. Define the level of detail for the proposed investment strategy maintaining a certain degree of flexibility.
2 Define the scale and focus of the Financing Instrument in line with the results of the market assessments and value-added assessment, in particular by selecting the financial product to be offered and the target final recipients.
5.4. Define the governance structure of the Financing Instrument by selecting the most appropriate implementation arrangement and definition of co-financing structure (including any envisaged combination with grant support).
Specification of expected results consistent with the relevant programme
1. Establish and quantify the expected results of the envisaged Financing Instrument by means of output indicators, result indicators and FI-performance indicators as appropriate.
2. Specification of how the envisaged Financing Instrument will contribute to deliver the desired strategic objectives for which it is set up.
3. Define the monitoring system to efficiently monitor the Financing Instrument, facilitate reporting requirements and identify any improvement areas.
Provisions for the update and review of the ex-ante assessment methodology
1. Define the conditions and/or the timing in which a revision or an update of the ex-ante assessment is needed.
2. Ensure that this flexibility, and trigger points, is reflected in the monitoring and reporting provisions.

B. Public financing schemes to support citizen financing operators – current experience

Public authorities willing to support the citizen financing market can provide grants, financing or guarantee instruments to citizen financing participants independently of the citizen financing process. Depending on the final recipient of the public funds (i.e. cooperatives/ crowdfunding platforms, investors or project owners) as well as the type of support (grants, financing or guarantee instruments), six different intervention models have been identified as potential support to market operators. These models are presented below.

Intervention models for the support of Public Financing Instruments to citizen financing operators



It should be noted that all models can be applied to cooperatives of crowdfunding platforms with the exception of model six which requires the citizen financing operator to intermediate the funds provided by the Public Financing Instrument and for which only crowdfunding platform operators that intermediate the provision of loan-based or equity-based financial instruments and that are supervised by the national financial regulator may qualify as financial intermediaries.

I. Schemes to support market operators

The provision of grant or equity directly to citizen financing operators is one of the first options for public authorities to support citizen crowdfunding and cooperative projects and investors. By lowering the operational costs of the citizen financing operators, grants or equity would allow them to offer better or more extensive services to investors such as due diligence of project owners in case of crowdfunding platforms or to better cover the risky first stages of project development such as impact studies, feasibility studies in case of cooperatives. Another option is to provide loans at favourable terms in view to increase the liquidity of the citizen financing operators.

Under this scheme, the public authority provides public funds to set-up a financing instrument to provide direct grant, equity or debt to citizen financing operators. To set up this scheme, the public authority should select through open call the citizen financing operators complying with eligible criteria set by the public authority. Typically, loans or equity would be provided at concessional terms (e.g. lower interest rate, terms of repayment, etc.) while grants would be provided for technical assistance or capacity development.

Example

Netherlands – Oneplanetcrowd – EaSI Programme

One example is the Dutch lending crowdfunding platform Oneplanetcrowd that raises EUR 1 million growth finance from the European Investment Fund (EIF) via the EU's Employment and Social Innovation Programme (EaSI) capacity building investments window. The financing comes in the form of a favorable loan with a term of eight years. As a result of this financing, further investments will be made in the coming years in the quality of the services provided by, among others: the improvement of front-end and back-end IT systems, expanding sales and marketing capacity, offering new products such as bonds, equities and limited tradability and meeting strict regulatory requirements as Oneplanetcrowd is one of the few platforms operating under MiFID II. In this example, Oneplanetcrowd is a crowdfunding platform established by a regulated investment fund manager (Startgreen Capital) that has implemented regulations that require a high level of professionalism. This has facilitated the engagement of EIF.

Source: Scaling up Partnerships: A blueprint for the implementation of match-funding schemes between public authorities and crowdfunding platforms, EUROCROWD, 2021.

II. Schemes to support project owners

The provision of grants directly to project owners remains the most accessible ways for the public authority to collaborate with citizen financing operators. Grants provided on top of citizen financing, especially capital grants, lower the risk/return ratio of investment projects making the investment more competitive and thus helping to attract citizen and private funds.

The public authority provides public funds to set-up a grant instrument to provide direct grants to project owners engaged in a citizen financing operation. To set up this scheme, the public authority should select a crowdfunding platform or a cooperative that will be responsible for identifying project opportunities and attract investors. The selected platform or cooperative will be responsible for the due diligence of both investors and projects. The financing scheme would complete, in the form of a grant, the investment made by all crowd-investors or coop-investors in a project that satisfies the eligibility criteria set by the public authority. Depending on the objectives of the scheme, the type of projects to finance and the chosen citizen financing operator (cooperative or crowdfunding platform), the public funds can be provided under the form of:

- A technical assistance grant to facilitate the initial project development and preparation of the fundraising. In this case, the grant is awarded before the fundraising operation start or is fully closed.
- A capital grant to complete the financing of the project. In this case, the grant is awarded when the fundraising operation has successfully closed.

Examples

Italy – Eppela - City of Milano

In 2016 and 2017, the Italian reward-based crowdfunding platform Eppela partnered with the City of Milano to support the financing of local projects of public interest with social impact. The City of Milano allocated EUR 400.000 to provide a capital grant as co-founding up to 50% and EUR 50.000 for selected projects that successfully complete a civic crowdfunding process (i.e. reaching the required threshold set out in the campaign). The City of Milano contracted Eppela via a public procurement tender to organize the crowdfunding campaigns and manage the fundraising process while the projects were selected through a public call for innovative projects. Eighteen projects went into the crowdfunding platform and sixteen of them collected 50% of their budget from donors that were completed at equal level by a grant from the City of Milano.

https://www.eppela.com/it/mentors/comunemilano

https://www.eppela.com/it/news/61-crowdfunding-civico-del-comune-di-milano-ci-siamo

The provision of debt or equity directly to project owners is one of the options for public authorities to support citizen crowdfunding loans or investment in crowdfunding or cooperative projects. Public debt or equity provided on top of citizen financing offers a better access to finance to the targeted projects. This helps to attract citizens and other investors. If public funds are provided on concessional terms, this can further improve the business case by helping to decrease the financing costs for the project owners or by improving the credit risk rating of the projects.

