



CONCERTED ACTION

ENERGY PERFORMANCE OF BUILDINGS

(CCT2)

Finance and Information

Status in 2022

AUTHORS

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1. Introduction

Financing plays a key role in achieving the challenging energy and climate targets set for 2030 by the EU, since there currently exists a large investment gap in energy efficiency and the application of technologies based on renewable energy sources in buildings. To reduce the gap as well as to improve financing and stimulate better energy efficiency in the building sector, several actions are needed, including:

- More effective use of existing financing options, as well as developing and introducing new financing mechanisms, including both hard investments but also soft measures as part of national initiatives;
- Dissemination of information to complement other measures and inform buildings owners, tenants and users about the different methods and practices that serve to enhance energy performance. It is especially important to provide information on energy performance certificates, inspection reports and their purpose and objectives, cost-effective ways to improve the energy performance of the building, and, where appropriate, on financial instruments.

Since the beginning of the EPBD CA V in 2018 the topic of financing and information has become more and more important. New financial elements are in use, such as the Recovery and Resilience Facility and the EU Taxonomy, that increasingly aim to support the decarbonisation of buildings. The cross-cutting team on Finance and Information deals with many relevant articles of the Directives 2010/31/EU and 2018/44/EU and in particular leads work and progress reports on:

- Article 10 on Financial measures;
- Article 20 on Information activities.

The CCT2 team supports work on the integration of Certification and Inspection in Articles 11 – 16 in general, and on a holistic policy package covering financing to enhance energy efficiency in all building types, thus helping to alleviate energy poverty (Article 2a (1, d)). The amending Directive 2018/44/EU Article 2a (3) emphasises Member States' responsibilities in supporting the mobilisation of investments in renovation by facilitating access to appropriate mechanisms for:

- a) the aggregation of projects, including those carried out by investment platforms or groups and by consortia of small- and medium-sized enterprises, to enable investor access as well as packaged solutions for potential clients;
- b) the reduction of the perceived risk of energy efficiency operations for investors and the private sector;
- c) the use of public funding to leverage additional private-sector investment or address specific market failures;
- d) guiding investments into an energy efficient public building stock, in line with Eurostat guidance;
- e) accessible and transparent advisory tools, such as one-stop shops for consumers and energy advisory services regarding relevant energy efficiency renovations and financing instruments.

The team also supports the Smart Finance for Smart Buildings initiative which was launched in 2018 by the European Investment Bank (EIB). The aim of the initiative is to make investments in energy efficiency projects in residential buildings more attractive to private investors through the intelligent use of EU grants as a guarantee.

2. Objectives

This report aims to give a short overview of the activities and outputs in the field of Financing and Information led by the Financing and Information cross cutting team within the CA EPBD V in the period May 2018 – May 2022.

In this period, twelve sessions were organised on this topic. The work and sessions primarily concerned:

- Smart financing for deep renovation, de-risking & aggregation, Article 2a (3);
- Smart financing for new public NZEB buildings; Article 2a(3);
- Reduction of perceived risk of financing / de-risking, Article 2a (3);
- Accessible and transparent advisory tools, Article 2a (3);
- One-stop shops as an assistance instrument, Article 2a (3);
- Different financial measures and instruments, Article 10;
- Information activities, Article 20.

Additionally, the team was responsible for organising a session in the joint CA RES/ CA EED/ CA EPBD workshop in January 2020 on Innovative Financing Solutions to Bridge the Investment Gap for 2030.

In the beginning of CA EPBD V, the key topics identified for discussion in the Financing and Information team were:

- Financial incentives and mechanisms as part of EPBD implementation;
- Information activities in connection to the EPBD;
- Policy integration – financing as part of a policy package;
- Smart Finance for Smart Buildings initiative;
- Lessons learned and recommendations for EU/international funding initiatives.

3. Analysis of Insights

Analysis of the topics discussed and dealt with so far have been grouped into four different categories:

- Smart financing – deep renovation, de-risking and aggregation;
- Smart financing – new public NZEB buildings;
- Accessible and transparent advisory tools and one-stop shops as an assistance instrument in renovation;
- Information activities.

Please note that the categories overlap each other.

3.1 Smart financing - deep renovation, de-risking and aggregation

3.1.1 Introduction

The objective of this topic is to present the current status in Member States on smart financing in renovation and to highlight examples of different instruments and mechanisms, with particular focus on de-risking and aggregation. Discussions have explored de-risking in energy efficiency operations to encourage participation of investors and the private sector. The reduction of perceived risks regarding energy efficiency investments is just one of the Member States' responsibilities outlined in Article 2a of the EPBD (Directive 2018/44/EU) as described in the general Introduction (Chapter 1).

Within the CA EPBD V work, this has proved a topic of great interest in many Member States. The focus has been in reviewing Member States' experiences on their current implementation of initiatives to facilitate funding for building renovation and on discussions about activities to lower risk in investments in renovation. As the Member States produced their Long Term Renovation Strategies, the different instruments and mechanisms used in financing renovation as well as the EU Taxonomy have been explored.

