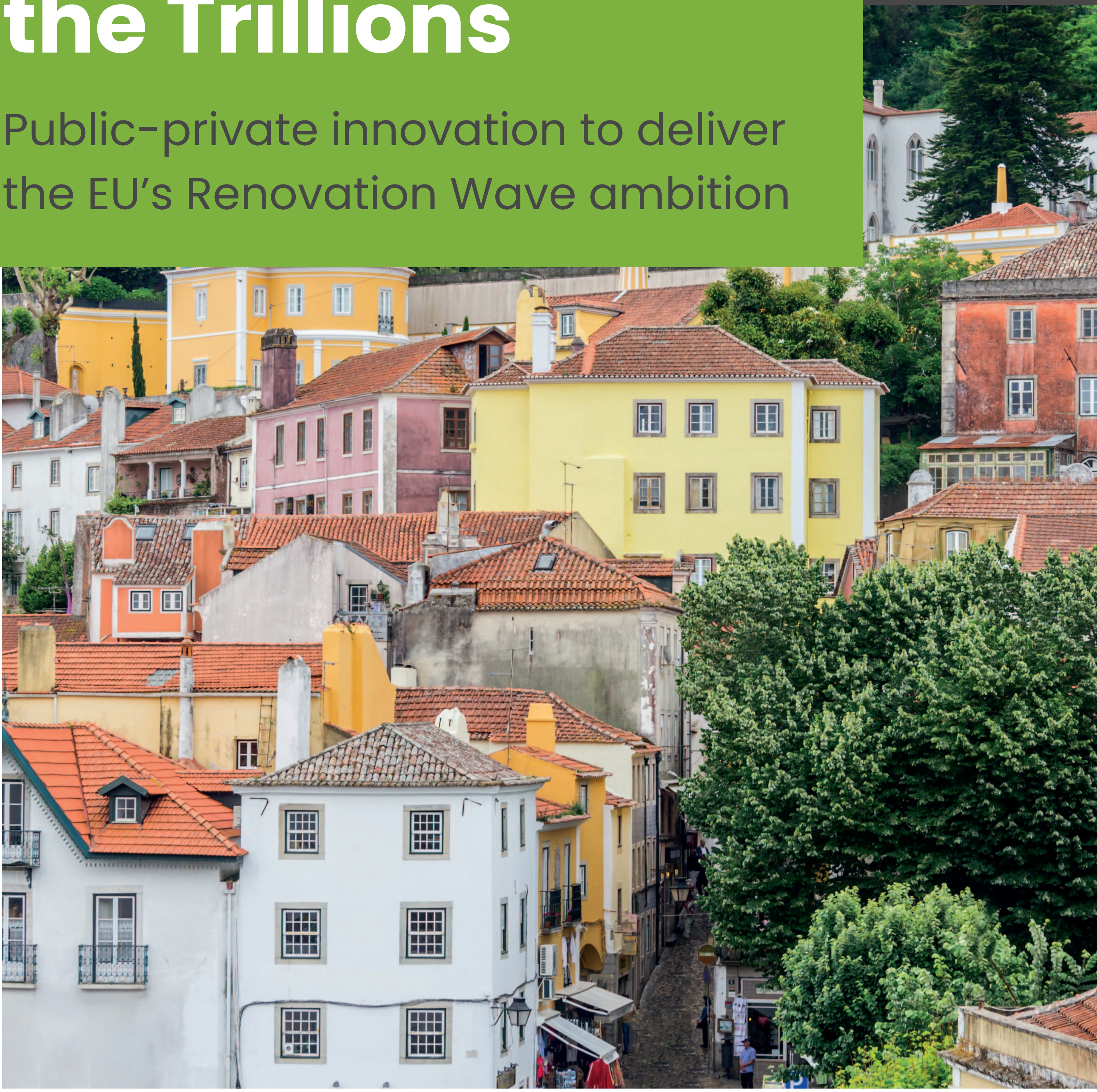
Green Finance Institute

Unlocking the Trillions

Public-private innovation to deliver the EU's Renovation Wave ambition



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Foreword

The European Commission wants to start a Renovation Wave, upgrading 35 million buildings by the end of this decade. Achieving this will mean tripling renovation rates and increasing the depth - that is the energy improvement of each renovation - by a factor of six, requiring an additional €275 billion per year.

We know that investing in green buildings brings returns on multiple levels: economic savings and value preservation, increased comfort and wellbeing of occupants, local investment and job creation, reduced energy poverty.... the list goes on.

So why is progress so slow?

The problem is not just availability of finance, it's much more systemic than that. The barriers are structural, social and even cultural. And the only way we can overcome these is through deep collaboration across stakeholder groups. The work that the GFI's Coalition for the Energy Efficiency of Buildings has been pioneering in the UK is a highly successful example of such collaboration.

Our network of Green Building Councils is working on tackling these systemic barriers and we welcome the contribution that this new CEEB report makes to this important task. By investing now, we can unlock the benefits of a high quality, high performance building stock and tackle the 36% of Europe's carbon emissions, which buildings contribute. The alternative is many more stranded assets that take us closer to climate catastrophe. It's time to get collaborating!

Stephen Richardson
Director - Europe, World Green Building Council
Member of EU Platform on Sustainable Finance

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Executive Summary

Europe has been among the worst affected areas of the Covid-19 crisis, but European Union leaders recognise the opportunity in the recovery from this crisis - an opportunity to use the €750bn of Next Generation EU (NGEU) funding to meet the goals of the European Green Deal and tackle the climate crisis.

Renovation of Europe's building stock will be critical in meeting these goals, accounting for 36% of the EU's energy-related GHG emissions. Some 70% of the EU's 220 million buildings need to be renovated, yet even the NGEU funding will be insufficient: the investment gap is estimated to be €275bn a year to 2030.

Private capital will have to be unlocked to meet the remaining funding requirements, and public-private partnerships are a formidable way to achieve this. These cross-sectoral partnerships work to identify the barriers to private finance and create the enabling environment to land innovative tools, frameworks and financial products that will catalyse growth in the renovation market.

There exist instances of this model across the EU and in the UK. One such example is the Coalition for the Energy Efficiency of Buildings (CEEB). Founded by the Green Finance Institute (GFI) in 2019, the CEEB is comprises over 360 members that have co-developed innovative tools and financial products to accelerate the decarbonisation of the built environment in the UK.

This collaborative approach is replicable across the EU and could serve to help fill the investment gap by crowding in private capital.

A mapping of Member States by GFI and independent climate think tank E3G has identified the States with a high degree of readiness for a CEEB-style coalition. This readiness is based on several factors including maturity of financial markets, investor confidence, policy, and stakeholder environment.

The GFI is now seeking to collaborate with existing coalitions and networks within these Member States. Where none exist, the GFI will seek to work with like-minded organisations to develop new cross-sectoral coalitions.

