



COL·LEGI D'APARELLADORS, ARQUITECTES TÈCNICS  
I ENGINYERS D'EDIFICACIÓ DE BARCELONA

**RE**habilita

16 Octubre  
2018

# Finançar la Rehabilitació residencial d'edificis



**Generalitat  
de Catalunya**



Ajuntament de  
Barcelona

**LA PLATAFORMA  
DE LA CONSTRUCCIÓ**

**La Hipoteca Verda  
que està impulsant la**

**Federació Hipotecària Europea  
(European Mortgage Federation)**

**El projecte EeMAP**

**Emilio Miguel Mitre**

**GBCe,**

Director de  
Relaciones Internacionales



# EeMAP

Energy efficient  
Mortgages  
Action Plan

This project has received funding from the  
European Union's Horizon 2020  
research and innovation programme  
under grant agreement No 746205



## EeMAP: The Story So Far

Emilio Miguel Mitre

GBCE ESTÁ TRANSFORMANDO LOS EDIFICIOS EN LOS QUE VIVIMOS, TRABAJAMOS Y NOS RELACIONAMOS, PARA HACERLOS COMPATIBLES CON LOS OBJETIVOS DE DESARROLLO SOSTENIBLE

[ÚNETE](#)

## QUIÉNES SOMOS

# GBCE

GBCe es una asociación sin ánimo de lucro que reúne a **representantes de todos los agentes del sector de la edificación** con el fin de contribuir a la transformación del mercado hacia una **edificación más sostenible**.

La Asociación GBCE, o Consejo para la Edificación Sostenible de España, es una organización autónoma afiliada a la Asociación Internacional, sin ánimo de lucro, "World Green Building Council", WorldGBC, de la cual constituye el Consejo Español.



[www.gbce.es](http://www.gbce.es)





## WE BELIEVE OUR BUILDINGS CAN BE BETTER THAN THEY ARE TODAY

BUILD UPON is the world's largest collaborative project on building renovation – bringing together 2,000 organisations, across 19 countries, at over 100 events in 2016-17.

It aims to create a renovation revolution across Europe by helping countries to deliver strategies for renovating their existing buildings, by the 30 April 2017 EU deadline.

These strategies are critical to cutting Europe's energy use, reducing the impacts of climate change, and creating buildings that deliver a high quality of life for everyone.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 648707



## THE HOW - National Dialogue Process

More than **100** Events organised across Europe

Example of the Italian Dialogue Process

- |          |                |
|----------|----------------|
| Spain    | Czech Republic |
|          |                |
| Italy    | Ireland        |
|          |                |
| Sweden   | Bulgaria       |
|          |                |
| Croatia  | Finland        |
|          |                |
| Latvia   | Slovakia       |
|          |                |
| Slovenia | Romania        |
|          |                |
| Turkey   | United Kingdom |
|          |                |



Support provided by BUILD UPON welcomed by **over 50** Governments, cities, regional authorities and energy agencies across Europe



National recommendations or "RENommandments"

Examples of the National Recommendations documents produced in Romania, Sweden and Ireland



Pictures of the workshops

## WHAT WE ARE DOING AND WHY



BUILD UPON is a community that is creating a shift in the way we approach Europe's building renovation challenge.

The proximity and working of all European languages are helping to put in place dialogue strategies to improve our existing buildings – to ensure they deliver impact on our society, economy and environment in a properly managed way.

During 2016-17 BUILD UPON has brought together a community of over 2,000 shared experiences in over 100 events across Europe – to ensure how to design and implement successful building renovation strategies. We were joined by not just a clear common vision of what we need to do to make this a reality – and how we can start to implement it, across Europe's buildings, but also to define a common vision for the way we do it.

## OUR COMMON VISION



Our vision is a Europe that leads in the building renovation challenge – meeting the goals of the Paris Agreement and supporting the goal of reducing its carbon footprint.

To achieve this, all countries must develop an ambitious national renovation strategy – setting out measures to 2050, with clear targets, milestones and measures that support their vision.

We need to create better policies and actions to support this vision, and to support the design and implementation of the renovation strategies.

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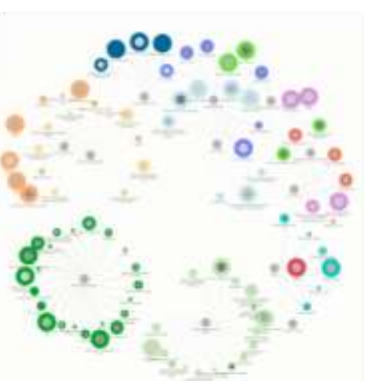
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## THE WHO - Mapping Stakeholders

**2,900** Stakeholders identified



Example of the Finnish Stakeholders Map

Analysis of the 14 Maps (19 countries and European level)



over **750** Initiatives

Great examples of solutions supporting energy efficient building renovation across Europe in our Renowiki platform to inspire one another.

## THE WHAT - Mapping Initiatives



Example of the Spanish Renowiki of a renovation integral initiative provided by the Basque Government

# **BUILD UPON**

INNOVATION INCUBATOR



**1**

**Awareness  
Raising Innovation**

**2**

**Skills & Capacity  
Building  
Innovation**

**3**

**Financial &  
Economic  
Innovation**

**4**

**Policy &  
Regulatory  
Innovation**

**1**

What is the  
problem you're  
trying to solve?

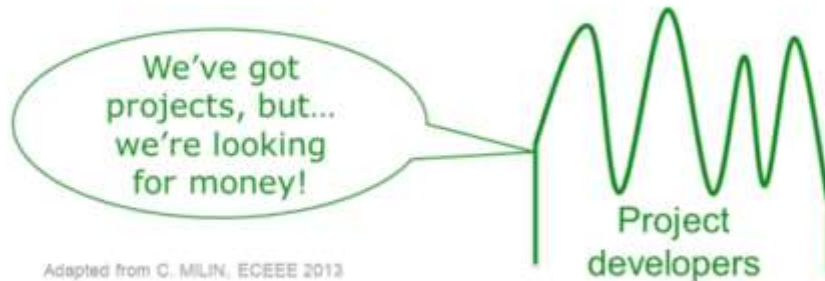
**2**

Does it address  
leverage  
points?

**3**

Has it been  
prototyped and  
shown promise  
or early  
success?

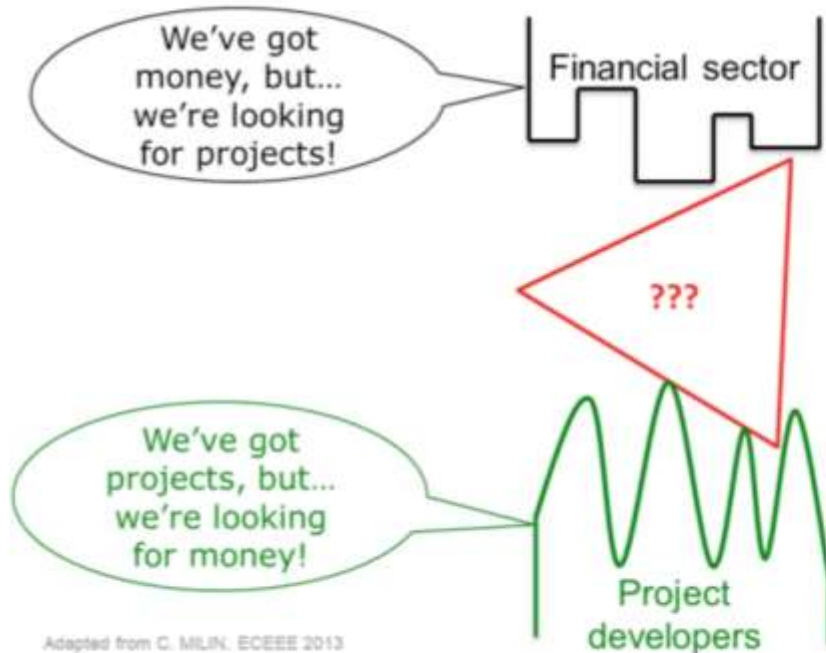
# Energy efficiency and finance – do we speak the same language?