3.1.2 De-risking and aggregation

In the first CA EPBD V plenary in London in **November 2018**, the pre-session questionnaire highlighted that further sharing of best practice and solutions for smart finance would be useful to Member States, along with concrete tools that can facilitate adherence to Article 2a. As the recast directive was very new (launched in June 2018,) it was evident that Member States were not fully familiar with the contents of the directive and mechanisms presented in it. Each of the mechanisms (a-e) in Article 2a (3) needed more exploration in the coming plenary meetings.

To reflect on the results from the questionnaire and the presentations given, participants were asked to split into 6 groups for discussion, each one assigned one of de Bono's 'Six Thinking Hats' (Figure 1). The feedback from each of these groups was as follows:

- **White Hat** – More examples of aggregation are needed, whilst considering whether the risk for the banks is minimised by aggregation.
- **Black Hat** – Aggregation of projects is a challenge: will this lower the cost, and will financial institutions be more willing to finance? All schemes demonstrate combining commercial and European funds.
- **Green Hat** – Discussion focused on value for money. It was mentioned that medics in England are now prescribing boilers.
- **Red Hat** – It seems there are many experts available in Portugal. The involvement of private banks and the number of professionals involved is encouraging. The banking sector now seems more amenable to working with government agencies. However, as local situations vary significantly, it may not be easy to copy schemes between Member States.
- **Yellow Hat** – It appears that a lot of money is available, and many investors are looking for green projects. However, there is a need to address the market correctly so that more money flows towards energy efficiency in buildings. There is a need to focus on real emissions and savings, not those calculated.
- **Blue Hat** – Happy to see that EPCs have been used for financing.

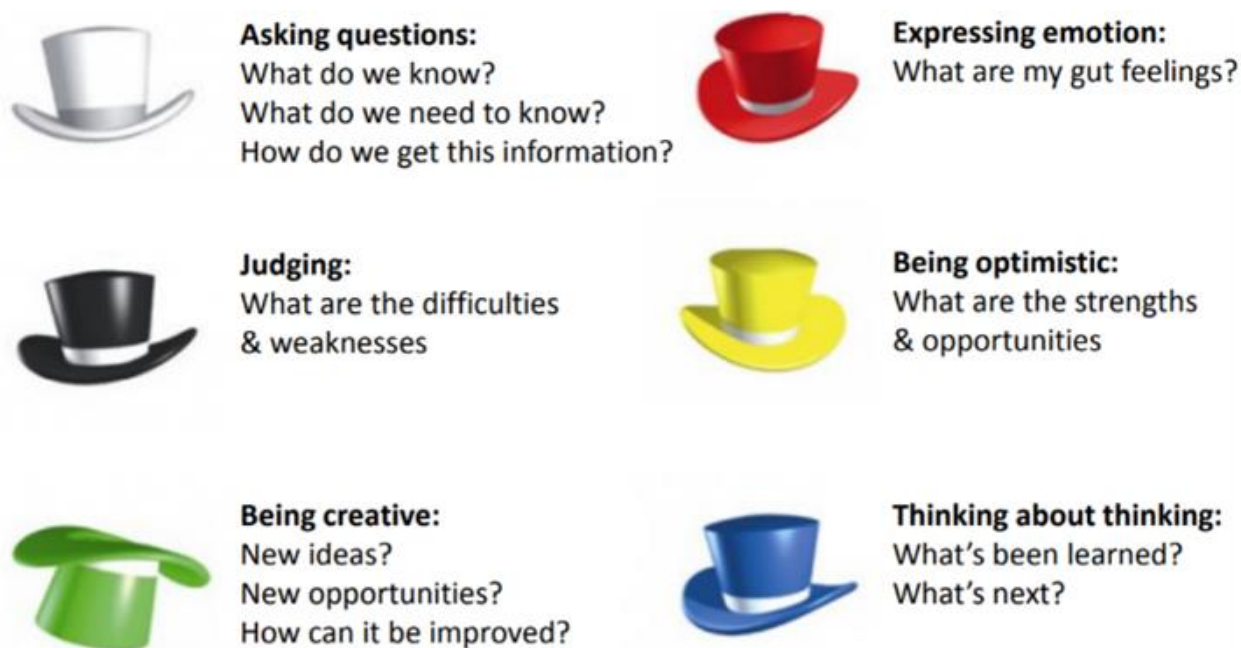


Figure 1. Edward de Bono's Six Thinking Hats, a tool for group discussion.

The appetite for investment from private institutions had improved in some Member States yet work still needed to be done to prepare the market correctly. The situation varied in different Member States and aggregation of projects was seen as a challenge. Further examples of success in this area were welcomed for future discussion.