The public authority provides public funds to set-up a debt or equity instrument to provide loans or equity to selected project owners engaged in a citizen financing operation. To set up this scheme, the public authority should select a crowdfunding platform or a cooperative that will be responsible for identifying project opportunities and attract investors. The selected platform or cooperative will be responsible for the due diligence of both investors and projects. Depending on the objectives of the scheme, the type of projects to finance and the chosen citizen financing operator (cooperative or crowdfunding platform), the public funds can be provided at different stages of the fundraising process:

- At the start of the fundraising process as first-in finance. In the crowdfunding sector, first-in finance could help to increase the credibility of the projects amongst investors. In the cooperative business model, first-in finance could serve to finance the early stage of project development such as impact studies, feasibility studies, etc.

- During the fundraising process as bridge or transition finance. In the crowdfunding sector, bridging the funding of the early investors could help close the fundraising deal by increasing the attractiveness of the project to other citizen investors. In the cooperative business model, bridge financing could be used to fund the project development phase before final financial close.

- At the end of the fundraising operation as top-up finance. In this case, the public funds are granted to the project owners only when the fundraising process has successfully closed.

Such financing instrument – whether they are loan or equity-based – are intermediated via a financial intermediary, typically a commercial bank or an investment fund. The public authority will therefore have to select a financial intermediary or to set-up a Special Purpose Vehicle to manage the financing instrument. It should be noted that operators of crowdfunding platforms, which intermediate the provision of loan-based or equity-based financial instruments, and which are supervised by the national financial regulator, are likely to fulfil criteria as appropriate financial intermediary for financial instrument to project owners.

Examples

Italy – equity crowdfunding platforms - Lazio Innova Venture Capital fund

The Lazio Region, as part of its strategy aimed to support investments in the venture capital of innovative startups and companies with a high growth potential in Lazio, launched the INNOVA Venture Capital fund in July 2018. The fund, which is managed by Lazio Innova, an in-house entity of Lazio Region, co-invests in these companies alongside other private investors through equity and quasi-equity instruments. The fund provides from a minimum of EUR 250.000 to a maximum of EUR 2 million for the initial investment, with co-investment from private investors accounting for 30% to 60% of the overall amount. The fund also provides a EUR 4 million for follow-on, with a maximum investment amount of EUR 6 million for each entrepreneur, of which Innova Venture invests a maximum of EUR 2.5 million. In this particular scheme, Lazio Innova is in charge of identifying and performing the due diligence of the projects proposed by entrepreneurs, which have to submit an application, including a 5-year business plan. Upon approval of the application, INNOVA Venture provides the entrepreneur with a first tranche, in the form of equity. Additionally, to this, Lazio Innova implemented partnership agreements with equity crowdfunding platforms, who can then host on demand campaigns launched by the selected projects to raise top-up funds. Once the campaign is successfully funded and following due diligence, Innova Venture matches the investments of the co-investors, including the crowd-investors for a maximum of EUR 2.5 million. Any equity crowdfunding platform able to carry out operations on the Italian territory could apply to become a partner in the initiative, as long as it had received an authorization from Italian national regulator CONSOB. At date, agreement have been signed with 5 Italian equity crowdfunding platforms: MamaCrowd, 200Crowd, WeAreStarting, Backtowork24, Starsup and Doorway.

http://www.lazioinnova.it/innova-venture/equity-crowdfunding/

III. Schemes to support investors

The provision of guarantees to investors is one of the options for public authorities to support citizen crowdfunding loans or investment in crowdfunding or cooperative projects, without having to provide any direct investment in projects or a cooperative/crowdfunding platform. The guarantees lower the financial risk for individual investors, hence increasing their appetite to invest through the cooperative of the crowdfunding platform.

The public authority provides public funds to set-up a guarantee instrument to cover investors in a selected crowdfunding campaign of a cooperative project. To set up this scheme, the public authority should select a crowdfunding platform or a cooperative that will be responsible for identifying project opportunities and attract investors. The selected platform or cooperative will be responsible for the due diligence of both investors and projects. The guarantee scheme would cover the investment made by all crowd-investors or coop-investors in a project that satisfies the eligibility criteria set by the public authority. In case of default, the guarantee will be channelled through the selected platform or cooperative to refund the investors.

Such guarantee schemes – whether they are loan-to-loan or portfolio guarantees – are intermediated via a financial intermediary, typically a commercial bank or a fund manager. The public authority will therefore have to select a financial intermediary or to set-up a Special Purpose Vehicle to manage the guarantee instrument. It should be noted that operators of crowdfunding platforms, which intermediate the provision of loan-based or equity-based financial instruments, and which are supervised by the national financial regulator, are likely to fulfil criteria as financial intermediary for guarantee to investors. Depending the source of public funds, the guarantee may be provided to the financial intermediary for free, with the benefit passed on to the project owners/final recipients in the form of no guarantee fee, reduced collateral and/or interests.