Adapted from C. MILIN, ECEEE 2013

This presentation requires oral explanations

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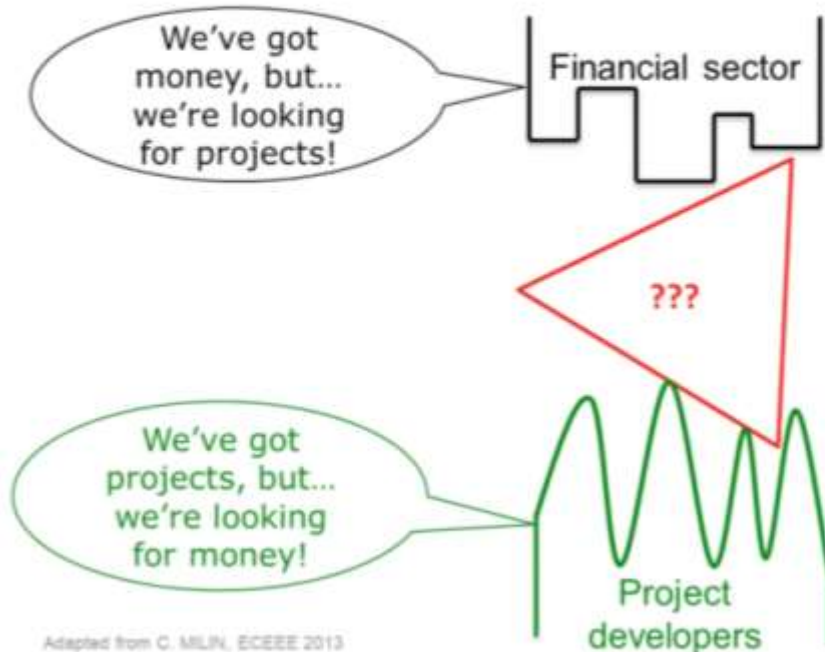
This presentation requires oral explanations



# Energy efficiency and finance – do we speak the same language?

(IRR: Internal Rate of Return)

(NPV: Net Present Value)



Adapted from C. MILIN, ECEEE 2013

## **“Investment project” for the financial sector:**

- technical black box
- standardized product
- cash-flows, IRR, NPV
- predictability of risks
- transaction costs

## **“Investment project” for many project developers:**

- technical design tailored to physical constraints
- state-of-the-art technology
- energy payback times
- “no financing” = “no subsidy”?

This presentation requires oral explanations

# REhabilita



“A unique partnership to leverage the power of mortgage lending in reducing the energy use of Europe’s buildings.”





## ¿Por qué hipotecas y por qué ahora?

- Hipotecas =  $\frac{1}{3}$  del total de los activos del sector bancario de la UE =  $\frac{1}{2}$  PIB de la UE (€7 millones de millones)
- La más conocida de las formas de préstamo a la propiedad
- Engrana con “trigger points” en rehabilitación (compra, refinanciación...)
- Reforma de los requerimientos de capital de la UE – Estrategia de financiación sostenible de la UE ... si los datos del préstamo evidencian un bajo riesgo
- Mejores condiciones posibles:
  - a) interés más bajo
  - b) mayor tasación
  - c) mayor porcentaje sobre tasación
- (... necesita apoyo técnico !!!!!)



## Green mortgages can unlock benefits for banks.

---

- ↓ PROBABILITY OF DEFAULT
- ↓ LOAN TO VALUE RATIO
- ↓ LOSS GIVEN DEFAULT





**Green mortgages could mean a better deal and a better home for millions across Europe.**

---

- ↓ ENERGY COSTS
- ↓ MORTGAGE INTEREST RATE
- ↑ PROPERTY VALUE
- ↑ LOAN AMOUNT
- ↑ COMFORT / WELLBEING



## Green mortgages can boost the local economy – and help save the planet!



↑ INVESTMENT  
IN RENOVATIONS



↓ ENERGY  
DEMAND



↓ CARBON  
EMISSIONS



Green mortgages can help banks and borrowers tackle the long term risks of inefficient buildings.

---



RIISING ENERGY  
AND FUEL COSTS



ENERGY-CONSCIOUS  
BUYERS AND  
TENANTS



TIGHTENING  
ENERGY  
PERFORMANCE  
REGULATIONS



EU HIGH-LEVEL EXPERT GROUP ON  
SUSTAINABLE FINANCE

**REhabilita**



**Final Report 2018**  
**by the High-Level Expert Group on Sustainable Finance**  
Secretariat provided by the European Commission



# Clean Energy for All Europeans Package

What are our objectives?

**Creating jobs & growth, bringing down greenhouse gas emissions, securing energy supply**



Putting energy efficiency first



Demonstrating global leadership in renewables



Delivering a fair deal for consumers



European  
Commission

# What can we expect in terms of results?

2016

2030



The package presents a **dual opportunity** to speed up **decarbonisation** and to speed up **growth and job creation**.



## Investment:

- extra 177bn EUR euros per year of investment from 2021 to meet 2030 climate & energy targets
- Crucial role for EFSI



## Economic growth\*:

- 1% increase in GDP
  - 190bn EUR into the economy
  - 900,000 new jobs
- \*Upper end of estimates



## Decarbonisation:

- Carbon intensity of the economy 57% lower in 2030 than in 2015
- 72% share of non-fossil fuels in electricity generation in 2030



## POLICY CONCLUSIONS FOR 2030

### ***Building renovation has to do more***

- Review of EPBD
- Review of EED (target, Art. 7 EED)

### ***Financing has a more important role to play***

- Smart Finance for Smart Buildings

### ***Digital/ICT has a big potential to contribute***

- Development of a 'Smartness indicator for buildings'
- Review of Art. 9-11 EED

A smartness indicator will reflect the ability of buildings to:

1. adjust to the needs of the user and empower building occupants providing information on operational energy consumption (complementing the energy performance information provided in the EPCs);
2. ensure efficient and comfortable building operation, signal when systems need maintenance or repair; and
3. readiness of the building to participate in demand response, charge electric vehicles and host energy storage systems.

## Focus on buildings



75% of the housing stock is energy inefficient, missing the benefits of increased renovation.



Renovation rates are too low and renovation depth is too shallow.



Need to accelerate and finance building renovation investments.



Tapping the potential of smart building technologies.



# Main outcomes of the revised EPBD

## A STRENGTHENED DIRECTIVE

- ✓ Stronger **long term renovation strategies** for Member States, aiming at decarbonisation by 2050 and with a solid financial component.
- ✓ Targeted support to **e-mobility** infrastructure deployment.
- ✓ Higher thresholds for **inspections** of heating and air conditioning systems and reinforced provisions on **building automation**
- ✓ A **Smart Readiness Indicator** for buildings.
- ✓ Strengthened **data requirements**.
- ✓ Enhanced **transparency** of national building energy performance calculation methodologies.

**Supportive** of building renovation, by linking policy and financing to results.

**Smart**, by ensuring the use of ICT and modern technologies,

## THE "SMART FINANCE FOR SMART BUILDINGS" INITIATIVE

### MAJOR GOALS

#### More effective use of public funds

- Deploying **Financial Instruments** and flexible energy efficiency and renewable financing platforms
- Building on EFSI II blending with ESIF funds



#### Assistance and aggregation

- Supporting the project pipeline at EU and local level
- **Project Development Assistance** facilities
- "One-stop-shops"
- **EIB ELENA**



#### De-risking

- Understanding the risks and benefits for financiers and investors
- **The De-risking Energy Efficiency Platform**
- Commonly accepted underwriting framework



EFSl: European Fund for Strategic Investments  
ESIF: European Structural and Investment Funds