In **June 2019**, the topic of smart financing was well received among CA EPBD participants. From the discussions, the following reflections from the interactive part of the Plenary meeting were:

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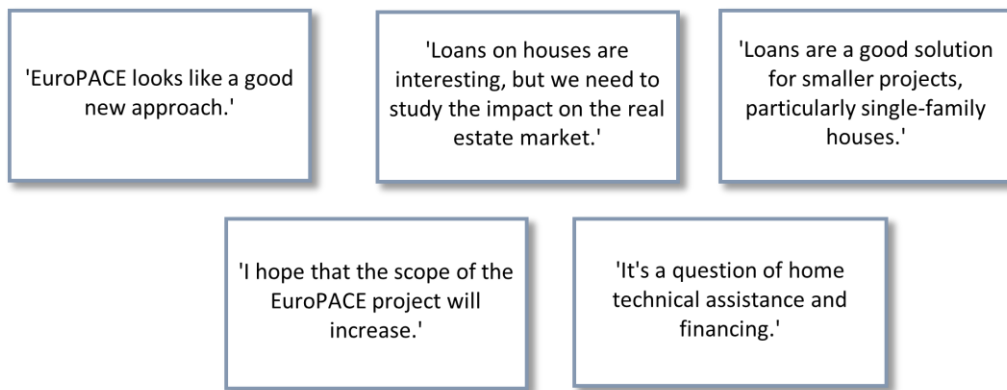


Figure 2. Reflections from the interactive part of the CA EPBD 2019 Plenary meeting on smart financing.

The topic was continued in the virtual plenary in **November 2020**, where both the financial aspects of the **Long Term Renovation Strategies (LTRS)** as well as the various available **financial mechanisms and tools** were explored.

The national **Long Term Renovation Strategies** are an important input to the 'Renovation Wave' initiative announced as part of the European Green Deal, aiming to take further action and create the necessary conditions to scale up renovations and reap the significant savings potential of the building sector.

In the pre-session questionnaire, of the 10 Member States that confirmed they had delivered their LTRS, most had addressed all the financial mechanisms outlined by Article 2a (3) of the EPBD within their strategies. The uptake of public funding and advisory tools was marginally greater than other mechanisms. As several of the LTRS were still in preparation, some Member States answered either that they do not know (not clear) or left the question unanswered. It also seems that in some of the cases, it may be difficult to make a connection between an instrument used in the Member States, with the options in the EU guidance for implementing Article 2a -- especially for the aggregation of projects and guiding investments.

Concerns were raised about how to select the best financial instruments and mechanisms available. However, it was confirmed that a staff working document by DG ENER was being compiled that would provide guidance on best practice for financial instruments and mechanisms available.

Perceived risk by investors and banks in energy efficient technologies and renovations has been identified as a barrier to the adoption of such measures. To reduce the perceived risks of energy efficiency operations for investors and the private sector, a better understanding of the financial mechanisms and tools are needed. The work started in Riga in 2019 was continued in **November 2020** as EU-wide Initiatives identified in the session included the **Sustainable Energy Investment Forums (SEIF)** and the ManagEnergy Initiative, although further initiatives are being explored at an individual Member States level.

The Energy Efficiency Financial Institutions Group (EEFIG) confirmed that all the described EEFIG tools and activities, for example the De-risking Energy Efficiency Platform (DEEP), the Underwriting Guide and working groups, provide valuable insight into the financial sector. Through these insights, the European Commission, financial sector, and industry experts can work together to act as a catalyst for deep decarbonisation.

To ensure a wide coverage of building types, users and needs, the use of a mixture of different financing schemes is recommended. Furthermore, public subsidies that create an early economic stimulus are unlikely to form a major driver for large-scale investments, and further leverage of private funds is required.

Further information on best practice examples from Member States is needed as is the need for more information on new and upcoming financial instruments.

In May 2021, the financial aspects of the LTRS were discussed further, with the EC (European Commission) providing information on the current LTRS submission and some of the preliminary lessons learned. It also looked at the next steps and the link between LTRS and recovery plans to follow the Covid-19 crisis.

Overall, Member States are taking the energy renovation of buildings very seriously. There is a rich set of best practice examples in all categories of the renovation wave, notably for public buildings, heating and cooling, and energy poverty. The LTRS seemed to vary in terms of ambition level of renovation targets (objectives and budget).

The **EU taxonomy** is a classification system which establishes a list of environmentally sustainable economic activities. It is expected to create security for investors, protect from greenwashing, help companies to plan the transition, mitigate market fragmentation, and shift investments to where they are most needed.

It has six environmental objectives:

- 1) climate change mitigation;
- 2) sustainable use and protection of water and marine resources;
- 3) pollution prevention and control;
- 4) climate change adaptation;
- 5) transition to a circular economy;
- 6) protect and restore biodiversity and ecosystems.

In real estate and construction, the taxonomy sets requirements for new builds, renovation and acquisition and ownership.

To increase dialogue between the financial sector, public authorities, energy services and other stakeholders involved in delivering investments in sustainable energy at EU, national and local levels, **Sustainable Energy Investment Forums** were introduced, as well as other events organised to share good practices and examples and to enhance cooperation between public and private stakeholders of the building renovation sector.

In **December 2021**, the EU Taxonomy was explored in more detail and in view of the practical take-up of the classification. The session gave a good overview of taxonomy: what it is and what it is not. Thresholds for both new buildings and renovations were presented and discussed. Energy Performance Contracting (EPC) was seen as the best available tool but should be developed. Corresponding studies offer more information on implementation, for example the Italian study on methodology to identify compliant building stock. Taxonomy is seen as a business opportunity - especially in the construction and real estate sectors. Taxonomy is seen as tool for green investments – defining what is and is not green. Taxonomy brings comprehensiveness, transparency, a common language for the different sectors and actors.