Examples

Sweden - Trine – Swedish Development Agency

The Swedish crowdfunding platform Trine partnered with the Swedish Development Agency to increase the amount of investment into renewable energy projects in Africa. Through a guarantee agreement, the Swedish Development Agency covered the risk of investors willing to lend to renewable energy companies. The Trine Platform arranges debt funding from private individuals to borrowers who are small and medium-sized energy service companies in Africa that offer renewable energy solutions, often in the form of rent-to-own. The guarantee agreement will run during the period 2018-2023 and will cover 60% of an expected portfolio of EUR 10 mobilized private capital from the "crowd". A similar guarantee agreement has been closed by the Swedish Development Agency with the Lendahand crowdfunding platform operating the same off-grid renewable energy investments in Africa for a portfolio of EUR 12 Mmobilized private capital that will be covered at 50%. The guarantee is structured with a rate of 50% and a cap rate of 60% of the loans provided by the platforms, meaning that crowd investors only lose a maximum for 40% of their investment in case of default. A limited fee corresponding to 3.3% of the total exposure under the guarantee is paid by the platforms to use the guarantee.

https://medium.com/trine-blog/making-it-safer-easier-and-more-impactful-to-invest-sustainably-411335321e97

https://www.sida.se/en/for-partners/private-sector/sidas-guarantee-instrument

Netherlands: OnePlanetCrowd/Startgreen Capital – Netherlands Entreprise Agency (RV0)

Startgreen Capital launched at the end of 2020 a new investment fund for sustainable small and medium size business looking for funding between EUR 200,000 to EUR 2 million. The fund can finance them directly through a loan covering a minimum of 60% of the financing amount requested. Companies can additionally raise up the 40% remaining through the Startgreen crowdfunding platform OnePlanetCrowd. The complete loan (including the part from the crowd) benefits of a state guarantee of a minimum of 67.5% on losses provided by the Netherlands Enterprise Agency as part of the COVID-19 recovery program from the Dutch government. RVO provides a state guarantee with a rate of 90% and a cap rate of 75% for loans with a maximum of EUR 2m for a term of two to four years. The SME pays a one-time commission of 2% of the principal amount of the loan for a term of 2 years to use the guarantee. With a term of 4 years, this commission is 3%. It is to note that the scheme is completed by a contribution of EUR 5 million from the Dutch national promotional bank (Invest NL) to the StartGreen Fund for Sustainable SMEs to be allocated to projects benefiting from the guarantee. In this example, Oneplanetcrowd is a crowdfunding platform established by a regulated investment fund manager (Startgreen Capital) that has implemented regulations that require a high level of professionalism. This has facilitated the engagement of RVO and Invest NL to support the scheme.

https://www.startgreen.nl/fondsen/startgreen-fonds-duurzaam-mkb/

https://www.oneplanetcrowd.com/nl/s/financiering

The most integrated way of cooperation between a public authority and citizen financing operators is the one where the public authority co-invests under the form of debt or equity alongside the citizen financing operator in targeted portfolio of projects. In this role, the public authority channels public funds via a citizen financing operator acting as a financial intermediary for the public financing instrument which could be debt- or equity-based. More specifically, the public authority contributes resources to the citizen financing operator, which are then invested in individual projects managed by the operator. In this case, the public authority delegates the full decision-making process to the citizen financing operator. The public financial support to projects would generally be linked to a private financing threshold, with negotiated terms and conditions (e.g. terms of repayment, governance process, reporting) aligning with the ones of private investors. It should be noted that this type of cooperation is only accessible to citizen financing operators eligible as financial intermediary, which is mostly the case in the crowdfunding sector and more specifically lending-based crowdfunding platforms which intermediate the provision of loan-based financing instruments or investment-based crowdfunding platforms having a MiFID or AIFM license.

Under this scheme, the public authority provides public funds to set up a financing instrument to provide loans or equity alongside the crowdfunding operator to selected projects in a single operation. To set up this scheme, the public authority should select a crowdfunding platform that will be responsible for identifying project opportunities and attract investors. The selected platform will be responsible for the due diligence of projects as well as the provision and management of loans of equity investments to the underlying projects. In most cases, the financing instrument is set up directly by the platform operator, under the form of a public-private debt or equity fund, with public funds used to crowd in institutional private investors. The public-private fund would complete the investment made by all crowd-investors in projects that satisfy the eligibility criteria as well as the terms and conditions set by the co-investors. Typically, the public funds would be provided with concessional terms helping to improve the blended terms of the loans or equity investments.

Examples

Lithuania – FinBee – Invega Avieté loan fund

In 2018, Invega, the Lithuanian National Promotion Institution (NPI), established a EUR 4.6 million lending instrument called Avietė as a pilot scheme to support local SMEs through crowdfunding platforms, aiming to attract private funds for Lithuanian companies, while at the same time contributing to the strengthening of the Fintech sector in the country. As part of this scheme, the crowdlending platform FinBee, a platform supervised by the Bank of Lithuania, was selected to intermediate Avieté loans to SMEs in a single transaction with contributions from crowd investors. The platform was responsible for selecting projects that would be co-financed with an Aviété loan of up to EUR 10,000 per business and a maximum of 40% of the total amount of each loan. These loans were granted for investments or for working capital to SMEs with a maximum maturity of 36 months. Following the impact of the Covid epidemic and the pressing need to increase liquidity in the local SME market, Invega used the crowdfunding platform as a full financial intermediary to provide 100% state-funded loans to SMEs seeking a loan on the platform between December 2020 and July 2021, at the same time increasing the maximum loan amount up to EUR 25,000.

http://turizmas.kaisiadorys.lt/en/business-support/

https://invega.lt/en/businesses-affected-covid-19-offered-liquidity-loans/

Pan-European – October – European Fund for Strategic Investment (EFSI) and other public investors