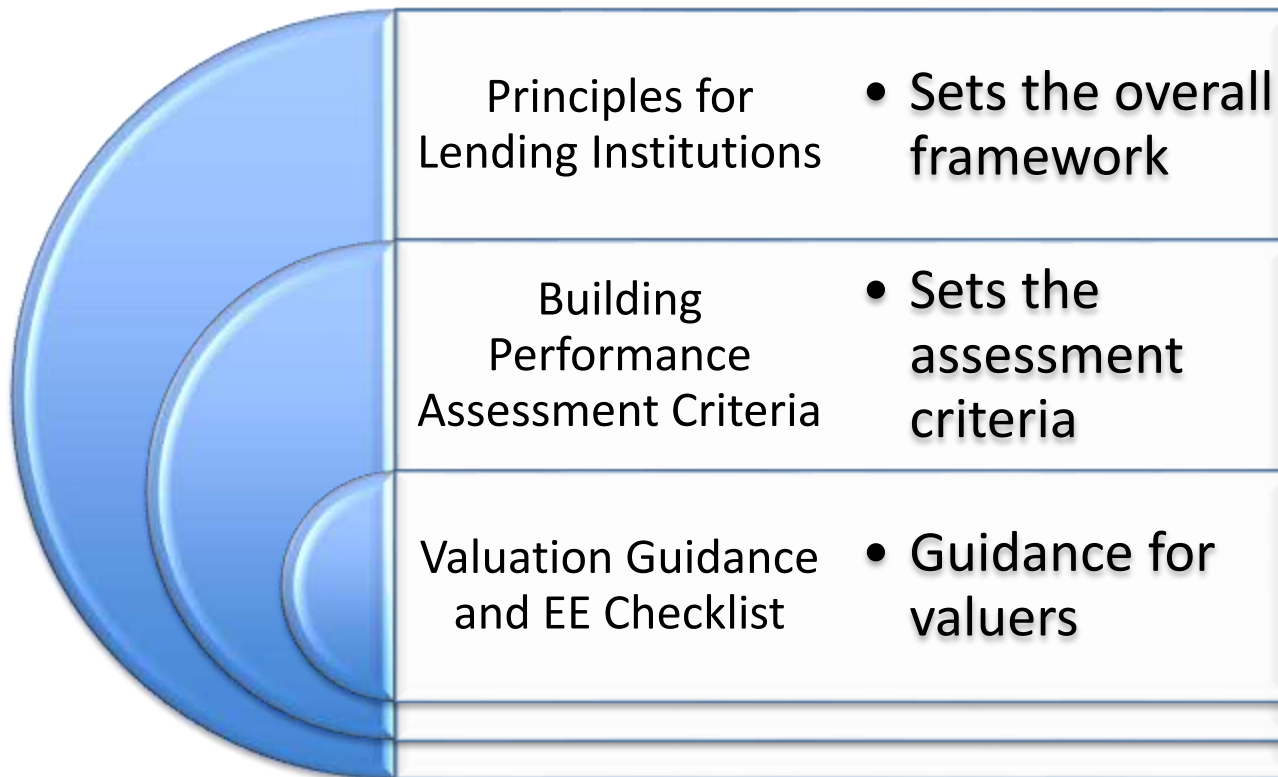


## **PRESS RELEASE**

**EMF-ECBC welcomes the European Commission's Sustainable Finance Action Plan and the commitment to assess the potential for realignment of capital requirements for "green" assets**

**Brussels, 8 March 2018 – For immediate release**

## EeMAP Framework in Overview





## EeMAP GBC Team



**EUROPE** REGIONAL  
NETWORK



## EeMAP Consumer Research

### Qualitative and Quantitative Consumer Research:

- Focus groups in 4 key markets: DE, IT, SE, UK
- Online surveys in 3 key markets: IT, SE, UK
- Insights into consumer preference and likelihood to take out a 'green mortgage'
- Full report out 15 Feb 2018!



Available from [worldgbc.org/green-mortgages](http://worldgbc.org/green-mortgages)

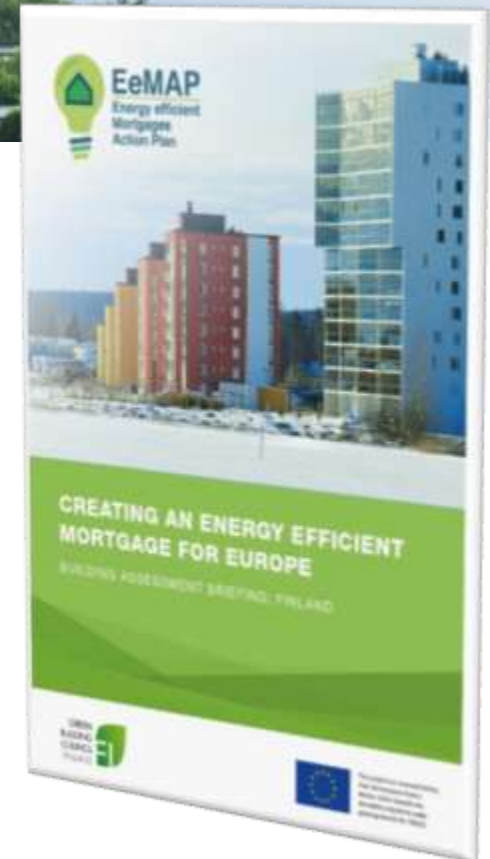


## Building Assessment Briefings

### Detailed market intelligence covering:

- Characteristics of the building stock
- Energy performance certificates, eg: access, QA procedures, coverage, etc.
- Other energy performance assessment infrastructure
- Energy performance measurement infrastructure
- Existing EE finance initiatives
- Sustainability assessment and certification landscape

Available from [worldgbc.org/green-mortgages](http://worldgbc.org/green-mortgages)

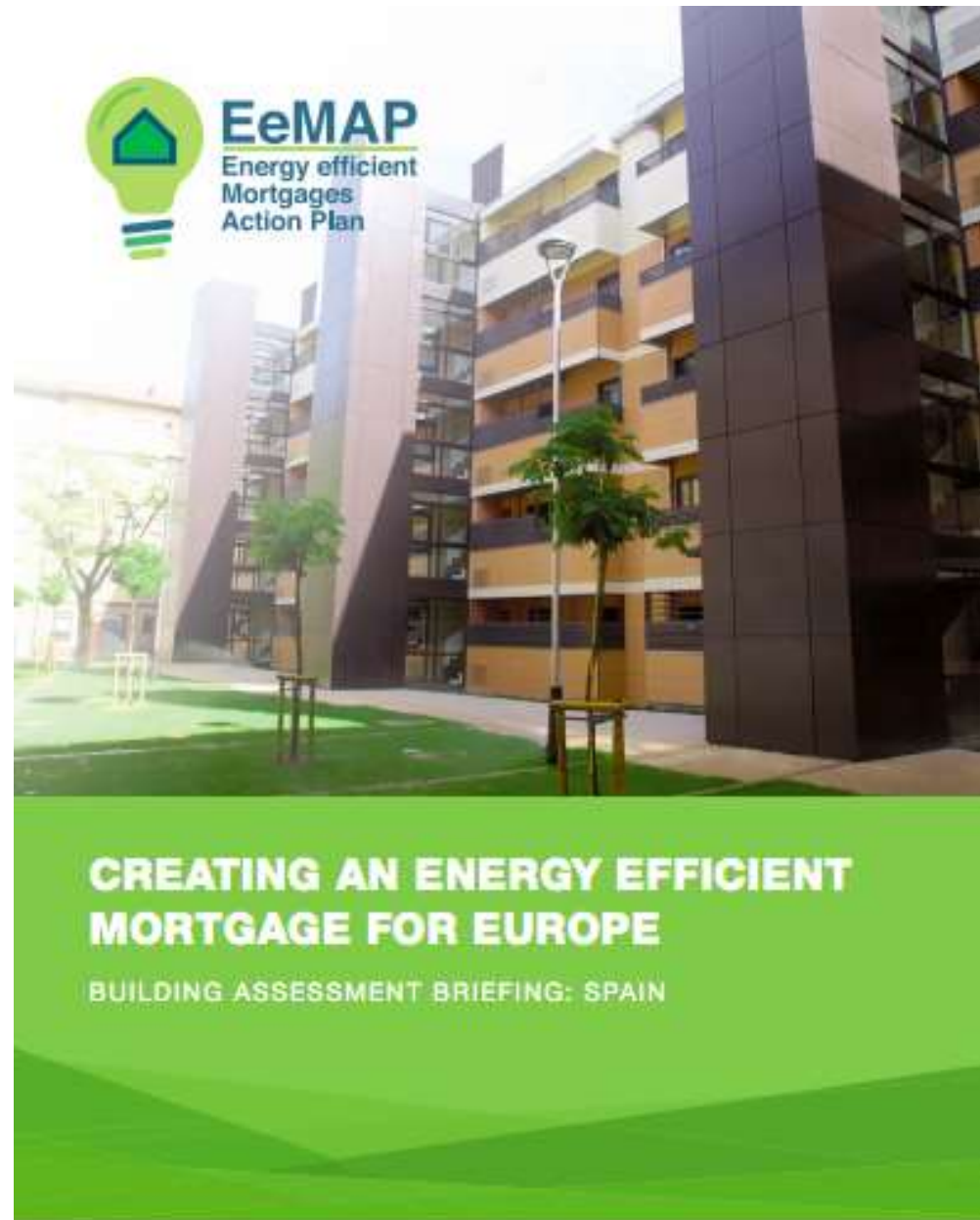


**REhabilita**

<http://gbce.es/blog/proyecto/eemap/>



**Triodos Bank**







# HIPOTECAS TRIODOS

Las viviendas más sostenibles  
obtienen **mejor tipo de interés**

[Más información](#) 

[Otra lectura](#) | [Plan Vinculación](#) | [Hipoteca Triodos](#) | [CDA](#) | 



### Cómo operar con Triodos Bank

En Triodos Bank podrá operar fácil y cómodamente con sus cuentas a través de internet, teléfono, correo postal y en nuestras oficinas.

[Cómo operar](#) >

### Productos y Servicios para

> [Particulares](#)

> [Empresas](#)

Acceso directo a:

> [Abrir una cuenta](#)

> [Solicite información](#)

> [Financiación](#)



### Precio con valor

Nuestras decisiones económicas tienen un impacto en el modelo de sociedad y economía que queremos. Otra lectura del equilibrio y el precio.