The ongoing and continued collaboration of sectors is important for the successful uptake of the taxonomy. The access to reliable data was seen as especially important; especially by the financial sector. The ambition level of the thresholds was raised as a point that also relates to national legislation. The longevity of the taxonomy criteria is a key point: a green loan should still be green after five (5) years.

The successful implementation of the taxonomy will depend on several factors such as balancing ambitious targets vs broad appeal as well as its transparency and reliability, and the ease of accessing the relevant data. Some taxonomy criteria are very specific while others leave room for interpretation.

Highlights of 3.1	<p>Aggregation of projects is a challenge: will it lower the cost, and will financial institutions be more willing to finance?</p> <p>EU Taxonomy is seen as a business opportunity - especially in the construction and real estate sectors. Taxonomy is seen as a tool for green investments – defining what is and is not green. The access to reliable data is important, especially in the financial sector. The longevity of the taxonomy criteria is a key point: a green loan should still be green after five (5) years.</p> <p>Energy Performance Contracting (EPC) is seen as the best available tool but should be developed.</p>
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Main Outcomes of 3.1
<p>Actions to reduce the renovation gap should cover different points and not only focus on de-risking but also on aggregation, on development of a consistent regulatory framework and on improved use of public funds.</p> <p>There are many resources available to support energy efficiency financing, such as the De-risking Energy Efficiency Platform (DEEP) and the EEFIG Underwriting Toolkit. Several Horizon 2020 projects have been financed to accelerate the mobilisation of the investments on renovation, and Member States are encouraged to take full advantage of the results of such projects as EuroPACE as well as HouseEInvest, ENERFUND, guaranteeE, TRANSITION ZERO, etc. SEIF can also be used as an advisory body for Member States.</p> <p>Moving forward, it will be important to continue to discuss the various financial mechanisms and tools utilised by Member States to finance renovation projects as well as the EU Taxonomy and its practical aspects.</p>

3.2 Smart financing - new public NZEB buildings

3.2.1 Introduction

The objective of this topic is to explore and encourage Member States to increase the use of different financing possibilities in the transition to NZEB buildings especially in the public sector. The goal is also to prioritise further needs for information on smart financing in the transition to new NZEB buildings.

Article 10 of the EPBD 2010/31/EU emphasises the importance of providing appropriate financing and other instruments to catalyse the energy performance of buildings and the transition to Nearly Zero Energy Buildings. Member States shall take the appropriate steps to consider the most relevant of such instruments in the light of national circumstances.

Directive 2010/31/EU states that after 31 December 2018, all new buildings occupied and owned by public authorities are to be Nearly Zero-Energy Buildings. Member States must ensure that by 31 December 2020, all new buildings are Nearly Zero Energy Buildings.

3.2.2 Smart financing

For the plenary in November 2018, a review of Member States' experience in utilising different financial instruments to boost and support NZEB included the introduction of an obligation to renovate, tax incentives, loans depending on minimum requirements, as well as building performance, and green bonds.

Besides the Member States' presentations, participants were asked to reflect on the **Critical Success Factors** for financing of new public NZEB by interactive means.

Critical Success Factor – ‘a factor or activity required for ensuring success of a company or organisation’

The Critical Success Factors identified by participants included:

- Engagement of all stakeholders in a single direction;
- One-stop shop – to collate all information;
- Focus on renovation instead of new buildings;
- Funding for vulnerable individuals;
- Attracting the private sector;
- Having more than one approach and multiple incentives;
- Need for Quality Assurance and the availability of a skilled workforce;
- Increasing capacity in the building sector;
- Development of a sound business case.

Highlights of 3.2	<p>Engagement of all stakeholders in a single direction. To achieve best results, the engagement of all stakeholders is needed. It is also imperative, that the aim, and the direction of actions are the same.</p> <p>Attracting the private sector. Public money is not sufficient to implement the necessary renovation measures; private investment is needed. It is important to find the means to create public-private partnerships and ways to leverage private investment with public money.</p> <p>Having more than one approach and multiple incentives. To enable different means of financing renovation it is important not to lock the solutions. Having various approaches and incentives available, provides the possibility to build solutions flexibly.</p>
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Main Outcomes of 3.2

Based on a questionnaire undertaken in autumn 2018, most of the Member States who answered the survey (15 out of 22) had already implemented financial mechanisms to support NZEB. The most popular measures included subsidies, grants, loans, and investment funding. Ten (10) of the respondents also stated that other incentives or programmes have been established to mobilise the construction of new public sector NZEB. These included guidance documents, discounts on land prices, research and pilot programmes, training programmes, information centres, and an energy-efficient design label.

Overall, financing NZEB is not the most critical issue in Member States; the challenge for most lies in finding financial mechanisms to boost renovation in existing buildings.

3.3 Accessible and transparent advisory tools and one-stop shops as an assistance instrument

3.3.1 Introduction

The objective is to boost renovations through financing, with a focus on accessible and transparent advisory tools and one-stop shops as assistance instruments. The topic will provide examples of advisory tools and one-stop shops as well as corresponding Horizon 2020 projects while gathering information from all Member States in an organised poster session.

Article 2a (3) of the EPBD 2018 deals with mobilising investments in renovation in diverse ways. In this context, accessible and transparent advisory tools and one-stop shops are important assistance instruments.