To support European SME businesses, the French digital lending platform October, active in France, Spain, Italy, Germany and the Netherlands, offers a hybrid investment model. As a crowdlending platform, the pan-European fintech has a community of 20,000 retail and citizen investors who lend to European SMEs from as little as €20 via its online platform. Since 2017, in addition to individual investors, October brings also together public and private institutional investors in funds set-up and managed by October Factory, a regulated asset management company wholly owned by the lending platform and who automatically participate in all projects presented on the platform. After receiving a first support of Bpifrance, a French public investor, which subscribed early in 2017 to the first public-private co-financing fund associated with the lending platform, October became also the first platform in Europe to receive on-lending support from the European Investment Bank, via the European Investment Fund (EIF). The EIF joined forces with Bpifrance and other private institutional investors in the joint debt fund of EUR 90 million, backed to the tune of EUR 18.5 million by EIF under the European Fund for Strategic Investment (EFSI). In this particular case, the EIF support aimed to attract other public and private institutional investors in the fund to allow October to expand its geographic commercial development and the range of financing offered on its crowdlending platform, particularly the size of the loans. The debt fund was to supplement loans in a proportion of 50% to 70% advanced by citizen investors on the crowdlending platform to SMEs. This operation was followed by two additional fundraisings, in 2018 (EUR 200 million) and 2019 (EUR 100 million), in which the EIF renewed its commitment in the joint fund (via the EFSI Private Credit Tailored for SME programme) alongside other top tier public and private institutional investors including CNP Assurances, Bpifrance and Zencap. More recently, the platform attracted three new public investors in joint funds, bringing the platform's overall lending capacity to €600 million: the Italian national promotional bank Cassa Depositi e Prestiti SpA (CDP), with a commitment of EUR 20 million, the Spanish national promotional bank Instituto de Credito (ICO), with a commitment of EUR 15 million, and the Italian financial institution of the Lombardy region Finlombarda Spa, with a EUR 15 million commitment. It is worth mentioning that another EUR 30 million institutional co-financing fund set-up by October Factory with 5 confidi entities (belonging to Federconfidi and Rete Fidi Italia) also received support from the EIF under the form of a guarantee through the InnovFin SME Guarantee Facility, an initiative launched by the European Commission and the EIB Group backed by the EU's research and innovation program Horizon 2020 programme, for which October has become an approved intermediary. Thanks to the impact of the guarantee facility provided by InnovFin, eligible Italian companies benefit from a reduced cost of funding.

https://october.eu/eib-group-lendix-join-forces-step-financing-french-european-businesses/

https://www.eif.org/what_we_do/guarantees/news/2019/efsi-eif-october.htm

https://october.eu/the-new-october-italy-fund-for-italian-smes/

Finland – Vauraus – EFSI Private Credit Tailored for SME programme

In December 2020, the Nordic loan-based crowdfunding company Vauraus Suomi became the second European crowdfunding platform to be supported by the European Investment Fund under EFSI Private Credit Tailored for SME programme, with a EUR 27.5 million cornerstone investment in Vauraus' new SME Loan Fund I Ky. The fund is expected to attract further private investments, helping it to reach a target size of at least EUR 60 million. Vauraus AIFM Oy (the fund manager) is a fully owned subsidiary of Vauraus Suomi Oyj, a Finnish crowdlending platform focused on SMEs. So far, the platform has intermediated a total of EUR 193 million in financing between c. 1,000 borrowers and c. 6,000 investors. Thanks to the backing of the EIF and additional funds available for investment via the Fund, Vauraus will be able to scale up its activities by awarding slightly larger loans, compared to current average financing size on the Finnish crowdlending market.

https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2371

C. Funding Action Plan

Any decision to consider the set-up of blended finance solutions with public money involving citizens finance schemes needs to be thought through and planned. Our Funding Source Action Plan can help evaluate the sources of available public funding and detail the tasks and schedule to mobilize the funds in order to successfully establish an Investment Platform (IP) for citizen financing schemes.

The following tables will guide you through the process and necessary steps to create an initial Funding Action Plan. In order to showcase how it might possibly look in the process, we have filled in examples as provided in the first half of 2021 by VIPA in italic letters, the Lithuanian Public Investment Development Agency, as part of this project. VIPA is a state-owned National Promotional Institution which provide loans, guarantees for repayable investments, implementation of similar measures for urban development, optimization of public infrastructure, and energy efficiency improvements. Our activities are financed by the European Union, national, and other financial assistance programs and financing sources.

I. Funding sources evaluation

IP level lending funding sources
Detail here the level of funds in euros required for lending funding purpose at the IP level. By lending funding purpose, we mean lending funds allocated by investors to the Investment Platform in the objective to be invested as loan contributions to the projects that are part of the investment program of your CFs4EE Financing Scheme.
VIPA's Investment Platforms is established as limited partnership and managed by VIPA as general partner. Investment platform had equity investor and obtained loan from EIB (EUR 12,5M), additional EUR 12,5M is under negotiation with EBRD. *CFs4EE Financing Scheme will be financed only from the equity investor's part whereas EIB financing cannot be dedicated to finance consumer needs while final beneficiaries under CFs4EE Financing Scheme are consumers. It is planned that up to* EUR *1M from Investment Platform will be channeled through P2P platform operators to finance CFs4EE Financing scheme.*
Who are the expected contributors to the required lending funds? What is their expected contribution, including the rates and terms required?
EIB at Investment Platform level. *At Citizens Financing Scheme level no lenders involved.*
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
Funding agreement with EIB is already signed (but it is only at Investment Platform level).

IP level equity funding sources
Detail here the level of funds in euros required for equity funding purpose at the IP level. By equity funding purpose, we mean equity funds allocated by investors to the Investment Platform in the objective to be invested as equity contributions to the projects that are part of the investment program of your CFs4EE Financing Scheme.
Investment platform had one equity investor – national electricity company Energijos skirstymo operatorius, which has exited Investment platform at the end of 1st quarter. At the moment VIPA is actively negotiating with new potential Investment platform equity investor. We are targeting EUR 10M equity investment to Investment Platform, in addition VIPA is planning to invest additional EUR 2M.
Who are the expected contributors to the required equity funds? What is their expected contribution, including the Exit multiple on investment or the IRR required by the expected contributors?
This information is still under negotiation process
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
Under negotiation process