The Opportunity

The Covid-19 crisis has cost the world's major economies US$4 trillion of economic output[i] and will increase global unemployment by 10% in 2022[ii]. Europe has been amongst the worst affected areas[iii] with GDP contracting by 7.1% in 2020 (China +2.3%) and a rebound expected to take longer with GDP growth forecast at 4.8% for 2021 (China 8.5%)[iv]. In fact, Europe's real GDP is not forecast to return to pre-crisis levels until mid-2022[v]. European Union (EU) leaders see opportunity in the recovery from this crisis, an opportunity to use recovery funding to meet the goals of the European Green Deal, legally enshrined as the European Climate Law in July 2021. This law requires the EU to attain climate neutrality by 2050 and the intermediate target of a reduction in greenhouse gas emissions (GHG) of 55% by 2030[vi].

The Next Generation EU (NGEU) fund of €750bn, active until 2026, is the EU's mechanism to finance the recovery and kickstart the Green Deal. The fund not only aims to repair the immediate social and economic harm caused by the Covid-19 crisis, but also seeks to drive a cohesive, digital, and green transition, complementing other sources of public funding such as those in the Cohesion Policy[vii]. The main component of NGEU is the Recovery and Resilience Facility (RRF), a €673bn mixture of loans (€360bn) and grants (€313bn) available to the EU27 to "build back better". For Member States to access this facility, National Recovery and Resilience Plans (NRRPs) must be approved by the European Commission (EC) which has mandated that 37% of investment needs to flow toward climate mitigation projects. EU leaders have also agreed that one third of the 37% – €83bn over 5 years – should support building renovations, the process of modernizing a structure for multiple benefits, including a reduction in energy consumption.

Buildings in the EU are responsible for 40% of energy consumption, more energy than any other sector, and account for 36% of the EU's energy-related GHG emissions[viii]. Approximately 75% of buildings in the EU are not energy efficient, yet 85-95% of the current building stock will still be in use in 2050[ix]. Inadequate housing costs an estimated €194bn per year to the EU through increased use of services such as healthcare. Decrepit buildings cause 100,000 deaths a year and an estimated 50 million Europeans live in energy poverty. Renovations can lift 7 million Europeans out of energy poverty every year alongside creating 160,000 new jobs and contributing €291bn in environmental and social savings[x]. Investment in renovation can bring enormous social and economic benefits.

Decarbonisation of the built environment will be challenging. Research by the Buildings Performance Institute Europe (BPIE) finds that to obtain a net-zero goal for the sector, 97% of EU buildings will need some level of renovation and for 70% of buildings it would have to be 'deep' – achieving an energy saving of 60% or more[xi]. Only 3% of the EU's 220 million buildings are EPC A rated, the lower limit for a decarbonised building stock. Further analysis by BPIE[xiii] indicates that annual rates of deep renovation need to reach 3% by 2030 to drive a 60% reduction in GHG, the rate for deep renovation is currently just 0.2%[xiv]. The Renovation Wave[xv] strategy, a flagship programme of the Green Deal, is designed to overcome these challenges and aims to double renovation rates across the EU27 and renovate 35 million buildings by 2030[xvi].

The Gap

This scale of renovation cannot be achieved with public financing alone. The Commission estimates the EU invests €85-90bn in buildings' energy efficiency each year. The Renovation Wave strategy assesses that the additional investment needed for renovation to meet the 55% target by 2030, including decarbonising heat in buildings, is €275bn per year to 2030[xvii]. Compare this to the €83bn over 5 years ambition of the NRRPs and the investment gap is clear. In fact – **this is the largest climate investment gap in any of the sectors the Green Deal is focused on.** Taken together, the investment needed to 2030 is over €3.5 trillion. The public funding attached to the recovery plans can start the Renovation Wave, but it cannot sustain it. Therefore, these funds represent a key opportunity to develop innovative new policies and public finance solutions to crowd-in private capital. This chance cannot be wasted if the investment challenge is to be met this decade.

Seizing the opportunity to close the renovation investment gap is a systemic challenge that needs a systemic response. Outcome-focused initiatives are needed that blend a comprehensive strategic and practical approach in a way that engages policy makers, the built environment supply chain and the finance sector and creates the enabling conditions to mobilise private finance at scale. Public grants play their part, particularly for those vulnerable to energy poverty, but they alone will not deliver the volume of capital at the pace needed to meet 2030 renovation targets. New financial products can sit alongside the grant schemes, thereby multiplying the real-economy impact of public funds.

The Proposition

To crowd in private funding there is a role for EU Member States to explore coalitions that bring together public and private stakeholders to identify the solutions to overcome the barriers to investment at scale. In the UK, the GFI has established a purpose-led innovation platform dedicated to tackling the renovation finance challenge – the Coalition for the Energy Efficiency of Buildings (CEEB). The CEEB was established in December 2019 and is currently made up of over 360 members representing all sectors involved in the built environment – from finance and business, to academia, civil society, and the public sector. The Coalition is designed to identify the barriers to investment in renovation for climate-neutrality, actively develop the financial solutions and data tools needed to unlock these barriers and support widescale investments into greening the building stock. By anticipating and exploiting market developments in an agile manner, the CEEB co-creates and accelerates these solutions from inception, through the pre-commercial and pilot phases, to launch and then scale. The Coalition also provides a crucial bridge between the finance sector, business and government to ensure the latest thinking and experience is shared in a 'community of best practice' that can inform policy-making, supply chain development and renovation financing.

The GFI aims to co-develop similar coalitions to enable the private sector to invest at scale in building renovations in the EU. While the investment needs and market conditions for scaling up private finance may vary across Member States, the need to catalyse private finance for renovation is immutable simply because of the volume of capital involved. The GFI, in partnership with independent climate think tank E3G and with funding from the Laudes Foundation, conducted a review of the operating context for this work, assessing Member States through four lenses relating to different aspects of market readiness for a CEEB-style initiative: financial landscape, enabling environment, policy ambition and stakeholder landscape. The findings, presented in this paper, have identified those countries that have the right enabling conditions for the launch of a successful coalition. It is here the GFI will look to engage and expand the work of the CEEB UK. As a next step, the GFI is looking to partner with like-minded local organisations to form new coalitions, and collaborate with those already in place, to share knowledge and best practice, catalyse product development, and advise on policy levers to create new markets for building renovations that will contribute to the EU's climate change and Green Deal commitments.

The Structural Conditions for Scaling Private Finance across the EU27

To assess the supportive environment for a CEEB-equivalent local initiative, the GFI and E3G developed a political economy mapping of the EU27 Member States by looking through four lenses, each comprising several indicators:

- The **financial landscape:** This provides a background to the likely affordability and accessibility of green financial products, services and solutions, and a snapshot of the maturity and 'greenness' of the financial system.
- The **enabling environment:** This considers depth of investor confidence and certainty and covers indicators that could accelerate or limit ambition in the renovation space and affect delivery.
- The **policy ambition:** Of pivotal influence is an enabling policy environment for renovation and how the role of private finance is considered. The mapping draws on assessments by the European Commission and others of National Energy and Climate Plans (NECP), Long Term Renovation Strategies (LTRS) and National Recovery and Resilience Plans (NRRP).
- The **stakeholder landscape:** This provides a snapshot of relevant expertise in renovation and finance present in countries to understand the support available for innovating and scaling up renovation private finance. Stakeholders in the finance sector, supply chain and civil society were mapped, focusing on those who are networked across the EU.