Information requirements according to the EPBD are to provide information to owners or tenants concerning methods and practices to enhance energy performance, energy performance certificates (EPCs), and inspection reports and their purpose and objectives.

3.3.2 One-stop shops

In the June 2019 CA EPBD plenary, from the presentations of Horizon 2020 projects *Energies Positif* and *STUNNING*, including the discussions and small presentations given by selected Member States, there were clear conclusions about the issues with the one-stop shop approach to energy retrofitting.

There is a distinct issue with reaching the market and achieving economies of scale. As highlighted by both presenters, there is a real need for clarity and visibility of the financing surrounding the works to engage and gain trust with customers and clients. The knowledge transfer platform built in *STUNNING* is a great facility to see live case studies, such as the *Ile de France (Energies Positif)* case study, and to retrieve and utilise previous work done to best address renovations in the future. This needs to be an approach that is facilitated throughout the European Union.

Engaging the customer is the most important aspect in successfully implementing these business models, and to do that, the project needs to be beneficial, very accessible, value-adding and cost-worthy. Showing these aspects to clients would significantly increase trust between the cooperation and facilitate a larger market uptake through increased financing support.

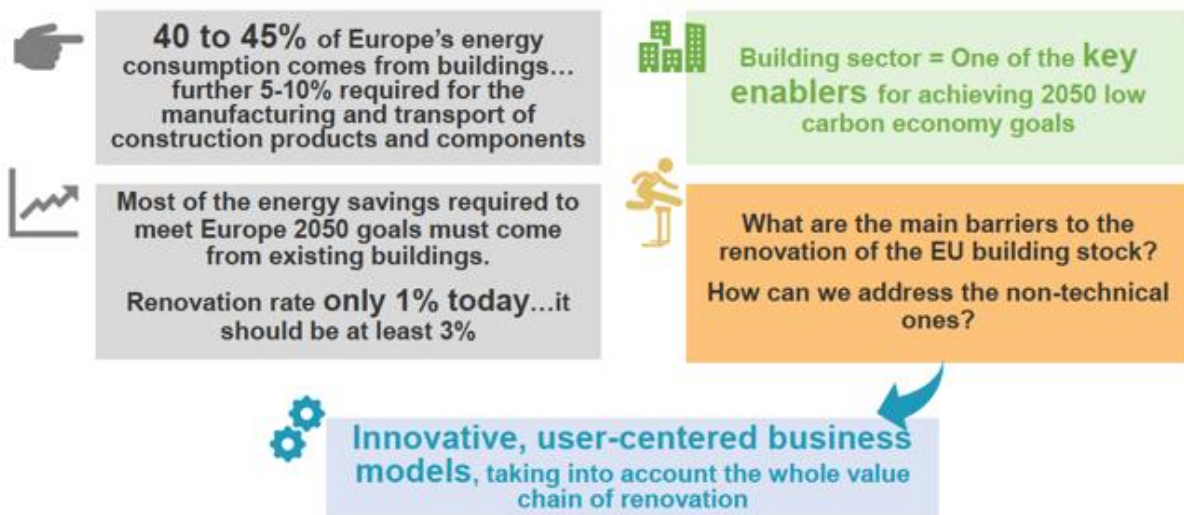


Figure 3. Context of the Horizon 2020 STUNNING project business case.

According to the poster presentations, ECPs are used and linked in various ways to the advisory tools and one-stop shops. The ECPs are either used as the basis for information, as a tool to present estimated savings, or as a way to gather information on implemented measures.

Advisory tools and one-stop shops were discussed in **May 2021**, in a session on the theme 'Information activities' (more on this in 3.4. Information activities)

In **December 2021**, the business models of the one-stop-shops were explored in more detail, with an introduction from the authors of the paper on integrated home renovation services '**Towards large-scale roll out of "integrated home renovation services" (IHRS) in Europe**'. In the paper, the authors (Christophe Milin and Adrien Bullier) identify the services in three models along the customer journey:

- *Advice model* – traditionally offered by energy agencies. This remains in the initial stages of the customer journey, i.e., providing advice but not getting too detailed and without incurring professional liability.
- *Support model* – this will incur professional liability. It involves supporting design, supporting the selection of a construction company, supporting the development of a financing plan, supervising work, and quality assurance. To a certain extent, this model is an extended architectural mandate, i.e., it can be delivered by an architect with an extended set of skills.
- *Implementation model* – not only providing general advice but also delivering the work. One of the main benefits of this model is that, because an initiative can earn money from the renovation work, it is possible to charge less for services rendered in the initial stages.

To give examples of how the models can be applied in practice, examples of different one-stop-shops were presented: **ORFEE** (France), **reNuveer and Energy houses** (Belgium Flanders) and **Portal CasA+** (Portugal).