IP level capital contribution funding sources
Detail here the level of funds in euros required for capital contribution purpose. By capital contribution purpose, we mean equity funds allocated by investors to the investment platforms in the objective to be invested either as equity contributions or loan contributions to the projects that are part of the investment program of your CFs4EE Financing Scheme.
N/A
Who are the expected contributors to the required capital contribution funds? What is their expected contribution, including the Exit multiple on investment or the IRR required by the expected contributors?
N/A
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
N/A

II. Project level funding sources evaluation

Project level lending funding sources
Detail here the level of funds in euros required for lending funding purpose at the project level. By lending funding purpose, we mean lending funds allocated by investors in the objective to be invested as loan contributions to the projects that are part of the investment program of your CFs4EE Financing Scheme.
EUr 3 000 000 (including citizens funding)
Who are the expected contributors to the required lending funds? What is their expected contribution, including the rates and terms required?
Citizens financing EUR 1 690 000 with the average rate of 10 percent P2P Operator financing EUR 710 000 with the average rate of 7 percent, and VIPA EUR 600 000 with the target rate between 3,50 and 7 percent depending on the risk score received by the final beneficiary.
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
The engagement of funds will be implemented through the crowdfunding platform administrated by the P2P operator. Funds are not allocated in advance in crowdfunding platforms.

Project level equity funding sources
Detail here the level of funds in euros required for equity funding purpose at the project level. By equity funding purpose, we mean equity funds to be invested as equity contributions to the projects that are part of the investment program of your CFs4EE Financing Scheme.
N/A
Who are the expected contributors to the required equity funds? What is their expected contribution, including the Exit multiple on investment or the IRR required by the expected contributors?
Equity contributors are not envisaged.
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
No equity funds expected.

Project level grant contribution funding sources
Detail here the level of funds in euros required for grant contribution purpose at the project level. By grant contribution purpose, we mean grant funds allocated by the public authority as non-refundable equity contribution to the projects that are part of the investment program of your CFs4EE Financing Scheme.
There is a state subsidy in place for consumers who obtain solar power plant for their own needs. The state provides subsidy for each installed Kw for around 323 Eur/kw. This subsidy helps to reduce payback period for such investment. As we expect 1200 loans (2,5 kW each) the total sum of grant expected would be EUR 969 000. Please note, that state subsidy is provided outside Investment platform and is managed by different institution.
Who are the expected contributors to the required grant funds? What is their expected contribution?
State of Lithuania through the administrative Agency.
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
Yes.

Project level capital contribution funding sources
Detail here the level of funds in euros required for capital contribution purpose at the project level. By capital contribution purpose, we mean equity funds allocated by the project owners as equity contribution to the projects that are part of the investment program of your CFs4EE Financing Scheme.
N/A
Who are the expected contributors to the required grant funds? What is their expected contribution?
Not expected
Are these funds already engaged? If not, what are the steps and actions you planned to engage the funds?
Not expected

III. Funding sources synthesis

Sources of funding	Lending purpose funds (euros)	Equity purpose funds (euros)	Capital contribution funds (euros)	Grant contribution funds (euros)
Public funds				
International Financing Institutions (e.g. EIB or EBRD)	*12,5M EIB* *12,5M EBRD (under negotiation)*			
European Structural Funds (via Member State Managing Authority)				
National, regional, and local public funds				
National Promotional Banks & public institutional investors		*EUr 2M (VIPA contribution)*		
Public institutional investors				
SUBTOTAL				
Private funds				
Private institutional investors (pensions funds, etc.)		*EUR 10M (new equity investor under negotiation phase)*		
Financial institutions & commercial banks				
Debt and/or equity crowdfunding platforms				
ESCOs				
Citizen cooperatives (ESCOOPs & FINCOOPs)				
Project owners/developers				
SUBTOTAL				
TOTAL				

D. Case studies

Within the CitizEE project four case were implemented aiming at creating citizen financing schemes and Investment Platforms. The goal was to explore the hurdles and opportunities given and providing direct input for authorities in replicating similar structures and for policy makers to review existing framework to reduce potential hurdles. The four cases listed below provide detailed guidance for the establishment of the specific citizen financing schemes and related planning. It should be noted that they are all subject to specific legal and geographical circumstances and that replication might need relevant adaptation of the concepts.

I. VIPA (Lithuania)

Strategic context
• The National Energy Independence Strategy of Lithuania is designed to help actively develop renewable energy sector. Its goals include to increase the number of consumers using environmentally friendly technologies to account for 45% of the country's total consumption of final energy from renewable energy sources by 2030 and 80% in 2050. • The strategy is based on the believe, that improving energy efficiency for economic operators and development of renewable energy sources, to finance about 500,000 electricity consumers in Lithuania by 2030 who produce the necessary amount of energy for their self-consumption, it will be necessary to invest over EUR 1.187 million.

Investment program and policy
• Eligible project measures are solar power plants installations for the residential buildings and purchasing the part of solar power plant from the remote solar power park. Produced energy must be consumed for consumer needs. • Loans through consumer facing loan-based crowdfunding platforms, here referred to as P2P platforms, for the solar power plants installations for the residential buildings and purchasing the part of solar power plant from the remote solar power park. • It is estimated to finance 1,200 consumers. • In accordance with statistical information, the average household consume 2 500 kwh per year. Assessing that 1 kw solar power plant produce 1,000 kwh per year, to satisfy such consumption needs 2,5 kw solar power plant should be installed. • The average price for one kw depends on the solar powerplant type. In remote solar power plant park, you can by 1 kw for around EUR 920-1,200, depending on the solar modal type (bifacial modules are more expensive but they can produce more energy), for installation on the roof 1 kw price may vary from EUR 750-900. • Average payback period is about 6-7 years calculating with the state subsidy. Payback period without state subsidy increases to up to 8-10 years.