[Más información](#) >

## Ventajas

## Condiciones

## Cómo solicitar

## Información legal

## Tipo de interés

El interés de la Hipoteca Triodos está vinculado a la certificación energética de la vivienda, de forma que las **viviendas más sostenibles obtienen mejor tipo de interés**. Con ello, Triodos Bank promueve la elección de viviendas cada vez más eficientes energéticamente.

| Certificación energética | Diferencial | TAE Variable | Cuota 1º año | Cuota año 2 al año 25 | Emisiones CO2 KgCO2/m2 (**) | Consumo (kWh/m2) respecto a la certificación energética (***) |
|--------------------------|-------------|--------------|--------------|-----------------------|-----------------------------|---------------------------------------------------------------|
| A+ (*)                   | 1,00 %      | 1,51 %       | 599,90 €     | 554,16 €              | < 10,1                      | < 25 %                                                        |
| A (*)                    | 1,06 %      | 1,56 %       | 599,90 €     | 558,04 €              | < 10,1                      | < 25 %                                                        |
| B                        | 1,09 %      | 1,59 %       | 599,90 €     | 559,99 €              | Entre 10,1 y 16,3           | Entre 25 % y 45 %                                             |
| C                        | 1,12 %      | 1,61 %       | 599,90 €     | 561,94 €              | Entre 16,3 y 25,30          | Entre 45 % y 65 %                                             |
| D                        | 1,15 %      | 1,64 %       | 599,90 €     | 563,90 €              | Entre 25,30 y 38,9          | Entre 65 % y 100 %                                            |
| E                        | 1,18 %      | 1,67 %       | 599,90 €     | 565,86 €              | Entre 38,9 y 66,0           | Entre 100 % y 175 %                                           |
| F                        | 1,21 %      | 1,70 %       | 599,90 €     | 567,82 €              | Entre 66,0 y 79,2           | Entre 175 % y 225 %                                           |
| G                        | 1,24 %      | 1,72 %       | 599,90 €     | 569,79 €              | > 79,2                      | > 225 %                                                       |

## Ahorro para usted y para el planeta

Además del ahorro en la cuota, una certificación energética superior repercute en un **menor consumo energético y menos emisiones de CO2** al medio ambiente.

(\*) A+: Si obtiene la certificación energética A y vivienda construcción sostenible certificada. A: Si obtiene la certificación energética A o vivienda construcción sostenible certificada. A efectos de certificación de vivienda sostenible se admitirán certificados reconocidos como: BREEAM, LEED, VERDE y PassivHaus.

(\*\*) Fuente: IDAE. Estimación propia para vivienda unifamiliar emplazada en Madrid.

(\*\*\*) Ahorro de suministros calculado en porcentajes en función del consumo de una vivienda respecto a la certificación energética E y calculado en Kwh/m2.

## Atención telefónica

Lunes de 10:00 a 17:30 h.  
Martes a viernes de 9:00 a 17:30 h.



✉ info@triodos.es  
☎ 902 360 940 / 91 640 46 84  
☎ Nosotros le llamamos  
♻ Visite nuestras oficinas

## PREGUNTAS FRECUENTES

- › ¿Cómo puedo solicitar mi Hipoteca Triodos?
- › ¿Cuáles son los requisitos para optar a una Hipoteca Triodos?
- › ¿Está Triodos Bank adscrito al Código de Buenas Prácticas de las entidades financieras aprobado por el Gobierno (Real Decreto ley 6/2012, de 9 de marzo)?

[Ver todas las preguntas frecuentes >](#)

## COMPARTIR EN REDES SOCIALES



📄 Guardar como Pdf  
🖨 Imprimir esta página



Una Hipoteca para la Eficiencia Energética de los Edificios

**REhabilita**



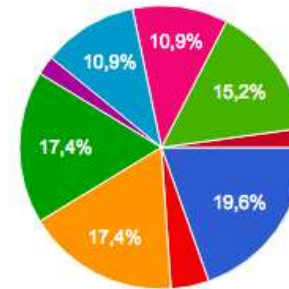
Una Hipoteca para la Eficiencia Energética de los Edificios

Con la colaboración estratégica de:

**Triodos Bank**

## Jornada y Taller EeMap, 22 marzo, Madrid

- Grupo motor
- Comisión revisión valor
- Reputación CEE
- Ideas hipotecas
- Pilotos



- Sector Financiero
- Tasación
- Consultoría
- Profesionales sector construcción
- Fabricantes sector construcción
- Usuarios / Ciudadanos
- Administraciones públicas
- Investigación y academia
- Promotores y Constructores