Highlights of 3.3	<p>One-stop shops are an essential element in boosting renovations. This was highlighted in the paper on integrated home renovation services. There are many good, functioning services in different Member States, that could be implemented in other countries as well.</p> <p>As different business models exist, the problem is in scaling up the services. Scaling up is not so easy (depending on the legal and fiscal context, the market readiness, etc.)</p>
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Main Outcomes of 3.3
<ul style="list-style-type: none">• One-stop shops are an essential element in boosting renovations.• Important to cover the whole value chain from planning to operation, including quality control.<ul style="list-style-type: none">○ Customised service package with technical solutions and financing.• Important to offer a single contact point during the whole project.• Multi-benefits: not just energy!<ul style="list-style-type: none">○ Better indoor climate, nicer homes, job creation.• Consumer engagement is essential. <p>Independent Home Renovation Services (IHRS) -- One-stop-shops (OSS) -- are vital instruments for reaching residential building stock owners who may not be knowledgeable about the significance of improving the energy performance of their home. Such services will continue to multiply and develop in the future. A key factor in their growth will be how all the relevant parties – construction, financing, local and nationwide government, etc. – work together.</p> <p>As such, the development and practical operation of several types of OSS should be monitored in the future.</p>

3.4 Information activities

3.4.1 Introduction

Information and communication activities are crucial for boosting the implementation of the EPBD. Article 20 (EPBD 2010/31/EU) states that Member States are responsible for informing homeowners and tenants of the benefits of energy efficiency measures and how to implement them. Also, Article 2a (EPBD 2018/844) emphasises the use of different advisory tools, such as one-stop-shops in mobilisation action for renovation.

Information activities

For the virtual plenary in May 2021, the pre-session questionnaire provided an overview of the topic covered by information activities.

- Most Member States report that their campaigns directly support the implementation of the EPBD;
- Only about 40% of Member States report having campaigns which promote national strategies;
- And only about a third provide campaigns which cover the topic of climate change mitigation and adaptation;
- It was also an opportunity to learn whether information activities have evolved since the 2018 revision of the EPBD;

- Most Member States have sustained the number of communication activities at the same level, although about a third responded that they have increased the number of information activities;
- In most Member States a single ministry or other governmental body is responsible, while others favour more cooperation amongst ministries;
- There is no particular focus on long-term versus short-term campaigns;
- Only about a quarter of Member States said that they conduct impact assessments of the campaigns. It was deemed that impact assessments need to be explored in more detail and to provide Member States with good examples on conducted assessments.

The nZEB (near-Zero Energy Buildings) roadshow is a Horizon 2020 project which aims to promote the benefits of NZEB and encourage the demand for skilled workers specialised in NZEB. This project has its roots in the BUILD UP skills initiative which was initiated in 2011. The BUILD UP project created national roadmaps for improving skills in the construction sector and training programmes on energy efficiency and RES in buildings.

In a virtual poster session, many different types of campaigns, actions and one-stop-shops were explored.

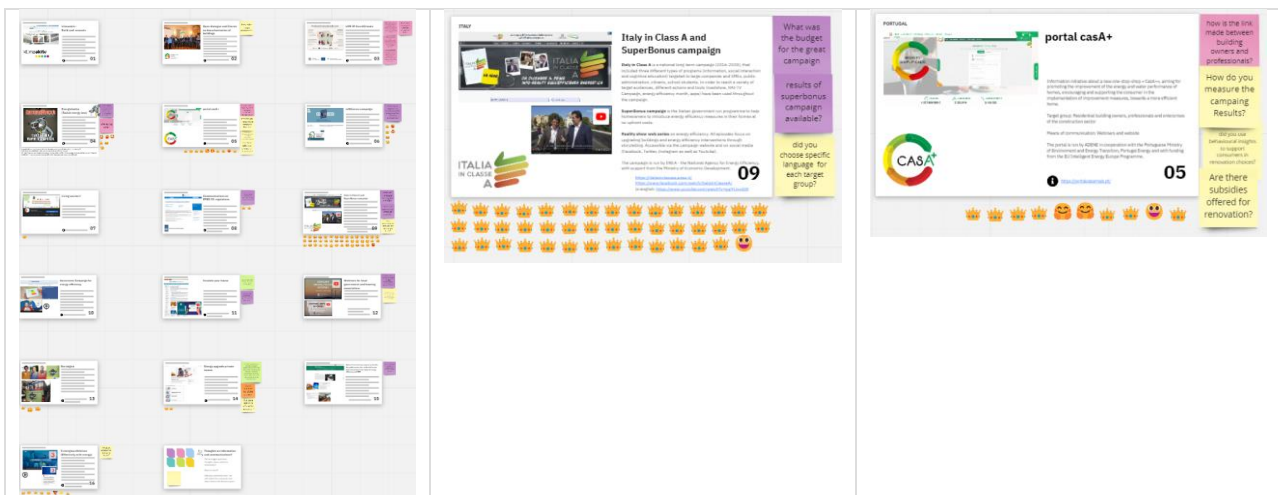


Figure 4. Virtual poster session in May 2021, with Italy (Class A and Superbonus campaign) and Portugal (Portal CasA+) voted as most interesting campaigns / approaches.

In the Athens plenary in May 2022, the impact assessments were explored in more detail in a session prepared with the cross-cutting team 3. The highlight of the session was the presentation of the different approaches of impact assessments. The main conclusions and experiences from all were that to succeed in conducting an assessment and thus a good evaluation of the actions, the need is to:

- set clear objectives;
- identify the action (collected data must be determined in the beginning);
- collect the data during the action;
- balance resources and actions.