As in the UK, these lenses are the four most pertinent – they are the pillars upon which financial innovation stands. They are mutually reinforcing and, with enabling conditions in each, the goal of systemic change becomes more achievable. As shown in Figure 1, assessing European Member States through these four lenses identifies the following countries as the closest to readiness for partnerships: Spain, Finland, France, Italy, Belgium, Germany, and the Netherlands. Although the GFI is targeting initial collaboration with these seven identified Member States, there is scope for partnership with Member States across the EU27, particularly those that have a strong appetite for using public-private partnerships to 'finance green'. For instance, countries such as Bulgaria, Croatia, Slovakia, and Poland have growing activity in this space, and the GFI would welcome conversations with organisations in these and other countries across Central and Eastern Europe.

Mapped Lenses

Country	Overall	Financial	Enabling Env.	Policy Ambition	Stakeholders
Spain					
Finland					
France					
Italy					
Belgium					
Germany					
Netherlands					
Denmark					
Austria					
Croatia					
Portugal					
Ireland					
Greece					
Slovakia					
Bulgaria					
Luxembourg					
Sweden					
Latvia					
Astonia					
Romania					
Poland					
Czechia					
Lithuania					
Cyprus					
Slovenia					
Hungary					
Malta					

Figure 1: heatmap displaying EU27 mapping results sorted by "Overall" ranking (Green to Red representing a high to low ranking)

The Mapping

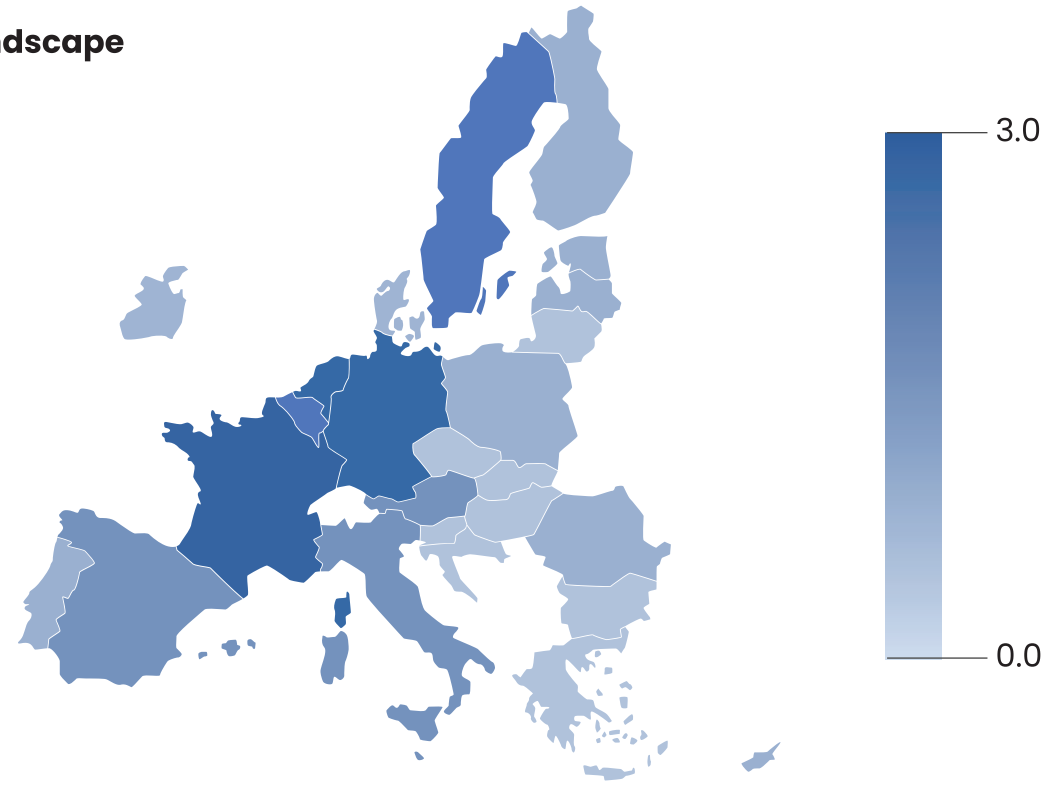
The overall picture revealed by the mapping conceals nuances across the four lenses. The following sections outline the qualitative highlights that discuss the themes at play in each lens.

Financial landscape

An open, well-capitalised banking system with multiple reputable financial institutions is one that has the capacity for innovation. Member States with financial institutions joining the global climate conversation will be thinking about the challenges to overcome and be open for the partnerships required to achieve the 2030 goals.

- There is a clear East-West divide. Foreign direct investment confidence and financial centre competitiveness are concentrated in Western Europe and older Member States. This divide is just as clear on the probability of default within Member States' commercial banking systems and the size of the ratio of central banks' assets to GDP. This extends to domestic firms' stock market capitalisation relative to GDP, and the percentage of working capital organisations finance through the private banking system.
- The volume of green bond issuance is bridging this divide. The divide between East and West is less distinct with respect to the depth and quality of green financial markets, and the volumes of green bond issuances.
- Companies lag their Regulators. The monetary authorities of all but three[1] Member States are members of the Network of Central Banks and Supervisors for Greening the Financial System. In contrast, only seven Member States[2] have private financial institutions as members of the Net-Zero Banking Alliance.

Financial landscape



The implications here are that Western members of the EU27 have a more stable financial landscape that can enable financial innovation, identifying them as more ready for partnerships. However, with this existing divide it is also vital that countries in Central and Eastern Europe are included to work together to bridge the gap.