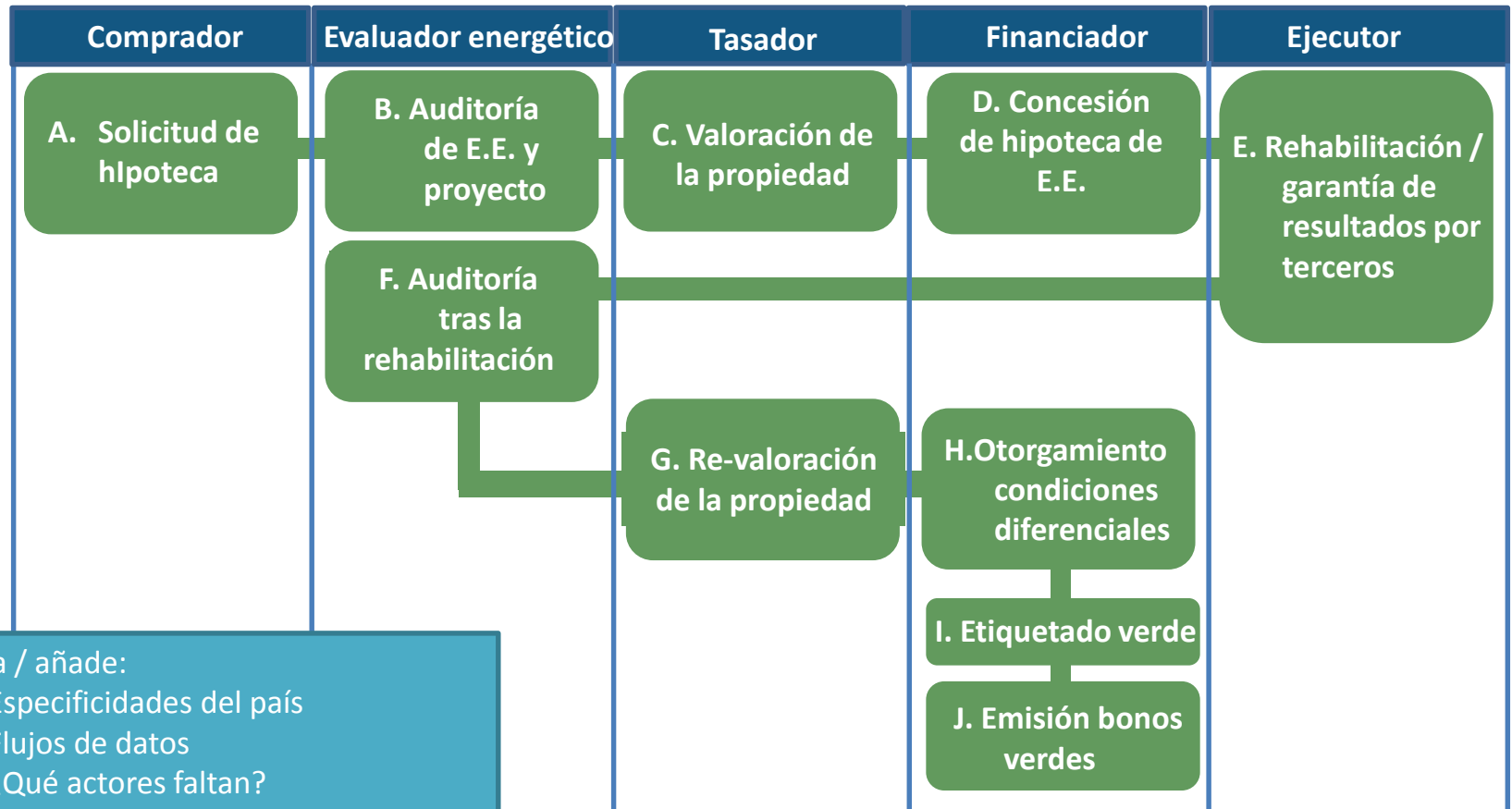


1. Es aceptable la tesis de que una mayor eficiencia energética, al reducir el gasto mensual de energía, aumenta la capacidad de pago de la hipoteca y por lo tanto reduce el riesgo de impago?
2. (La hipoteca de eficiencia energética) ¿Es relevante para el mundo financiero?
3. ¿Es relevante para las personas?
4. ¿Es la hipoteca la forma de préstamo más adecuada?
5. ¿Está bien descrito el proceso? (ver hoja de proceso en las mesas)
6. ¿Hasta qué punto es necesaria al final una garantía de resultados de consumo?
7. (De cara a la evaluación del préstamo) ¿Es suficiente la información proporcionada por el Certificado de Eficiencia Energética?
8. ¿Convendría que además del Certificado de Eficiencia Energética hubiera otro tipo de sello?
9. ¿Sería conveniente un instrumento (herramienta, procedimiento...) que facilite el análisis del riesgo?
10. ¿Podría la ITE (Inspección Técnica de la Edificación) o el Informe de Evaluación del Edificio donde proceda aportar una garantía adicional?
11. ¿Es necesario un instrumento que permita la agregación?
12. ¿Tendría la tasación capacidad de marcar la diferencia entre lo que es edificación energéticamente eficiente y lo que no?
13. ¿Debería enriquecerse explícitamente la tasación con criterios de eficiencia energética?
14. ¿Debe la tasación contemplar de manera diferencial la revalorización superior a la que conduce la eficiencia energética?
15. ¿Cabe prever un valor superior a lo largo de la vida útil?
16. ¿Es una buena idea obligar a que se informe de los resultados de consumo del edificio en uso?
17. ¿Tendría sentido que los datos de consumo real condujeran a una revisión de las condiciones de la hipoteca?
18. ¿Convendría introducir en consideración otros aspectos de sostenibilidad que van más allá de la energía, como reducción de emisiones de CO2, confort, salud...?
19. ¿Es viable la introducción de todas o alguna de las condiciones más favorables posibles (menor interés, mayor cifra de préstamo, mayor porcentaje de la tasación)?
20. La obligación ya existente (aunque todavía no llevada a la práctica) de medición individualizada de consumos ¿debería extenderse a la facilitación de información para la hipoteca?
21. ¿Tendría sentido que los bancos u otras entidades financieras se convirtieran en algo así como oficinas de venta de la rehabilitación energética, y de la sostenibilidad en edificación en general?
22. ¿Es necesario que se garantice a los bancos una cobertura en caso de impagos?
23. ¿Tendría sentido que los cobros se canalizaran por ejemplo a través de la compañía energética?
24. En el caso de impago, ¿sería una solución el registro de la deuda como carga en el registro de la propiedad o como carga municipal?
25. ¿Ayudaría la introducción de una herramienta tipo app en el móvil que permitiera hacer un seguimiento ágil de los consumos y lo que representan?
26. ¿Cabría una figura hipotecaria que asistiera en situaciones de pobreza energética?
27. ¿Sería necesario un desarrollo normativo en tasación para valorar la eficiencia energética?
28. ¿Puede este tipo de instrumentos ser útil en caso de una intervención por fases?
29. ¿Siguiendo como un problema el estatus legal de las comunidades de propietarios en porque no son entidades capaces de responsabilizarse colectivamente de la devolución del préstamo?
30. ¿Podría haber otras entidades, además de los bancos, que hicieran préstamos con garantía hipotecaria?
31. ¿Interesa que otras entidades además de los bancos jueguen un papel complementario en la promoción de la hipoteca de eficiencia energética?



- Nueva construcción,  
o compra y rehabilitación,  
... o rehabilitación sin compra
- Hipoteca o préstamo
- Asunción de riesgo individual o colectiva
- Carga sobre el inmueble o sobre el propietario
- Intermediario financiero?
- Mix con otras soluciones financieras?
- Hipoteca con carencia indefinida como solución genérica ?
- Preevaluación  
Inspección Técnica de la Edificación / IEE  
Certificado de Eficiencia Energética  
Cualificación adicional (por ejemplo VERDE)?
- Seguimiento y verificación  
Medición de consumos  
Acceso a los datos
- Sólo energía ¿?
- EECN
- Otros aspectos ambientales
- Valor y menor riesgo... VALOR

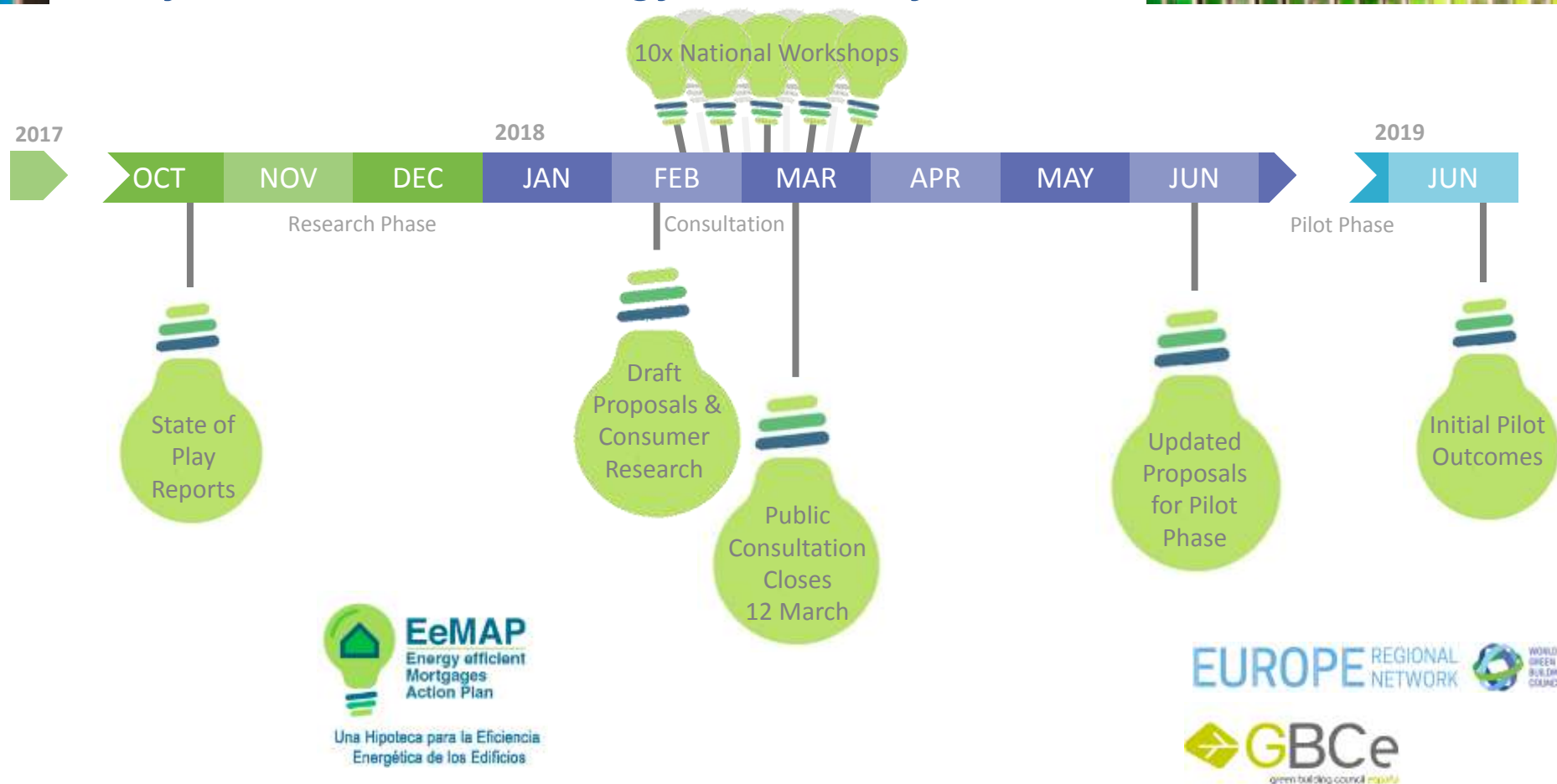
## Proceso de la hipoteca de eficiencia energética



Mejora / añade:

- Especificidades del país
- Flujos de datos
- ¿Qué actores faltan?
- ¿Cuáles son los cuellos de botella?

## Project Timeline: Energy Efficiency Work





## EeMAP Pilot Scheme

### June 2018 onwards

- To test the EeMAP guidelines in an operational environment
- Create the learning and relationships needed to strengthen value-chains
- In time, mortgages will be issued, in line with EeMAP's proposed guidelines
- Lenders will identify and 'tag' existing mortgages that meet the requirements
- Anonymised data on energy performance will be collected by the EeMAP consortium



## Siete entidades españolas ponen en marcha "Hipotecas Piloto de Eficiencia Energética"

Proyecto liderado por GBCe de la mano de Triodos Bank que forma parte de la iniciativa de Hipotecas de Eficiencia Energética llevada a cabo por la European Mortgage Federation, RICS y World GBCe, entre otros

14-06-2018 |

(Windsor, jueves 18 de junio de 2018).- La European Mortgage Federation ha anunciado oficialmente el lanzamiento del proyecto de Hipotecas Piloto a la Eficiencia Energética (Energy Efficient Mortgages Pilot Scheme) así como las entidades, organizaciones y organismos oficiales que las pondrán en marcha.