Investment strategy and financing products
• The citizen financing scheme will be funded through an Investment Platform, which is established as limited partnership and managed by VIPA as general partner. The Investment Platform will issue a loan to P2P platform operators or invest directly into P2P platform. Investment or the loan will be channelled to consumers by the P2P platform operators to cover the cost of purchasing or installation of solar power plant. • The Investment Platform will have an equity investor and receive a loan from the EIB, whereas at the level of citizen financing scheme private funds will be attracted, and P2P platform operators may co-invest at the level of final beneficiaries as well.

Investment structure and funding sources
• VIPA established an Investment Platform for financing the energy efficiency projects. The legal status of Investment Platform is structured as a limited partnership. VIPA runs the entity as general partner with unlimited liability. Investors can participate as limited partners whereas liability is limited up to investment amount. • Companies can receive loan from Investment platform in order to implement energy savings measures and ESCO's can receive a long-term loan to install their energy efficiency measures. • Risk management procedures will be performed by VIPA at the Investment Platform level and by the P2P platform operators at the level of citizens as they will be responsible for the selection of eligible final beneficiaries and their credit risk assessment.

Implementing entities, implementation scheme, organizational set-up
• VIPA will launch open calls for the selection of P2P platform operators to implement the citizen financing scheme. • Project monitoring at the Investment Platform level is carried out by the fund manager (VIPA). • P2P platform operators provide reports to fund manager (VIPA) about issued loans.
• The citizen financing scheme will be operated by P2P platform operators and managed by VIPA. P2P platform operators will work on their daily basis meaning that operation of CFs4EE financing scheme won't change their day-to-day business. • VIPA acts as a General Partner of the Investment Platform and is responsible for: o performing risk management o ensuring compliance o providing staff, IT infrastructure and other resources o attracting co-investors and leveraging funds o promoting IP's activities

II. REGEA (CROATIA)

Strategic context

- Based on data from the EU Observer Photovoltaic Barometer 2019 and 2020, Croatia ranks among the lowest per capita installation, despite having considerable solar potential due to geographical location. Even tough economic and financial calculations indicate that PV installations can be feasible even without any subsidies (but with the removal of existing legal and organisational barriers), the progress of PV capacity installation in Croatia is very slow compared to other EU countries. This has been identified as a market failure.
- On 28 October 2021 the City Assembly of the City of Zagreb has officially adopted the Solar Roofs Program, which states the aim of achieving investment in over 50 MW of PVs in the City of Zagreb in the period 2022-2024. The estimated investments to achieve this goal amount to between 30 and 40 Meur, and the adopted document explicitly states that citizen financing is an important element of this investment.
- Thus, establishment of an investment platform with citizen financing elements looks like an excellent solution to implement this investment. A preliminary interest of representatives of the City of Zagreb has been obtained at the end of November 2021, however at this point no formal written commitment has been obtained. However, it is reasonable to believe that such commitment will be obtained within the duration of the CitizEE project.

Investment program and policy

- The investment objectives include investments in building integrated PV systems in general. Within the period 2022 to 2024 it is assumed that most of the investment will be realized in PVs integrated in public or commercial buildings (including buildings owned by companies owned/established by the City of Zagreb). The average volume of investment has been estimated at EUR 50,000 (60-70 kW of installed capacity).
- The portfolio of potential projects thus includes a large number (about 550) of small to medium (30-250 kW) projects. The methodology of selecting projects should be based on cost effectiveness, however it should be simple and robust in order to allow evaluation of a large number of projects – i.e. the main selection criteria should be simple payback period.

Investment strategy and financing products

- The investment strategy is based on the project portfolio, i.e. the investment sector will consist of a large number of small to photo voltaic projects installed. The transaction size is estimated at up to EUR 200,000 per project (up to 250 kW capacity).
- The investment platform will directly invest in photo voltaic building integrated projects which will be realized either as Power Purchasing Agreement or guaranteed premium price (based on Law on Renewable Energy Sources and High Efficiency Cogeneration (O.B. 100/15, 123/16, 131/17, 111/18)). In both cases a long-term contract of electricity supply (between 10 and 12 years) will be signed and act as guarantee of payment/revenues.
- The total volume of investment is estimated at EUR 27.5 million, where possible co-investment from citizens is estimated at maximum of EUR 5 million. The citizens will get a guaranteed return rate of 5%.

Investment structure and funding sources
The planned investment structure to fund the investment platform is based on two main sources: • Commercial banks – initial funding estimated at EUR 25 million • Citizens – initial funding estimated at EUR 5 million • The initial funding will allow to cover app. 4,000 photo voltaic projects on households (project volume app EUR 5,000 per project, total volume EUR 20 million, plus management fees and other costs).

Implementing entities, implementation scheme, organizational set-up
• The information regarding organizational set-up of the scheme presented below reflects the situation late November 2021 and includes assumptions. • The investment platform is planned to be established by the City of Zagreb, probably as a Special Purpose Vehicle.
• The estimated organizational set up includes the following: o Project Delivery Unit (PDU) - The team assigned to carry out preparation and delivery of project on support or on behalf of the Final Beneficiaries/ Recipients o Fund Manager or Financial Intermediary - manages the funds allocated under the Investment Platform and deploy the financing products. • Key partners organisations include the following: o City of Zagreb (establishment of investment platform) o Financial institutions (Provision of capital) o Technical experts (Subcontracted for technical expertise) o Service providers (Supply of equipment and works for installation)

The institutional structure includes the following bodies, with indicated main responsibilities:

- Investment platform owner (City of Zagreb)
    - Establish the investment needs, the sectorial focus, the business case, the sources of funding, the co-financing or risk-sharing agreements, decision-making rules.
    - Decide on the risk/return profile, the remuneration criteria for the investors, and the eligible entities which can propose projects to the Platform and the Investment Platform's internal project selection process.
    - Provide part of the initial funding for the Investment Platform's activities.
- Program Management Unit (PMU)
    - Provides advisory services regarding the financing scheme investment program.
    - Manages the monitoring and reporting of the investment program progress to the program authority.
- Supervisory Board (SB)
    - Provides advisory services to the co-investors regarding the Investment Platform financial performance and its objectives including non-financial returns; commitment and deployment milestones.
    - Manages the financial monitoring and reporting of the Investment Platform operations to the co-investors.
    - Appoints the Financial Intermediary or the Fund Manager through an adequate selection process, and decide on its remuneration, which should be performance- based and ensure alignment of interests.
- Investment Committee (IC)
    - Advises the Financial Intermediary or the Fund Manager on investment decisions or takes investment decisions based on the Investment Platform's internal project selection process.