[1] Bulgaria, Croatia, and Czechia
[2] Denmark, Finland, France, Germany, Netherlands, Spain, and Sweden

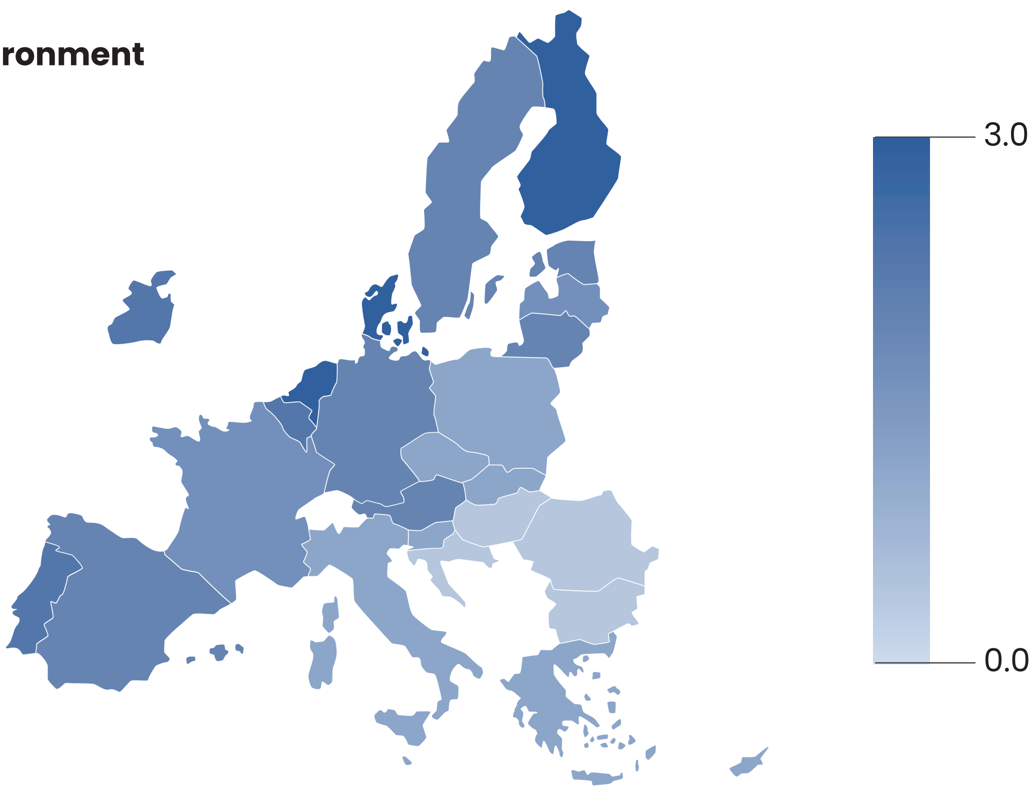
Enabling environment

Policy-makers are a crucial participant in accelerating the change to a low-carbon future therefore it is important to examine civil service effectiveness and political stability. Those countries with upcoming elections were deemed to be less ready as the potential for distraction increases and uncertainty in leadership promotes temporary indecision.

- EU Member States are on a relatively solid footing regarding political stability, regulatory quality, and the rule of law.
- The outcome of negotiations over new climate legislative proposals and their implementation, including on energy efficiency, heating, cooling and buildings, will depend on the composition of national governments and the European Council positions they adopt. Key political decision-makers can affect the scope for increasing the flow of private finance into renovation.
- There are at least eight national elections due to take place over the next 18 months. This gives rise to political uncertainty, particularly while coalition agreements are under negotiation. This can create regulatory uncertainty in specific sectors, including buildings and climate where many national political decisions are required.

Given that the EU27 has signed the Green Deal into law there is demonstrable political will to become a net-zero continent. Within the timeline of the NGEU funding, the next five years needs to see that political will translate into action. Currently, the challenge is the amount of public money in the system – the 7-year EU budget of approximately €1.1 trillion has now been increased to €1.8 trillion with the NGEU funds – Member States are struggling to put this money to work and therefore grant-based projects, which are often quicker to market, are given priority and create a myopic risk that public funds will be around to solve the problem.

Enabling environment



Policy ambition

The high-level policy framework for the EU is already agreed – the target to reach climate neutrality by 2050 has been set into law. In the summer of 2021, the Fit for 55 package introduced 14 legislative proposals to reach these goals, with more expected later this year. The Energy Performance of Buildings, Energy Efficiency and Renewable Energy Directives will have major implications for buildings decarbonisation. Our mapping examines the high-level state of play of national renovation policies, rather than the state of implementation.

- As of the end of July 2021, 25 Member States had submitted their NRRPs. Nearly all of them include planned investments for renovation out to 2026 and together comprise investment of €53bn, highly concentrated in Central and Eastern Europe (CEE) on a per capita basis. Disappointingly, very few Member States have set out how public funding could crowd-in private finance to support investment or sustain longer-term renovation activity, relying mostly on grant funding[4].
- All but six Member States have 'moderately ambitious' to 'ambitious' goals for building decarbonisation in their National Energy and Climate Plans (NECPs). These will eventually need updating in line with the EU's new 2030 climate target. All but three Member States[3] have submitted more detailed, complementary Long Term Renovation Strategies (LTRSs) that enhance the credibility of NECP goals for buildings or show more ambition.
- How EU legislation is implemented and complemented by national policies has major implications for private renovation finance and innovation. For example, under the Energy Performance of Buildings Directive, the completeness, robustness, and usability of energy performance certificate (EPC) data is a crucial enabler for the development of new financial products and services geared to support renovation. And yet, not all Member States have publicly available EPC data for financial institutions to stress test their property portfolios.

Overall, there is greater variability across Member States in the robustness of the policies for building renovation compared with the other lenses examined. Countries from different areas of the EU lead the way – Spain, Croatia, Finland, Slovakia, Bulgaria, and Greece, indicating the potential for regional leadership diffusing into neighbouring countries.

Policy ambition

[3] Malta, Poland, Slovenia

[4] https://www.renovate-europe.eu/renovate2recover-how-transformational-are-the-national-recovery-plans-for-buildings-renovation/