En España, el espectro de participación es muy amplio: con representación de la **administración pública** (Ayuntamiento de Madrid), del **sector financiero** (Triodos Bank, Caja Rural de Navarra y Unión de Créditos Inmobiliarios, UCI), del **sector de la valoración** (Cohispania y Tinsa), y asociaciones como **Green Building Council España (GBCe)**, que coordina el proyecto a nivel nacional en colaboración estratégica con Triodos Bank.



Las hipotecas de eficiencia energética podrían conllevar condiciones favorables de financiación para edificios energéticamente eficientes y rehabilitación que supongan ahorro de energía. Este plan piloto forma parte de la **Iniciativa de Hipotecas de Eficiencia Energética** (Energy Efficient Mortgages Initiative- EeMAP) dirigida por European Mortgage Federation- European Covered Bond Council (EMF-ECBC), Ca'Foscari University of Venice, RICS, la Red Europea de World Green Building Council, E.ON y SAFE Goethe University Frankfurt. El **principal objetivo del proyecto es incentivar la creación de una hipoteca de eficiencia energética que parte del convencimiento de que la eficiencia energética tiene un efecto de mitigación de riesgos para los bancos y un aumento en el valor de la propiedad.**

### CONTACTAR

#### Contacto para Medios de Comunicación

Si desea contactar con el Departamento de Comunicación

-  Puede enviar un correo a [comunicacion@triodos.es](mailto:comunicacion@triodos.es)
-  O llamarnos al 91 788 60 40.



#### HIPOTECAS TRIODOS

Elija la hipoteca que mejor se adapte a sus necesidades.

[Más información >](#)

### COMPARTIR EN REDES SOCIALES



-  Guardar como Pdf
-  Imprimir esta página



GBCe  
Triodos Bank  
Cohispania  
TINSA

Caja Rural de Navarra  
UCI (Unión de Créditos inmobiliarios)  
Ayuntamiento de Madrid

# Windsor, 14 de Junio 2018

REhabilita

GBCe  
green building council *españa*



Energy  
Efficient  
Mortgages  
Initiative

THE STAKEHOLDERS

PILOT SCHEME

DOWNLOADS

Map 1

63 confirmed participants (39 banks and 24 other organisations)



\*In the map three participating institutions are not depicted, AmTrust International, EBC and S&P, due to their international scope.

Map 2

Coverage of the participating banks to total mortgage outstanding in 2017 of outstanding mortgage loans\*



\*Banks' mortgage outstanding has been extracted from the respective End-2017 Investor Reports. The total outstanding of the country is based on the Hypostat 2017 figures.

\*\*100% is depicted when the national association which covers the entire national market is participating in the pilot scheme

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
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Windsor,  
14 de Junio 2018



**EeMAP**  
Energy efficient  
Mortgages  
Action Plan

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# CREATING AN ENERGY EFFICIENT MORTGAGE FOR EUROPE

TOWARDS A NEW MARKET STANDARD



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|                                                                                                                                              | Croatia                                                | Finland                                | France                                                     | Germany | Ireland                                                                | Italy                             | Netherlands      | Poland                      | Spain               | UK                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------|------------------------------------------------------------|---------|------------------------------------------------------------------------|-----------------------------------|------------------|-----------------------------|---------------------|-------------------------------------------------------|
| EPC scope matches EeMAP Energy Performance definition?                                                                                       | Yes <sup>2</sup>                                       | Yes                                    | Yes                                                        | Yes     | Yes <sup>2</sup>                                                       | Yes <sup>2</sup>                  | Yes <sup>2</sup> | Yes <sup>2</sup>            | Yes <sup>2</sup>    | Yes <sup>2</sup>                                      |
| EPC register publicly available?                                                                                                             | No                                                     | Yes                                    | Yes <sup>3</sup>                                           | No      | Yes                                                                    | In some regions                   | Yes              | No <sup>4</sup>             | In some regions     | Yes                                                   |
| EPCs typically involve site visits?                                                                                                          | No <sup>5</sup>                                        | No <sup>6</sup>                        | Yes                                                        | Yes     | Yes                                                                    | Yes                               | No               | No <sup>6</sup>             | No                  | Yes                                                   |
| NZEB definition exists?                                                                                                                      | Yes                                                    | Yes                                    | Yes                                                        | Yes     | Yes                                                                    | Yes                               | Yes              | Yes                         | Yes                 | No                                                    |
| Smart meter roll-out under way?                                                                                                              | No                                                     | Yes                                    | Yes                                                        | Yes     | No, due to start 2019                                                  | Yes                               | Yes              | Yes                         | Yes                 | Yes                                                   |
| Feasibility of using national NZEB standards as threshold for new build                                                                      | Green                                                  | Amber <sup>7</sup>                     | Green                                                      | *       | Amber <sup>8</sup>                                                     | Green                             | *                | Green                       | Amber <sup>9</sup>  | Amber <sup>10</sup>                                   |
| Feasibility of using 20% improvement in energy performance over current national regulations as threshold for new-build (if NZEB unfeasible) | Not applicable (N/A) because NZEB standard can be used | Amber <sup>11</sup>                    | N/A                                                        |         | Amber <sup>12</sup>                                                    | N/A                               |                  | N/A                         | Green <sup>9</sup>  | Green                                                 |
| Feasibility of implementing ongoing monitoring proposals?                                                                                    | Amber <sup>14</sup>                                    | Amber <sup>14</sup>                    | Green                                                      |         | Amber <sup>15</sup>                                                    | Green                             |                  | Amber <sup>14</sup>         | Green               | Amber <sup>15</sup>                                   |
| Experts available to plan and carry out renovations?                                                                                         | Yes: Based on Ordinance NN67/2017                      | Yes: Already a legislative requirement | Yes: <i>Reconnu garant de l'environnement</i> (RGE) scheme |         | Yes: Possibly using SEAI register <sup>14</sup> or forthcoming ECCoPro | Yes: Considered standard practice |                  | Needs further clarification | Yes                 | Needs further clarification and must not exclude SMEs |
| Feasibility of implementing quality assurance proposals?                                                                                     | Amber <sup>15</sup>                                    | Green                                  | Amber <sup>15</sup>                                        |         | Amber <sup>15</sup>                                                    | Green                             |                  | Amber <sup>15</sup>         | Amber <sup>15</sup> | Amber <sup>15</sup>                                   |

#### Notes:

**Green** indicates that the majority of experts consulted during the relevant national workshop judged that a particular criterion could be applied without amendment.

**Amber** indicates that the majority judged a particular criterion to be broadly appropriate with some minor adjustment needed to make it nationally applicable.

**Red** (not selected) would indicate major alteration to a criterion is needed.

\* — Data not available as no EeMAP national workshop held

1 — New format EPCs only. EPCs issued prior to 2017 only include heating demand.

2 — EPC reports primary energy rather than delivered energy. However a conversion to delivered energy is possible.

3 — France introduced a national register in 2013. Any EPC issued before this date is not on the register.

4 — Only data for public buildings currently accessible from the Polish EPC register.

5 — According to regulations, EPCs should involve a site visit but in practice this is often not the case.

6 — The Polish government is currently trying to address this issue to ensure site visits do take place.

7 — NZEB definition came into force for new builds in January 2018 in Finland so this may not be ambitious enough.

8 — NZEB definition not thought to be ambitious enough in Ireland.

9 — In Spain, the NZEB definition has been aligned with current building regulation and therefore may not be ambitious enough. For Spain, an improvement of 20% against the current regulatory standard is therefore effectively an improvement of 20% against NZEB.

10 — NZEB not yet clearly defined in the UK and there are question marks over its relevance post Brexit.

11 — Thresholds may be better communicated if translated into energy performance bands (e.g. A rated EPC).

12 — 20% below current standards may be too onerous for the level of additional funding that a bank could realistically provide.

13 — Concerns expressed by some about the cost of data collection and whether banks would be able or willing to use this data. Another concern was how to address the lack of comparability between measured and calculated energy performance.

14 — The SEAI register may require further development.

15 — Concerns expressed by some that aspects of the quality assurance requirements could be too onerous or too costly, particularly for residential buildings.