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In the discussions, the groups emphasised the following points:

- monitoring should be planned in connection with the communication/ action;
- resources are needed – remember to divide the data collection work.

It was also noted that the competition between neighbours is sometimes the most effective action – but how to measure that?



Figure 5. Presentations and discussion on impact assessments in the Athens plenary were some of the first discussions after the virtual plenaries caused by the Covid-19 crisis.

Highlights of 3.4	<p>For communication measures the highlights are:</p> <ul style="list-style-type: none">Keep it simple: messages, methods and monitoring should not be too complicated.Set clear objectives: objectives should be set so that they can be evaluated.Different methods are available for evaluation. Keep in touch with the evaluation experts from the planning stage to the end of the project/measures.
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Main Outcomes of 3.4	<ul style="list-style-type: none">• Excellent description on different types of actions and campaigns with Horizon 2020 projects widening the prospects for exchange of information and experiences.• Information activities are needed to promote renovation as well as other measures linked to energy efficiency of buildings.• Impact assessments are not conducted in general and more information as well as best practices and good examples are still needed. The evaluation of actions is vital to planning better and more impactful actions.• Monitoring should be planned in connection with the communication/ action.• Resources are needed – remember to divide the data collection work.
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4. Main Outcomes

Topic	Main discussions and outcomes	Conclusion of topic	Future directions
Smart financing – de-risking and aggregation	<p>For the financiers: de-risking, but also other supporting measures, project bundling, etc. Optimal use of private financing and public funding.</p> <p>Examples of Horizon 2020 projects, such as EuroPACE, I3CP, ICPEU, HouseEInvest, ENERFUND, guarantEE, TRANSITION ZERO, etc.</p> <p>Developed tools and platforms are useful for Member States, organisations and business to work on de-risking investments: EEFIG, DEEP (part of EEFIG), etc.</p>	<p>Member States are different, with differing instruments in use. Cooperation, understanding and exchange of information are important success factors.</p>	<p>Prioritising common interests.</p> <p>Experiences of EU Taxonomy criteria linked to EPBD is needed.</p>
Smart financing and NZEB		<p>All new construction already on an NZEB level, as stipulated in the directive. Various financial instruments should be used to conduct demonstration projects on very energy efficient constructions and new innovations.</p>	<p>The use of different financial instruments needs to be discussed further.</p>
Advisory tools	<p>Making use of existing tools and platforms, financial instruments, and mechanisms, as well as the results from Horizon 2020 projects for, e.g., one-stop-shops (OSS).</p> <p>Relevant Horizon 2020 projects should be used to design usable services and tools for, e.g., Energie</p>		<p>A key priority.</p> <p>Gathering more information and experiences on the business models of OSS already in use is vital for developing working services in more Member States. The new projects and services funded by the LIFE-CET programme should be investigated and explored more in detail.</p>

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Topic	Main discussions and outcomes	Conclusion of topic	Future directions
	Positif, STUNNING, ORFEE, etc.		
Information activities	Information campaigns and activities are needed to ensure the full implementation of the directive. To ensure the impact of the actions, assessments should be conducted. More information and experiences on different types of actions as well as assessment methods is needed.		More information on impact assessments of information activities is needed to improve the effectiveness, impact, and selection of activities.
Summary	The importance of financing is increasing as the need for energy efficient renovation grows as well as for green investments as a whole.	<p>There is a distinct need for exchange of experiences between Member States and a need to learn from examples (both successes and failures).</p> <p>Developed platforms bring support for Member States, such as EEFIG, DEEP, the SEIF, etc.</p>	<p>Further work on the theme of Financing and Information is needed to increase the volume of renovations and green investments and to enhance the energy efficiency of buildings links to the EU Taxonomy.</p> <p>The quality of data is essential, e.g., in connection to the EU Taxonomy.</p>

5. Lessons Learned and Recommendations

The topic Financing and Information has gained a lot of interest and participants consider the topic more and more relevant also for future discussions.

5.1 Smart financing - deep renovation, de-risking and aggregation

It will be important to continue to discuss and share experiences on the various approaches taken by Member States to reduce the perceived risk seen by investors in energy efficiency measures. This seems to be central in order to increase private financing.

An example of a useful collaboration in this field is with the European Development Bank. It is also worthwhile to use and continue spreading the experiences of relevant EU (Horizon 2020) projects and mechanisms, e.g., the DEEP database together with EEFIG, continue the fruitful collaboration with the EIB (European Investment Bank), etc. Currently, many energy efficiency experts do not have a background and competence on financing as such; more information and training is needed, as it is required, for example, for in the EU Taxonomy.

To successfully implement Article 2 a) of the EPBD, topics such as 'Aggregation of investments through public funding' and 'Guiding investments into an efficient public building stock, in line with Eurostat guidance' are still worth exploring further, possibly in connection with other issues including relevant information activities. The EU Taxonomy is an important factor in working with financial institutions. The taxonomy criteria as well as other elements such as the reporting of the financed projects is a topic that needs to be explored in depth.