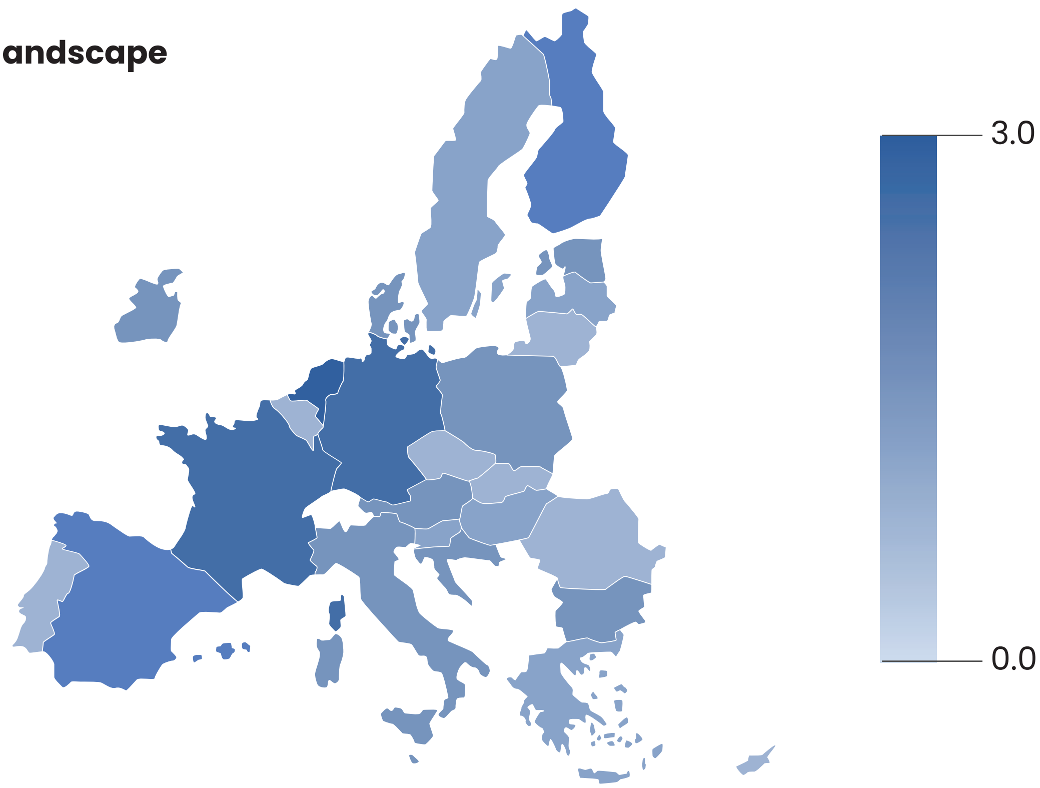
Stakeholder landscape

The impetus for innovation across renovation supply chains is set to be strengthened with the proposed extension to the EU Emissions Trading System (EU ETS) to include fossil fuels used in heating buildings. It is intended to "help bring cleaner heating fuels to the market, shorten payback periods for investments in renovation and accelerate fuel-switching in heating and cooling in existing buildings"[xix].

- Supply chains, industry and civil society expertise are more institutionalised and deeply interconnected in Western Europe, indicative of an East-West divide. Stakeholders headquartered in Western Europe are also better networked across the EU. This speaks to the need to connect more strongly with stakeholders within Central and Eastern Europe – a focus of Horizon EU.
- The European Association of Public Banks (EAPB) forms a European-wide network of public banks active in EU Member States and working on a common sustainable finance approach. Membership is especially strong in France, Germany, Hungary, the Netherlands, and Spain, while half of the EU Member States have at least one public bank that is a member of the EAPB.
- The existence of Financial Trade Bodies with a focus on sustainable finance is heavily skewed towards Western Europe. Only the Financial Trade Bodies of Denmark, Estonia, Finland, the Netherlands, and Spain have publicly announced that sustainable finance is a priority area.
- The European Bank for Reconstruction and Development's Green Economy Financing Facilities (GEFFs) are active in several CEE Member States – Bulgaria, Croatia, Hungary, Romania, Poland, and Slovakia. These are credit lines that national retail banks can 'on-lend' for residential, commercial, and public building energy efficiency, including small-scale renewables. GEFFs usually involve technical experts and accredited supply chain stakeholders, playing an important role in the renovation finance landscape.

Across the EU27 there are stakeholders driving change in the building renovations space. The GFI would like to work with these organisations and together amplify that change, to create the momentum and scale required to reach the goals of the Renovation Wave.

Stakeholder landscape



Unlocking Private Finance across the EU

Across the EU, there exist programmes aimed at tackling the challenge of scaling up renovation. These range from EU-wide initiatives aimed at catalysing investment, to in-country one-stop-shops aimed at local property owners. These facilities demonstrate the positive impact of diversifying away from grant-only financing. As shown below, the most innovative and impactful of these examples are those that blend public and private financing to unlock the leveraging power and sustainability of private capital. Further detail on a selection of case studies can be found in Annex 1.

- **The European Local Energy Assistance (ELENA)** is a joint initiative of the European Investment Bank and the EC under Horizon 2020, managed by a team of experts made up of engineers and economists. Created in 2009, ELENA has granted more than €180 million in EU aid, mobilising an estimated investment of around €6.6 billion (by the end of 2019). One of the most recent grants under ELENA has been awarded to the Primavera project supporting the Navarre region in Spain by mobilising more than €40m over the next three years, contributing to the implementation of energy efficiency measures in around 1,900 homes and adding up to a total annual energy savings of 13.1 GWh. Around 90% of the investment will be allocated to privately owned buildings while the rest goes to publicly owned social housing buildings with the goal of reducing heating-related energy use by 70%.
- **KfW's energy efficiency loans in Germany**[5] offer a blend of public and private financing where low-interest loans encourage renovation ambition by reducing interest rates for larger loans. Loans also have 20+ year terms thereby increasing affordability. KfW's AAA rating allows it to borrow cheaply, and the low cost of finance is passed on to a distribution network of local banks to market to their existing client base. It is estimated that every euro invested relieves public finances by up to €5.4[xx].
- **The KredEx Fund in Estonia** was founded in 2009 to renovate multi-family apartment buildings with public seed funding. Offering a combination of loans, loan guarantees and grants, the Fund incentivises building owners to renovate. It has helped more than 100,000 families improve the energy efficiency of their homes by as much as 65%[xxi].
- **EuroPACE**[xxii] is a three-year project with the goal of making home renovation simple, affordable, and reliable for all by combining affordable financing with technical assistance. It offers homeowners logistical as well as technical support throughout their entire renovation journey and provides access to trained and qualified contractors. With the blend of public/private financing the project can offer long-term loans, ensuring affordable monthly payments. The initiative has seen over a €1.8M in projects, trained 55 contractors with 87 homeowners expressing an interest, 43 projects in progress and 17 completed[xxiii].

To have an enduring impact in building new markets, EU funds need to be deployed in a way that catalyses increasing volumes of private investment - and move away from one-time, grant-funded projects that headline well in year one and then disappear the next. While an important part of the picture, this approach on its own is not a model that supply chain stakeholders and homeowners can invest into.

Grant funding will still play a vital role in supporting lower income households. However, for much of the market, entrepreneurial public investment is needed alongside a stable and investment-enabling regulatory landscape to achieve the systemic changes needed.

[5] KfW's "Energy-efficient Construction and Refurbishment" programmes

While the investment needs and market conditions for scaling up private finance may vary across Member States, the need to catalyse private finance for renovation is immutable – the scale of investment required cannot otherwise be met. Innovative financial mechanisms are required to direct capital to where it is most needed and one such mechanism is a cross-sectoral, outcomes-focused coalition. Leveraging the experience and wisdom of a group of public and private stakeholders can produce the technical expertise and mechanisms to channel private finance.

The EU has several funding programmes such as Horizon 2020 and Invest EU that support innovative start-ups and projects such as coalitions. These have been set up to address the pervasive challenge of low renovation rates. Figure 2 highlights a non-exhaustive list of coalitions identified in our research that may be a good fit with our approach. This is the starting point for our endeavours and the GFI welcomes a conversation with them.