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**EeMAP**  
Energy efficient  
Mortgages  
Action Plan

|                                                                                                                                              | Croatia                                                | Finland                                | France                                                     | Germany | Ireland                                                                | Italy                             | Netherlands      | Poland                      | Spain               | UK                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------|------------------------------------------------------------|---------|------------------------------------------------------------------------|-----------------------------------|------------------|-----------------------------|---------------------|-------------------------------------------------------|
| EPC scope matches EeMAP Energy Performance definition?                                                                                       | Yes <sup>2</sup>                                       | Yes                                    | Yes                                                        | Yes     | Yes <sup>2</sup>                                                       | Yes <sup>2</sup>                  | Yes <sup>2</sup> | Yes <sup>2</sup>            | Yes <sup>2</sup>    | Yes <sup>2</sup>                                      |
| EPC register publicly available?                                                                                                             | No                                                     | Yes                                    | Yes <sup>3</sup>                                           | No      | Yes                                                                    | In some regions                   | Yes              | No <sup>4</sup>             | In some regions     | Yes                                                   |
| EPCs typically involve site visits?                                                                                                          | No <sup>5</sup>                                        | No <sup>5</sup>                        | Yes                                                        | Yes     | Yes                                                                    | Yes                               | No               | No <sup>6</sup>             | No                  | Yes                                                   |
| NZEB definition exists?                                                                                                                      | Yes                                                    | Yes                                    | Yes                                                        | Yes     | Yes                                                                    | Yes                               | Yes              | Yes                         | Yes                 | No                                                    |
| Smart meter roll-out under way?                                                                                                              | No                                                     | Yes                                    | Yes                                                        | Yes     | No, due to start 2019                                                  | Yes                               | Yes              | Yes                         | Yes                 | Yes                                                   |
| Feasibility of using national NZEB standards as threshold for new build                                                                      | Green                                                  | Amber <sup>7</sup>                     | Green                                                      | *       | Amber <sup>8</sup>                                                     | Green                             | *                | Green                       | Amber <sup>8</sup>  | Amber <sup>10</sup>                                   |
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| Feasibility of implementing ongoing monitoring proposals?                                                                                    | Amber <sup>13</sup>                                    | Amber <sup>12</sup>                    | Green                                                      |         | Amber <sup>13</sup>                                                    | Green                             |                  | Amber <sup>13</sup>         | Green               | Amber <sup>13</sup>                                   |
| Experts available to plan and carry out renovations?                                                                                         | Yes: Based on Ordinance NN67/2017                      | Yes: Already a legislative requirement | Yes: <i>Reconnu garant de l'environnement</i> (RGE) scheme |         | Yes: Possibly using SEAI register <sup>14</sup> or forthcoming ECCoPro | Yes: Considered standard practice |                  | Needs further clarification | Yes                 | Needs further clarification and must not exclude SMEs |
| Feasibility of implementing quality assurance proposals?                                                                                     | Amber <sup>16</sup>                                    | Green                                  | Amber <sup>16</sup>                                        |         | Amber <sup>16</sup>                                                    | Green                             |                  | Amber <sup>16</sup>         | Amber <sup>16</sup> | Amber <sup>16</sup>                                   |

## Criteria have been proposed in three key areas: **REhabilita**



- Energy performance thresholds for compliance
- Ongoing performance monitoring requirements
- Quality assurance requirements regarding works undertaken

### 1. Energy Performance

An Energy Performance Certificate<sup>1</sup> (EPC) showing:

a. Nearly Zero Energy Building (NZEB)<sup>2</sup> compliant

**OR**

b. 20% better than current regulations

**OR**

c. 30% improvement<sup>3</sup>

### 2. Ongoing Performance Monitoring

a. Actual consumption (meter readings using smart meters where available)

b. Revised EPC<sup>3</sup>

(For the purpose of loan performance assessments)

### 3. Quality Assurance

a. Planned and carried out by qualified/accredited professionals

b. Planned to prevent 'lock-in' ie future improvements are not made more difficult/expensive

c. Documentary evidence of work undertaken

1 – EPCs only valid if calculation inputs have been verified during a site visit

2 – NZEB – The EU Energy Performance of Buildings Directive requires all new buildings to be NZEB compliant, where NZEB performance levels are defined by each member state based on cost optimal levels.

3 – For renovations



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Mortgages  
Action Plan

## Achieving the Vision: summary of our call to action

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World Green Building Council's Europe network calls on the following stakeholders to take immediate action to accelerate the growth of the energy efficient mortgage market:

### Banks and Investors

- Pilot our criteria to test how they can be applied within your business
- Share lessons learned and loan performance data to help refine the criteria over time
- Partner with the building sector and energy companies to streamline delivery to the consumer
- Make energy efficiency part of every mortgage conversation with borrowers

### Building Sector and Energy Companies

- Develop partnerships with pilot banks to streamline customer experience
- Develop partnerships within the sector to keep assessment costs down
- Train and educate the workforce to comply with our criteria;
- Innovate to create improved delivery models for energy efficient renovations

### Governments

- Work with banks and Green Building Councils to understand how policy can play an enabling role.
- Introduce policy incentives to drive demand
- Develop 'building renovation passports' that can support phased, deep energy renovations of a building over several ownership cycles

### All Stakeholders

- Communicate the benefits of energy efficient mortgages to the public



**EeMAP**  
Energy efficient  
Mortgages  
Action Plan



Buildings are responsible for 40%  
of Europe's carbon emissions.  
Green mortgages could change all that!

---





It's time to make  
green mortgages  
available to  
every borrower.

Venecia, 27 de Septiembre 2018

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Report has received global coverage in Bloomberg and Euractiv as well as lots of national interest around Europe and as far away as Australia!

Banks have completed their summer 'homework' and identified the key barriers to market development across 7 main areas of mortgage markets including:

1. Origination (customer interactions etc.)
2. Risk management
3. Funding and investor relations
4. Marketing
5. IT and data
6. Partnerships
7. Technical expertise



These will form the basis of the next stage of the initiative - where banks and other supporting organisations will be encouraged to collaborate to overcome the barriers identified.



Venecia, 27 de Septiembre 2018

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As part of this EMF-ECBC have put in a bid for further H2020 funding to create an 'Activation Framework' (EeMAF) where funding will be available to support such collaborations.

There are some promising results from the data work stream of EeMAP - which have, for the first time using European (Dutch) data, shown a correlation between energy efficiency and lower mortgage defaults. The colleagues at Ca'Foscari continue to search for new datasets which they can use to expand their analysis.



Finally there is growing interest from cities and regions to support the initiative and the first mover, Madrid, may soon be joined by Milan and the Scottish Government and discussions are also starting with the Greater London Authority.



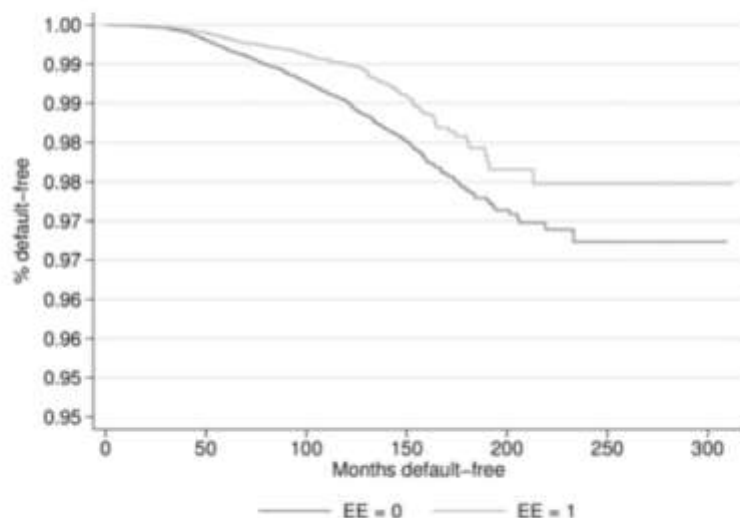
Venecia, 27 de Septiembre 2018

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## Latest EeMAP Developments

- Data analysis by Ca'Foscari showing promising early results



EE mortgages seem to survive for a longer time period

Venecia, 27 de Septiembre 2018

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## Latest EeMAP Developments

- Data analysis by Ca'Foscari showing promising early results

| Rating category | All   | Defaulted |
|-----------------|-------|-----------|
| A               | 13.95 | 0.37      |
| B               | 17.67 | 0.45      |
| C               | 27.9  | 0.56      |
| D               | 9.52  | 0.78      |
| E               | 4.08  | 1.21      |
| F               | 11.36 | 0.87      |
| G               | 15.52 | 0.94      |
| Total           | 100   | 0.66      |



Percentage of defaults increases with lower EE-rating

Venecia, 27 de Septiembre 2018

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## Latest EeMAP Developments