III. VEB (Belgium)

Strategic context
• The investment scheme will focus on school buildings. In total, there are approximately 17,995 school buildings in Flanders. There is no exclusion regarding type of school buildings (in grades, education type, funding etc.). Regarding ownership, there are different situations (but all are included in the scope): o 100% subsidized school buildings Flemish level (Financed by GO!) 'Gemeenschapsonderwijs' (25.34% of students) o <100% subsidized school buildings local authorities' level (co-financing AGION) 'Officieel Gesubsidieerd Onderwijs (15,26% of students) o <100% subsbidized school buildings (co-financing AGION) 'Vrij Gesubsidieerd Onderwijs' (59,40% of students) • Half of the educational buildings in Flanders are 50 years or older • During the pilot phase, in order to remove the existing thresholds and get more insight in the barriers in order to structure the financial instruments, we work together with the school network GO!= 100% subsidized school buildings Flemish level (Financed by GO!) 'Gemeenschapsonderwijs' (25.34% of students), with a building portfolio of 4000 buildings. • Problem: o Need for Comprehensive Energy Refurbishment and NZEB Energy Refurbishment in line with the Flemish long-term renovation and climate strategy for their building stock o Financial gap between EUR 60 million and EUR 350 million per year • Based on an analysis of the Flemish Energy and Climate agency (policy advisory department), there is also a large investment gap for Energy renovation (deep retrofit) in the healthcare sector. This sector (Operating regime 7/7, 24/24 and energy intensive) fits well within the OEPC business model. • Along the CitizEE project, we have decided to also work out a pilot investment project with the healthcare sector as risk mitigation action. To make sure at least one pilot project would successfully start within the timeframe of the CitizEE project.

Investment program and policy
• The scheme will primarily focus on 'Comprehensive Energy Refurbishment' and NZEB Energy Refurbishment in line with the Flemish long-term renovation and climate strategy. It includes integrated energy conservation measures on the building envelope and the technical building systems to achieve very high energy performance levels. However, depending on the real estate strategy of the building stock, various levels of 'intensity' in renovations can occur. In some cases, when the building is labelled to be demolished after e.g. 10 years, only limited measures of energy refurbishment will be implemented. The aim is to define the right level of ambition and a right level of clustering to deploy cost-effective investments. Within a cluster to be procured, different levels of ambition can occur. • The following scheme gives an estimation of the possible investment. The scheme will start with several pilots during 2021 - 2025 to scale up in the following years. However, the estimations are strongly dependent on political approval, in line with the on-balance investment budgeting.

- Additionally, the investment objectives are slightly adapted in line with the modalities of the funding source of the pilot investment platform
    - Target of comprehensive energy refurbishment = at least 45% CO2-reduction
    - No technical lock-ins, integrating the building envelope and the technical building systems
    - Projects will focus on buildings with a replacement need of HVAC (heating) and upgrading building envelope in the meantime (building age 30 – 40 years), in line with the ESCO-business model and the subsidy | infrastructure dotation

Investment strategy and financing products

- 'Comprehensive Energy Refurbishment' and NZEB Energy Refurbishment in line with the Flemish long-term renovation and Climate Strategy to become Climate Neutral by 2045
- K-level 40 (EPC-label A)
- At least -45% CO2 reduction in comparison with the current status of the building energy usage
- Capital grants are maximum 30- 35% of the capital expediture
- Citizen co-financing for renewable energy (equity) realized by local RESCOOPS (local economy) on project level

Investment structure and funding sources

- The implementation model will be primarily the Energy Performance Contracting model. However, given the objective to deconsolidate a part of the investment, we will distinguish 'pure EPC assets' from other energetic and non-energetic measures.
    - Within a single EPC contract, the investment will be divided in the following categories:
    - EPC, financed by the ESCO / RESCOOP and climate subsidies, e.g. relighting, PV and heating optimisation (mainly re-commissioning).
    - EPC, financed by the ESCO and Climate subsidies e.g. ventilation, building envelope and insulation
    - Non-energy efficiency measures of the building envelope, financed by the Climate subsidies, infrastructure dotation (GO! Centraal) or healthcare institution
    - Schools and healthcare institutions can opt for additional maintenance services included in the EPC-contract.
- Co-Investment structure (example)

Co-investor	Technical measures	Building envelope measures
GO!	8,75%	8,75%
VKF	26,25%	26,25%
ESCO (/RESCOOP?)	65%	X%
School (group) or GO!	0%	65-X%

Implementing entities, implementation scheme, organizational set-up
• To be considered after the pilot calls (Education call with 65 buildings) and healthcare call: o Investment Platform under the form of a public dedicated credit line from the Flemish government o Investment capacity: overall objective of +/- €30 million (pilot case as a start, to be upscaled) o Investment horizon: 20 to 40 years o Potential IP/Fund Manager: Flemish Government or PMV o Public climate grant: as a capital grant (pilot case) o Potential co-investors: capital markets/PMV

IV. Goparity (Portugal)

Strategic context
• The small and mid-sized market of energy efficiency projects provides an interesting opportunity for citizen financing. SMEs, Social Institutions and even Local Administration with relevant needs for investment related to Energy Efficiency often encounter constrains when accessing funds to accelerate the energy transition. These players traditionally have high levels of indebtedness or do not have access to commercial banking. Less risk averse funding solutions, namely longer maturities, are needed. Complementary, off-balance sheet solutions via ESCOs might also reinforce the funding offer. • The proposed Investment Platform will blend public institutional funds with citizen funds, in order to give scale and at the same time democratize the access to interesting investment opportunities.