Country	Name	Focus
Belgium	**CAP Construction**	372 members across a variety of sectors sharing best practice and promoting sustainable construction in Wallonia. Sectors include architects, real estate, building managers, HVAC installers, auditors.
Bulgaria	**EnEffect**	The Energy Efficiency Centre EnEffect is a non-governmental non-profit organization with a mission to support the efforts of central and local authorities to achieve sustainable development of the country through more efficient use of energy.
EU-wide	**Renovate EU**	A political communications campaign with the ambition to reduce the energy demand of the EU building stock by 80% by 2050 through legislation and ambitious renovation programmes. A network of national partners across the EU27 are now focused on implementation.
	European Mortgage Federation	The overarching aim of the EMF is to ensure a sustainable housing environment for EU citizens. They have active Energy Efficient Mortgage Hubs in multiple countries covering Denmark, Sweden, Finland, Spain, Portugal, Italy, Belgium, the Netherlands, Scotland.
	World Green Building Council	The World Green Building Council catalyses the uptake of sustainable buildings for everyone, everywhere. Transforming the building and construction sector across three strategic areas—climate action, health & wellbeing, and resources & circularity— they are a global action network comprised of around 70 Green Building Councils around the globe.
Finland	**CANEMU project (Carbon Neutral Municipalities)**	Brings together municipalities, businesses, citizens, and experts to create and carry out solutions to reduce greenhouse gas emissions in the built environment.
	MuniFin	Specialises in the financing of the municipal sector and non-profit housing sector. Offers green finance for environmentally friendly projects and was the first Finnish issuer of green bonds.

Country	Name	Focus
France	**Finance for Tomorrow**	Brings together all private, public, and institutional players in the Paris financial centre who wish to commit themselves to a finance that focuses on a sustainable future and combines long-term investment with consideration of environmental and social challenges.
	RENOVONS	An alliance bringing together civil society actors committed to energy efficiency through the energy renovation of housing in France. A particular focus on structurally reducing energy poverty.
Germany	**The Green and Sustainable Finance Cluster**	To achieve greater use of financial market expertise in sustainability. Its primary ambition is to formulate and implement solid approaches to fostering the sustainability of national and international financial markets.
	GREEN Home	Connects relevant stakeholders from politics, business and civil society that are related to energy efficient renovation in German homeowner associations. Focuses on four topic areas: 1. finance and funding, 2. construction and housing technology, 3. legislation and 4. communication and process support.
Italy	**Kyoto Club**	Brings together businesses, companies, associations, local municipalities, and governments engaged in reaching the greenhouse gas reduction targets set by the Kyoto Protocol.
	GREENROAD	Aims to facilitate dialogue between Italian public and private key actors on financing issues related to energy efficiency in the existing and new buildings sector. Aims to foster collaboration, innovation, and action through the establishment of a permanent national roundtable.
Spain	**FinResp**	The Centre for Sustainable and Responsible Finance of Spain (FINRESP) seeks to contribute to a more sustainable and responsible economic and financial activity through the creation of a meeting point, debate, awareness, and innovation for stakeholders.
	AÚNA	A large, specialised forum to bring together all stakeholders across the finance, construction, and energy industries, including the public and private sectors.

Figure 2: Table of existing networks and coalitions

The Coalition for the Energy Efficiency of Buildings, UK

One model for replication is the Coalition for the Energy Efficiency of Buildings (CEEB) whose members represent all sectors involved in the built environment – from finance and business, to academia, civil society, and the public sector. The Coalition identifies the barriers to investment in net-zero homes, and actively develops the financial solutions and data tools needed to unlock these barriers and support widescale investment into greening the building stock. By anticipating and exploiting market developments, the CEEB co-creates and accelerates these solutions from inception, through the pre-commercial and pilot phases, to launch and then scale. The Coalition also provides a crucial bridge between the finance sector, business, and government to ensure the latest thinking and experience is shared in a 'community of best practice'.

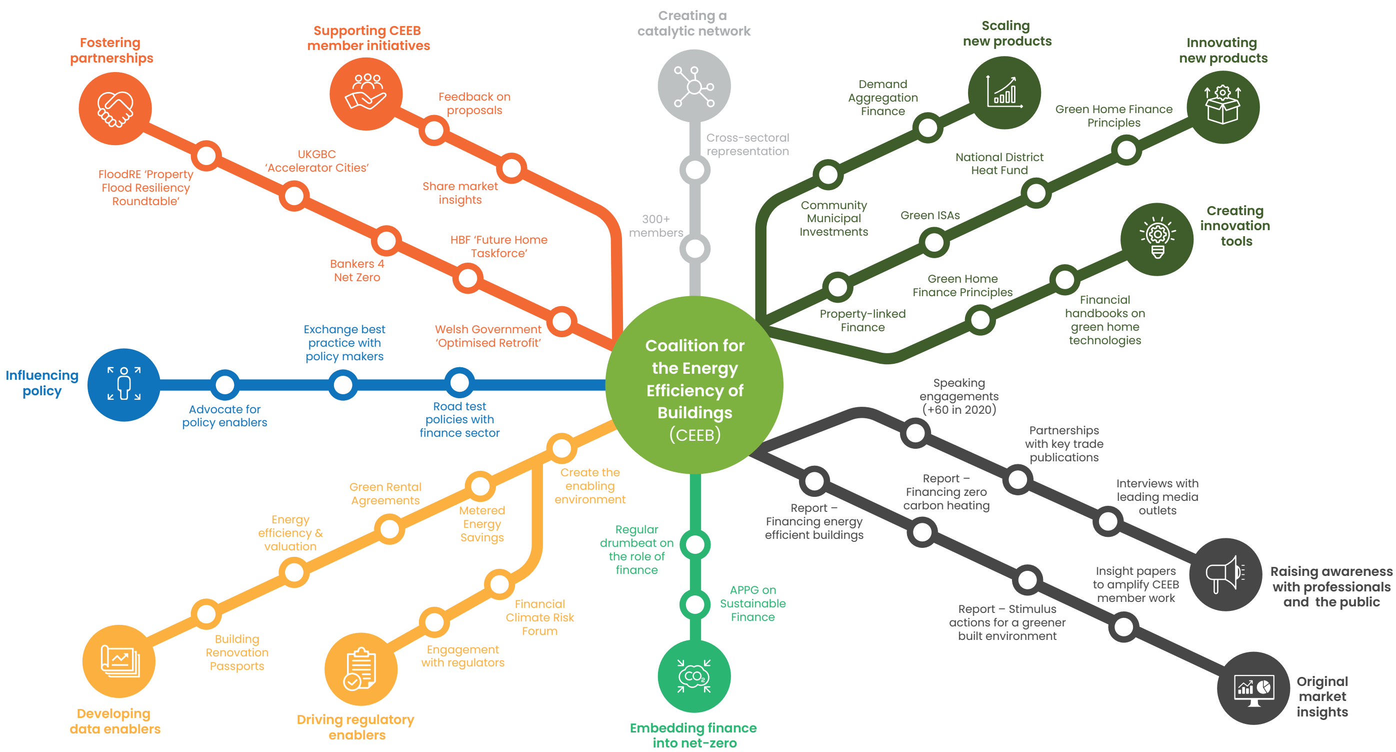


Figure 3: the breadth of the UK CEEB's impact and influence

In under two years, the CEEB has co-created several impactful solutions, tools, initiatives, and market insights. Leveraging the CEEB member's cross-sectoral expertise and shared objective to achieve a net-zero built environment, the Coalition's ventures include:

- An initiative to embed transparency and consistency into the green home finance market and minimise the risk of greenwashing, the **Green Home Finance Principles** (GHFPs) were launched in September 2020, in collaboration with the Loan Markets Association. Within just one year, 11 lenders with combined mortgage balances of +£480bn have launched, or committed to launch one or more lending products aligned with the GHFPs.
- Raising public awareness and supporting local authorities through the process of releasing their own Local Climate Bond, the Coalition established the **Local Climate Bonds Campaign,** in partnership with Abundance Investment. A local climate bond is a type of 'community municipal investment' that allows local authorities to raise capital to fund specific initiatives in their neighbourhoods. Launched in July 2021, the campaign is already gathering momentum and expects to announce several signatories at COP26.
- Providing actionable data and real-time performance monitoring to catalyse the development of new financial products, services, and business models, the Coalition launched an industry protocol for **Metered Energy Savings.**
- Bringing together a focus group of over 50 industry experts into the Zero Carbon Heating Taskforce (ZCHT), as part of the wider CEEB programme, to identify the financial solutions and data, policy, and regulatory tools to accelerate investment into low-carbon heating solutions. The ZCHT recommended 13 practical, implementable, and scalable solutions, several of which the Coalition members have actively developed throughout 2021.
- Actively developing a portfolio of financial solutions, data tools and market enablers, such as policy and regulatory levers, to unlock investment flows into decarbonising the built environment. These include several exciting projects that will launch in 2021/22, including:
    - **Green ISA Principles,** designed in collaboration with market practitioners, to provide clear and consistent process guidelines for Green ISAs to ensure that financiers and retail investors have confidence in this growing market.
    - Original research into consumer attitudes towards **Property Linked Finance** (also known as PACE Finance in the United States), alongside a roadmap and ongoing work to deliver the UK's first pilot scheme.
    - A **practical handbook** for finance practitioners that provides decision-useful information about green home technologies, to help upskill and empower financial professionals to fund such projects.
    - An industry-backed framework of best practices for **Building Renovation Plans** in the UK.
    - A new **Green Rental Agreement** to incentivise landlords to renovate their properties and encourage tenants towards more sustainable practices.

Additionally, the Coalition also uses its convening power to facilitate a constructive dialogue between the finance sector, industry, and HM Government. This includes orchestrating multiple workshops on behalf of HM Government, convening meetings with senior Ministers, and channelling the finance sector's voice on key topics such as the Green Homes Grant Scheme and an EPC-linked Stamp Duty Land Tax to catalyse demand for renovation.

The Coalition is unique in who it brings together and how it operates across the strategic and practical spectra, all the while working closely with, and bringing a collective voice to, national government on strategy, policy, and implementation. In so doing, the CEEB's outcomes are more than the sum of its parts. It is this purpose-led, innovative approach that has replicability in other countries and why the GFI, through a funding partnership with the Laudes Foundation, is exploring how the CEEB framework, work programme and innovations can be tailored for local markets in Europe and adapted to collaborate with existing networks and coalitions.

Looking Ahead – Coalitions across Europe

The EU27 have access to public financing options in the form of a Recovery and Resiliency facility and multiple Cohesion funds. The platform is there to build back better and the opportunity to use the leveraging power of these funds to sustain the Renovation Wave into 2030 and beyond.

With that aim, the GFI is working towards broad engagement and has plans to partner with in-country leaders in establishing new coalitions or collaborating with existing networks to tackle the barriers to unlocking private capital and ensure the NGEU funding is used as a mechanism to bridge the investment gap. Over the next five years, aligned with the NGEU, the Green Finance Institute has ambitions to work with in-country partners to create a series of financial implementation-focused coalitions across the EU to create the enabling conditions to realise the ambitions of the Renovation Wave. The opportunity exists and the benefits are clear – better homes, improvements to health and job creation, and investment to support a healthier and wealthier society.

Annex 1

Unlocking capital in the EU

Below are some case studies that highlight current initiatives in the EU and how the challenge remains to move away from grant funded initiatives.

On-bill financing: RenOnBill

RenOnBill is a Horizon 2020 project that aims to pioneer new, replicable business models for on-bill financing of deep renovations in Germany, Italy, Lithuania, and Spain. An investment vehicle, set up by the utility company and the renovation stakeholders, takes on the upfront cost of renovation and repayment is made via the customer's utility bill. It recognises banks' general unfamiliarity with energy saving investments, the challenge of lending for small projects, poorly understood links between energy bills savings and loan affordability – together resulting in an overestimate of energy efficiency investment risk. It aims to bring energy utilities and financial institutions together, leveraging utilities' detailed knowledge of energy solutions and default rates on energy bills, and via on-bill loan repayment mechanisms, seeks to aggregate many small projects into larger, less risky financing propositions.

Let's Live Warmer

Latvia's 'Let's Live Warmer' is an awareness raising campaign that has led to a greater uptake of housing insulation in Latvia. During the 4.5 years of the campaign a total number of 198 events were organised including more than 6,390 participants in person and more than 2,740 participants through online channels. A communication system with citizens was established through social networking and the Ministry of Economics participating in trade fairs and exhibitions.

The awareness campaign was successful by steadily increasing the number of submitted project applications for funding from 117 in 2009 (pre-campaign), to 170 in 2010 (at the start of the campaign), to 435 in 2012 (mid-campaign) and 248 in 2013 (end of the campaign). Following the success of the campaign, the programme's EU funding was increased fourfold – from €20m to €89m.

Seamless Services for Housing Energy Efficiency Renovations

Bulgaria's Seamless Services for Housing Energy Efficiency Renovations (SHEERenov) is a €1.4m EU-funded Horizon 2020 programme, running from 1 June 2020 to 30 September 2022. It is a one-stop shop service replicating good practices from Hungary and Estonia in the municipality of Sofia.

The goal is to transition from the existing multifamily buildings energy efficiency renovation model, which is based on public finance, to a market-oriented model. The project will review obstacles and identify requirements to create the conditions to attract and support the participation of relevant stakeholders in the process of energy efficiency renovating in the residential field. The system will provide homeowners free access to one-stop shop assistance by private businesses, a sustainable financial mechanism to facilitate loan access and appropriate municipal policies. The sustainability of SHEERenov results will be ensured through policy recommendations, communication, dissemination activities and intended policy change regarding multifamily building renovation in Bulgaria.