5.2 Smart financing - new public NZEB

All possible financial mechanisms should be used to fulfil the requirements for NZEB and to make sure of the quality of new buildings. All new construction should already be on the NZEB level, as stipulated in the directive (30/2010/EU to be implemented by the end of 2018). However, various financial instruments, including, for example, lower interests or higher subsidies, should also be used to conduct demonstration projects on very energy efficient constructions and new innovations.

5.3 Advisory tools and one-stop shops

The need to and interest in sharing of experience and examples, especially in the field of different advisory tools and one-stop shops, still exists. They can provide excellent and effective platforms and tools to accelerate renovations. In particular, it would be valuable to receive more information on business models regarding advisory tools and one-stop shops.

5.4 Taking advantage and using existing tools and portals on financing

The situation amongst Member States varies, and thus no one-fits-all solution is possible. Each Member State has its own features, both regarding the financial market and the building sector. However, it is extremely important to utilise the available financial instruments and mechanisms at the European level (Horizon 2020, LIFE-CET, EIB, ELENA, etc.) The Renovation Wave and flagship initiative under the EU Green Deal launched in May 2020 provides several EU programmes and financial instruments with support schemes that stimulate building renovation.

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Member States' level of cooperation with the financial sector should increase to ensure a better understanding of the financial terminology. Examples of existing tools and platforms are EEFIG and the DEEP database, developed at the EU level, which lend a helping hand in this. Information and experiences are also shared through SEIF events.

5.5 Information activities

Information activities play a key role in ensuring the effective implementation of the EPBD. Different information tools and approaches are needed depending on the target group, the level of awareness and the local conditions. Repetition of communication and information activities is needed. The message should be kept as simple and concise as possible, to motivate and activate the target audience with clear instructions for action.

Monitoring and evaluation of the effectiveness of the information activities is essential. To succeed, monitoring and evaluation must be planned in the early phase of the information activities, to ensure that the success criteria and indicators are set appropriately, and the needed data is gathered during the activities. Information activities can seldom be successfully added to an action after it has started, as they are a key function to support and boost other mechanisms in parallel and should also be planned in parallel.

5.6 Collaboration with other central and cross-cutting themes

Since financing is strongly linked to all technical aspects and financial initiatives, it often works best as part of a package of measures. Many topics addressed through the CA EPBD V cross cutting team Financing and Information are also linked to the CA EPBD V central teams for new and existing buildings. Many topics and activities therefore overlap with and complement those of other CA EPBD teams; indicative examples include one-stop shops and support for Long Term Renovation Strategies (LTRS). Other topics, such as impact assessments, were developed in cooperation with the cross-cutting team CCT3.

5.7 Collaboration with other Concerted Actions

Financing and Information also plays a central role in the other Concerted Actions, i.e., CA EED and CA RES. Certain overlap and complementary relationships may therefore be expected between CA EPBD, CA EED and CA RES, particularly when addressing topics such as energy poverty, information tools, financing, etc. The joint in-depth workshop in Barcelona in January 2020 enlightened and broadened the understanding of common possibilities and cross-cutting issues between the three CAs. All welcomed the expansion of the Concerted Action network and hoped that the cooperation continues in the future. The closing session in Barcelona ended with a quick online survey of participants to identify topics for future cooperation. Cross-cutting implementation, and monitoring and reporting were voted the highest, followed by the alignment of definitions, regional cooperation, and blended financing.

Figure 4 presents the output of the questionnaire by participants at the joint in-depth workshop of 2020 based on the question: Which financial topics do you consider to be most relevant in the future?

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The drivers of the recovery need to be explored: The Recovery and Resilience Facility is boosting the renovation and green transition in general; EU Taxonomy is affecting the way the financial sector works in connection to financing renovation and other energy efficiency projects in the building sector.

The due date for Member States to submit their Long Term Renovation Strategy (LTRS) was 10 March 2020. The national LTRS are an important input to the 'Renovation Wave' initiative, announced as part of the European Green deal, which aims to take further action and create the necessary conditions to scale up renovations and reap the significant savings potential of the building sector. One of the key elements in the LTRS is financing-related instruments and mechanisms, and thus it is necessary to share lessons learnt and exchange experiences regarding financing-related elements in the future work of the CA EPBD VI.

5.9 Summary

Further examples of best practice and financing mechanisms would be useful for future CA EPBD work. Furthermore, CA EPBD V is seen as an excellent forum to broadly share experiences and, for instance, find partners for future projects.

Also, the collaboration with the other Concerted Actions, especially the CA EED, is useful and worth to increase in the future.

To ensure that the targets set by the EU are met, the following conditions should be met:

- Different financial instruments are in use – both public and private funding is used.
- Financing addresses many targets at the same time, the projects produce multi-benefits: green investments grow, renovation rate increases as does energy efficiency; indoor air quality improves, energy poverty decreases.
- Several information channels are in use and supplement each other to achieve the set targets: one-stop-shops are typically effective, but business models still need to be developed, as heavy public funding is usually needed.
- New instruments, such as the EU Taxonomy will build a common ground for criteria for financing.
- Trust between partners grows.
- Member States' characteristics are considered in implementation of the EPBD in view of finance and information. And sharing experiences and best practices between Member States is very welcome.

6. Endnotes

1. Energy Performance of Buildings Directive 30/2010/EU
2. Energy Performance of Buildings Directive 844/2018/EU



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