Investment program and policy
• The envisaged IP is being fine-tuned for the kick off stage on the visibility of a pipeline of EE projects from BundleNext (an H2020 projects with the goal of bringing to the stage of investor ready a pipeline of EE projects, originated mainly on the public administration side) and GoParity. We see appetite for private investors to enter in the energy transition, namely via crowdlending. Main target category will focus on non-residential buildings: o Public buildings o Social buildings o Commercial buildings o The projects are mainly focused on single energy measures, not exhaustive: o RES power and thermal energy generation o Indoor Lighting o Public lighting system optimization o Improvements to heat sources and distribution systems o Thermal insulation o Other energy end-use applications including energy management control systems, power factor correction measures, air compressors and fuel switching. o Indicative reduction of at least 20% on energy consumption as performance threshold.

Investment strategy and financing products
• Local Administration, Social Institutions and SMEs will be the investment focus. The "middle market" that traditionally has constrains to access commercial banking and lacks scale for bigger investors' appetite. o Indicative investment period of 5 years with a proposed life span of 15 years for the scheme. o Proposed types of financing products: o Loans with longer maturities on a project/bundle base (project holders as final beneficiaries). o Equity for ESCOs, to increase their project development capacity, especially for the public administration projects. Support of the off-balance sheet investment need in a relevant segment of the final beneficiaries (high debt levels)

Investment structure and funding sources
• Ongoing negotiation with a local fund manager for the creation of a funding structure inside a broader investment fund being set up for the energy transition. At the same time conversations were initiated with another investment fund to co-invest at the project level. Initially, both had investment intentions, but the intended investment structure using a subfund was changed due to market and strategic considerations. The second fund manager, BlueCrow, was interested in co-investing in crowdlending for energy efficiency projects that met their investment criteria. • The crowdlending part of the investment structure will be secured by GoParity, with a growing investment capacity and with the intention to create a specific credit line for energy efficiency. A partnership between BlueCrow and GoParity as co-investors and with the potential to mobilize an estimated total of EUR 20 million in funds for loans plus EUR 5 million for equity has been outlined, with ongoing discussions with other potential private co-investors to enter the scheme. Initially considered public funds are not likely being made available within a reasonable time frame, therefore a more practical interim approach is being initially implemented based on private funds only from GoParity and BlueCrow, with an estimated EUR 10 million from GoParity and EUR 15 million from BlueCrow over a 5-year horizon period. • The investment structure will have GoParity as the coordinator and manager of the Investment Platform. GoParity is preparing the launch of a revised online matchmaking investment platform, defining an operational structure and workflow alignment with the core partners of the platform: ADENE and RNAE on the lead generation side (via institutional communication) and, for now, GOPARITY and BLUECROW on the investment side (the intention is to bring on board more co-investors).

Implementing entities, implementation scheme, organizational set-up
• The activities will operate under the umbrella of an online matchmaking investment platform that will support both promoters and investors. The implementation of the financial products will be the responsibility of BlueCrow and GoParity (or other co-investors joining the scheme in the future). • Expansion of the Investment Platforms to include national initiatives via Portugal's main energy agency (ADENE) and the leading association of energy agencies (RNAE) are underway and could lead to a significant multiplication of the Investment Platform reach. The scheme is under negotiation, but a high-level framework could be described as: o Matchmaking investment platform implemented and coordinated by GoParity (online platform) o Strategic partnerships for lead generation with a first arrangement with ADENE and RNAE, by way of promotion of the investment platform within their partners (mainly public entities) o Strategic partnership with co-investors, with a first arrangement to be secured with BlueCrow for investment on energy efficiency projects that met their investment criteria o Citizen financing to be secured by GoParity crowdlending platform, coinvesting alongside other co-investors

7. REFERENCES

The information presented in this toolkit are based on the results created by CitizEE, which received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 847147. All results of the project can be accessed here https://www.citizee.eu/results/ while specific source used to collate the toolkit are listed below:

(1) CitizEE (2019). Institutional, organisational and procedural report. D2.1. https://www.citizee.eu/wp-content/uploads/2020/01/D2.1-Institutional-organisational-and-procedural-report_PU_compressed.pdf accessed 18 December 2021

(2) CitizEE (2019). Map of Structured Financial Solutions for CFs4EE Financing Schemes. D3.2. https://www.citizee.eu/wp-content/uploads/2020/07/Map-of-Strucutured-Financial-Solutions-for-EE-CitizEE.pdf accessed 29 November 2021

(3) CitizEE (2019). Master Action Plan for the Establishment of the Citizen financing Platforms. D2.2. https://www.citizee.eu/wp-content/uploads/2020/01/D2.2-Master-Action-Plan-for-the-Establishment-of-the-Citizen-Investment-Platforms_PU.pdf accessed 2 December 2021

(4) CitizEE (2021). Citizen funding market assessment report. D3.1. https://www.citizee.eu/wp-content/uploads/2021/12/Citizen-funding-market-assessment-report.pdf accessed 3 January 2022

(5) CitizEE (2021). Funding Source Action Plan. D.4.2. https://www.citizee.eu/wp-content/uploads/2021/07/Funding-Source-Action-Plan.pdf accessed 10 December 2021

(6) CitizEE (2021). Business Model Report. D.4.1. https://www.citizee.eu/wp-content/uploads/2021/07/Business-Model-Report.pdf accessed 6 December 2021

(7) CitizEE (2022). Detailed Business Plan. D4.4. https://www.citizee.eu/wp-content/uploads/2022/02/Detailed-Business-Plan.pdf accessed 15 December 2021

Learn more about the project at:

citizee.eu