Annex 2

Mapping Methodology

Detail on the indicators drawn together and examined under each lens is provided in Figure 4. Indicators were selected on the basis of stemming from reputable or authoritative sources and availability across Member States. Results were assessed using a scoring index for each element of the landscape and combined for a consolidated overview that gives an indication of the strength of conditions for private renovation finance in Member States.

The 'Stakeholder landscape' as well as 'Enabling environment' lenses include a weighted ranking, while all indicators equally contribute to the overall score in the 'Policy ambition' and 'Financial landscape' lenses. The overall score is also weighted towards the 'Financial landscape' (40%) and 'Policy ambition' (40%) as we feel they are the most influential for the buildings and renovation framework. 'Stakeholder landscape' and 'Enabling environment' are each weighted at 10%. The average scores of each lens, as well as the weighted final score, are all rounded to one decimal point after the comma and attributed the respective '3', '2' or '1' rank depending on the closest rounded number. The same ranks translate into the colour intensity in the heatmaps which represent the results from the analysis of the four different lenses.

Financial landscape

This is the only lens where more countries have the lowest than the highest score and an almost equal number in the medium score. Four Member States have the highest score in "Financial Centre Competitiveness" and "Central bank assets to GDP ratio" while more than half of the 27 Member States score the lowest on "FDI Confidence", "Financial Centre Green Market Depth", and 70% on "Green Bond issuance". These results are not surprising as green finance is still in its early stages and is developed to differing degrees across Member States that themselves have financial systems with differing degrees of maturity. However, a positive trend is visible and might be enhanced by a political push in the light of additional funding from the NRRP's as well as the EU's ongoing focus on developing a sustainable financial market – including through the latest Sustainable Finance Strategy and EU Taxonomy.

Enabling environment

The political landscape across the EU27 is relatively stable. There are some disparities between East and West Europe but by comparison to the global picture, the EU remains a place where the rule of law is upheld, and democratic principles are valued.

Policy ambition

As of July 19, 2021, 25 out of the 27 Member States have submitted their NRRPs and out of these 18 have already been approved by the Commission and 12 by the Council. All those 18 greenlighted countries have reached the 37% green spending threshold according to the Commission's assessment. Meanwhile, the Green Recovery Tracker[xxiv] only counts three Member States passing this threshold: Finland (42%), Germany (38%), and Hungary (37%). Out of those plans already submitted, 7.9% of the €668bn Recovery and Resilience Fund money will be spent on buildings. The Green Recovery Tracker analysis shows that out of the 17 countries analysed, 16% will have a very positive impact on the climate, 21% will have a positive impact and 63% will have a likely climate effect whose directions is not assessable. Next to the spending on agriculture, which is significantly less, buildings is the only other sector which has no spending going towards it that has a negative or very negative impact on the climate. 26% of NRRPs, 48% of LTRS, and 44% of NECPs have scored high[6] on the ambition scale out of which the Central and Eastern European region contributed the most Member States with the highest-scoring NRRPs and LTRS.

Stakeholder landscape

The snapshot of the stakeholder landscape is inevitably partial. The focus is on types of stakeholders also involved in the CEEB – broadly speaking financial institutions, renovation supply chain stakeholders, and civil society focused on decarbonising buildings. The scope was limited to stakeholders who are to a degree networked, coordinated, or directed across national boundaries (including present CEEB members).

Only four Member States score the highest score while just three score in the lowest ranks and the majority have a medium score. Member States are performing the best in the "Civil Society Capacity" indicator with only one Member State receiving the grade "obstructed", 13 "narrow" and 13 "open". Existence of stakeholders in the private sector mainly scores medium to well, whereas the amount of EAPB members in the Member States as well as the number of financial trade bodies with an explicit and ambitious green focus is rather low, which is also reflected in the Financial landscape scores.

[6] The assessment was based on the Commission's assessment of the plans and additionally informed by desk-based research and contributions from National Partners of Renovate Europe.

Political Landscape	Policy Landscape	Financial Landscape	Stakeholder Landscape
Corruption Perceptions – 2020 (Transparency International)	**National Recovery and Resilience Plans** – Looking at: Clarity & depth of ambition, Financial perspective & landscape, Multiple benefits & integration, Supply Chain & Project Support, Implementation Framework	**FDI Confidence Index** – 2021 (Kearney)	**Public Banks** (EAPB Membership – 2021) – This indicator looks at how many public banks which are members of the EAPB each Member State has
Government effectiveness – 2019 (Worldwide Governance)	**Long-Term Renovation Strategies** – Looking at: Milestones & Numeric Pledges for Renovations, Investment needs, Main characteristics of proposed measures, Potential areas of further improvement	**Financial Centres Competitiveness** (Global Financial Centres Index)	**Civil Society Capacity** (State of Civil Society Report 2020) – This indicator shows the strength and public participation of the civil society
Political Stability (Worldwide Governance)	**National Energy and Climate Plans** – Looking at: Renewable Energy targets, Energy Efficiency targets, Buildings & Renovation Policies, Investments	**Financial Centres Green Market Depth** (Global Green Finance Index)	**World Green Building Council** (Membership – 2021) – This indicator depicts the existing network of GBC in each MS
Regulatory Quality (Worldwide Governance)		**Financial Centres Green Market Quality** (Global Green Finance Index)	**Renovate Europe** (National Initiatives – 2021)
Voice & Accountability (Worldwide Governance)		**Network for Greening the Financial System** (Membership – June 30th 2021)	**Finance Trade Bodies** focussing on Sustainability (respective websites)
Civil Service Effectiveness – 2019 (Institute for Government)		**Net-Zero Banking Alliance** (Membership – 2021)	**Green Economy Financial Facility** (Membership - 2021)
Press Freedom Index – 2021 (Reporters Without Borders)		**Bank Z-Score** (Global Financial Development Report 2019/2020)	
Human Freedom Index – 2020 (CATO Institute)		**Stock Capitalization** (Global Financial Development Report 2019/2020)	
GHG Disclosures – 2019 (Corporate Knights)		**Assets to GDP** (Global Financial Development Report 2019/2020)	
Next Elections – 2021-2023		**Firms using banks to finance working capital** (World Bank)	
		Market capitalisation of listed domestic companies (World Bank)	

Figure 4: Four categories the mapping was based on including their indicators.[7]

[7] These indicators are formed by quantitative data which is available online and come from multiple sources for the last year that data was available

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Acknowledgements

The Green Finance Institute would like to extend a thank you to James Hooton, Programme Director, and Shayna Kowlaczyk, Associate, Green Finance Institute and the CEEB's secretariat team from E3G: Pedro Guertler, Kevin Maass and Roxana Dela Fiamor.

The Institute would also like to extend a special thank you to Maya Faerch and James Drinkwater at the Laudes Foundation, Stephen Richardson at World Green Building Council, Brook Riley at Rockwool and Steve Fawkes at EnergyPro who have contributed their time, insights and feedback to strengthen the quality of this report.

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