- ▶ 7 Sub-Groups assessing criticalities
  - 1. Origination and retail (BNP Paribas Fortis, BE)
  - 2. Risk management (Belfius, BE)
  - 3. Marketing (Banco Monte dei Paschi, IT)
  - 4. Funding and investor relations (Muenchener Hyp, DE)
  - 5. Partnerships (BNP Paribas, UK)
  - 6. IT and data (ING, BE)
  - 7. Technical experts (RICS, WorldGBC)



| Criticalities                                                                      | Area                         | O&R      | MRKTG | PART. | EXP. | RM       | F&I | IT&D     |
|------------------------------------------------------------------------------------|------------------------------|----------|-------|-------|------|----------|-----|----------|
| Will there be any demand?                                                          | Customer Journey             | <u>X</u> | X     | X     |      |          |     |          |
| Will it cost us more money?                                                        | Bank Business Case           | <u>X</u> |       |       |      |          |     |          |
| Where and how will we get good data? And will it cost more?                        | EE Criteria Technical Issues | X        | X     | X     | X    | X        | X   | <u>X</u> |
|                                                                                    | EE Criteria Technical Issues | X        |       |       |      | <u>X</u> |     |          |
|                                                                                    | EE Criteria Technical Issues | X        |       |       | X    |          |     | <u>X</u> |
| We don't want to do any ongoing monitoring – because it will cost us more!         | EE Criteria Practical Issues | X        |       |       |      | <u>X</u> | X   | X        |
| Who should we be working with?                                                     | Bank Business Case           |          |       |       |      |          |     |          |
|                                                                                    | Bank Business Case           |          |       |       | X    |          |     |          |
| We want regulators to help us stimulate demand and offset our costs                | Bank Business Case           |          |       |       |      | <u>X</u> |     |          |
| The criteria are too strict – we won't be able to refinance our existing mortgages | EE Criteria practical issues | <u>X</u> |       |       |      |          | X   |          |
| We need to be aligned with existing green finance principles                       | EE Criteria practical issues |          |       |       |      |          | X   |          |
| The IT systems are going to cost us more!                                          | Bank Business Case           |          |       |       |      |          |     | <u>X</u> |



| Criticalities                                                                                                                                | Area                         | O&R      | MRKTG | PART. | EXP. | RM       | F&I | IT&O     |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|-------|-------|------|----------|-----|----------|
| Customer journey: need for awareness, incentive and simplicity (energy advice)                                                               | Customer Journey             | <u>X</u> | X     | X     |      |          |     |          |
| Bank Incentive: additional process costs (EPC, Valuation and Certification)                                                                  | Bank Business Case           | <u>X</u> |       |       |      |          |     |          |
| Data availability and accessibility (existing/non-existing; public/private)                                                                  | EE Criteria Technical Issues | X        | X     | X     | X    | X        | X   | <u>X</u> |
| Data quality and representativeness                                                                                                          | EE Criteria Technical Issues | X        |       |       |      | <u>X</u> |     |          |
| Data Harmonisation, consolidation and comparability (Mortgage-Valuation-EE)                                                                  | EE Criteria Technical Issues | X        |       |       | X    |          |     | <u>X</u> |
| Data dynamic monitoring and non-bank data assessment (energy savings and real-time energy consumption)                                       | EE Criteria Practical Issues | X        |       |       |      | <u>X</u> | X   | X        |
| Inclusion of relevant partnerships (government & institutions, Utility Providers, EE advisors)                                               | Bank Business Case           |          |       |       |      |          |     |          |
| Accreditation of installers and SMEs                                                                                                         | Bank Business Case           |          |       |       | X    |          |     |          |
| Regulatory Add-Ons and lower capital requirements                                                                                            | Bank Business Case           |          |       |       |      | <u>X</u> |     |          |
| Asset eligibility wrt scope (criteria stringency and evolving targets)                                                                       | EE Criteria practical issues | <u>X</u> |       |       |      |          | X   |          |
| Impact Reporting need for definition (green loan principles) and aligned with national benchmark and existing best practices and regulations | EE Criteria practical issues |          |       |       |      |          | X   |          |
| IT system update, implementation costs (in money, time and expertise)                                                                        | Bank Business Case           |          |       |       |      |          |     | <u>X</u> |



## EEM Definition

### ► New Builds:

| Our Criteria                               | Bank proposals                                       |
|--------------------------------------------|------------------------------------------------------|
| NZEB<br>Or<br>20% better than current regs | EPC bands A & B or top 15-20% of market as benchmark |

### ► Existing:

| Our Criteria        | Bank proposals                                                  |
|---------------------|-----------------------------------------------------------------|
| Min 30% improvement | 2 EPC bands and at least up to a C-rating<br>Or 30% improvement |

## AHORA

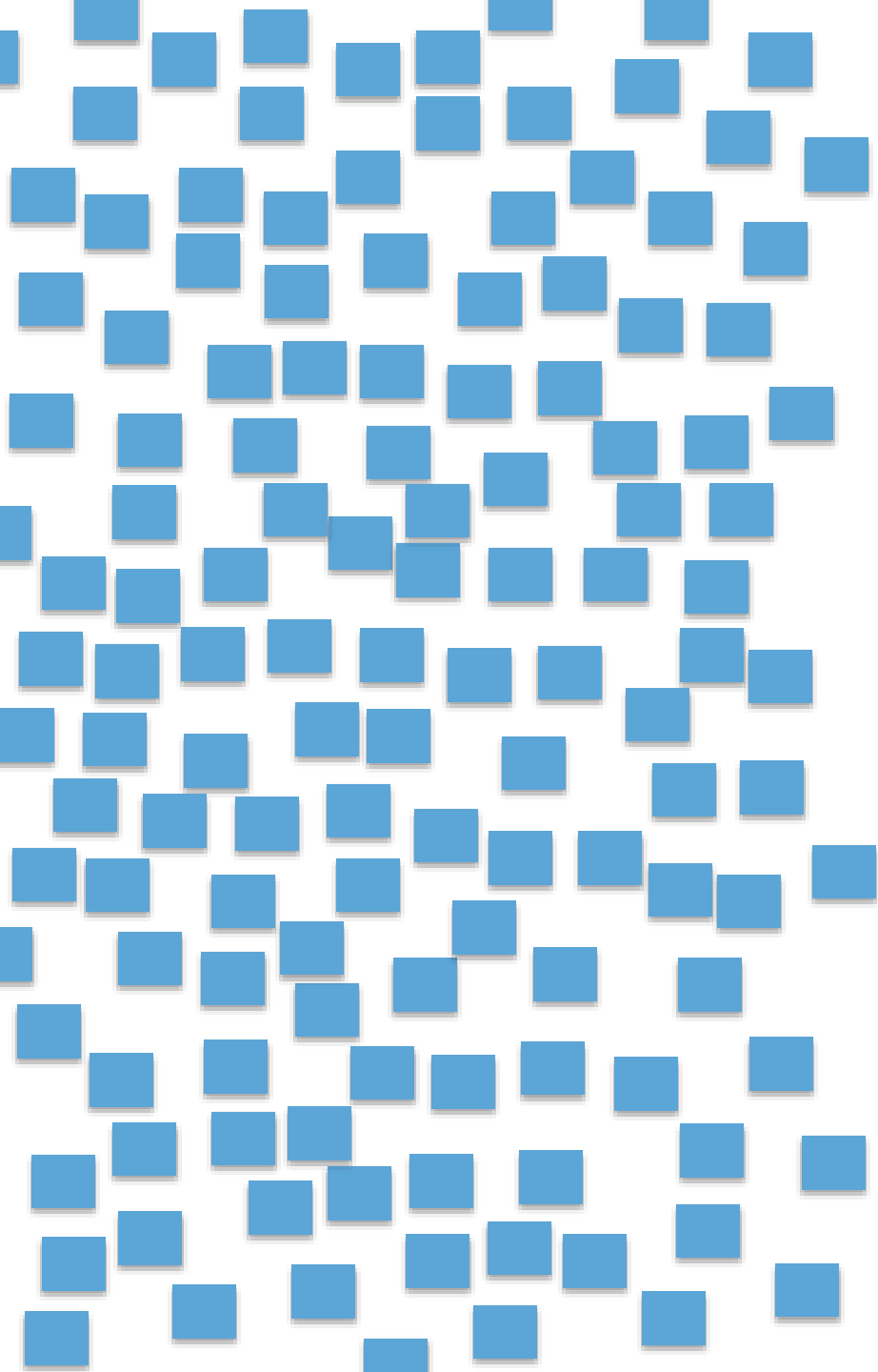
1. Estructurar interés y establecer apoyos nacionales alrededor de la Estrategia Nacional de Rehabilitación, y la inserción de la Transición de la Edificación en la LCCyTE
2. Desarrollar y aprender de los pilotos
  1. Riesgo
  2. Valor
3. Building Renovation Passports como medio de incorporar adecuadamente un proceso hacia cero carbono, incorporando control de calidad: CTE, Certificado de Eficiencia Energética de los Edificios, ITE (IEE?)..., EPBD (incorporando renovables, movilidad eléctrica, TICs, descarbonización a 2050, mapa de ruta y monitorización...)... economía circular !!!
4. Comunicación para despertar demanda...



Una Hipoteca para la Eficiencia  
Energética de los Edificios

Con la colaboración estratégica de:

**Triodos**  **Bank**



**REhabilita**



Imagine  
we all  
lived  
in a  
single home  
with  
one  
envelope

