

Improving Citizens' Health

Comfort and Financial Well-Being
by Supporting Banks

**Residential Investors and Solution
Providers with
Green Homes and Green Mortgage
programmes**

● **Amber Gardens**
*a bio-climatic,
Net Zero Energy project,
by Alesonor*

USEFUL REFERENCES:

Green Finance Online Platform:

<https://c2e2.unepdtu.org/smarter/>

Toolkit for Residential Investors

[http://rogbc.org/Downloads/Proiecte/GreenHomes/RoGBC Green Homes and Green Mortgage Toolkit for Residential Investors.pdf](http://rogbc.org/Downloads/Proiecte/GreenHomes/RoGBC%20Green%20Homes%20and%20Green%20Mortgage%20Toolkit%20for%20Residential%20Investors.pdf)

Green Homes & Green Mortgage Program - Romania:

<http://www.rogbc.org/en/projects/green-homes>

Home Performance Index – Ireland

<http://homeperformanceindex.ie/>

Contacts:

Steven.Borncamp@RoGBC.org

Pat@IGBC.ie



**SMARTER
FINANCE
FOR
FAMILIES**



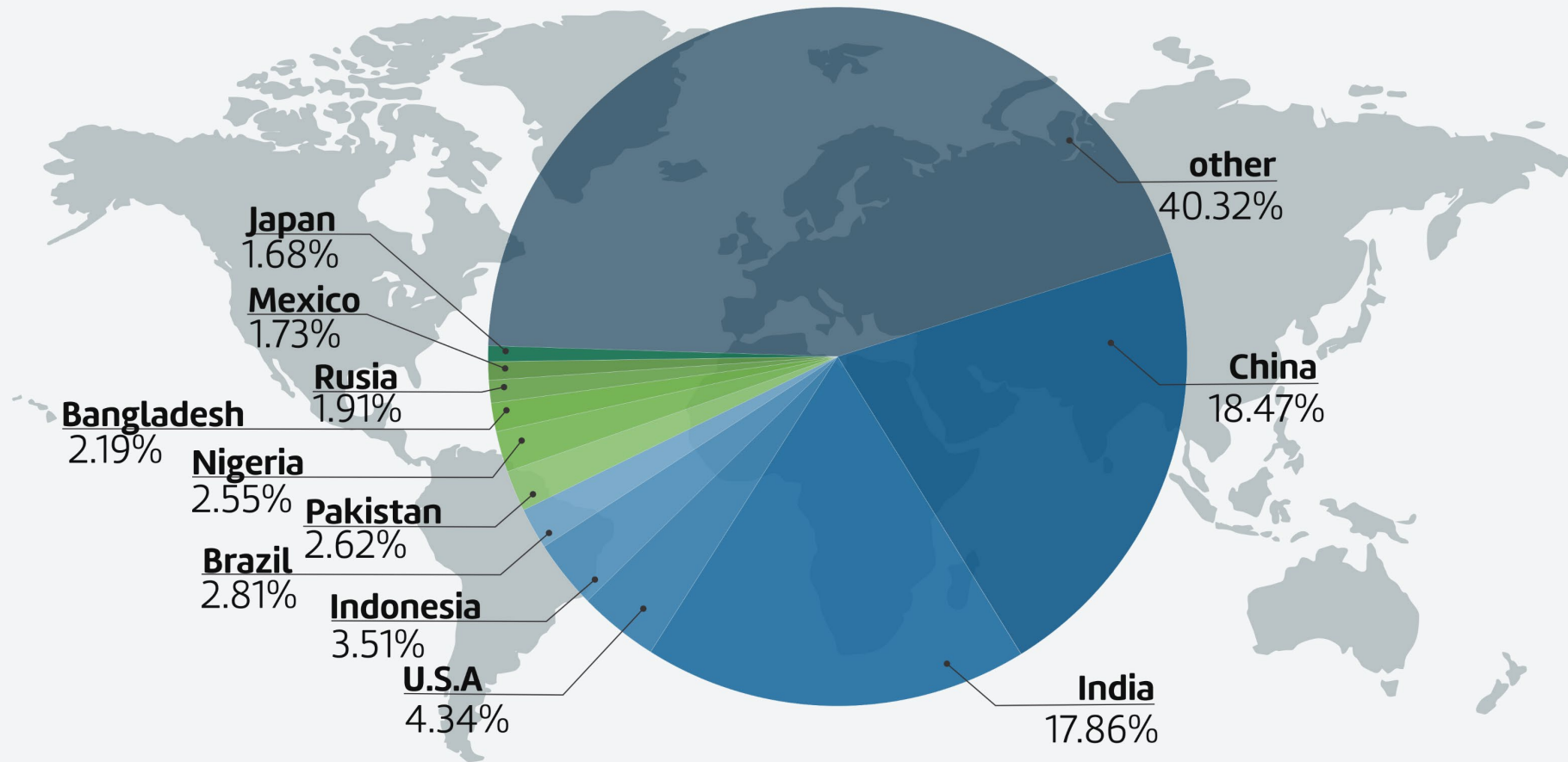
total population

305,817,238



Country	Population
Turkey	82,003,882
Italy	60,390,560
Ukraine	42,220,824
Poland	38,433,600
Romania	19,523,621
Belgium	11,449,656
Greece	10,768,193
Czech Rep	10,627,794
Bulgaria	7,050,034
Denmark	5,806,015
Slovakia	5,445,087
Ireland	4,857,000
Georgia	3,729,600
Bosnia and Herzegovina	3,511,372

Countries by Proportion of World Population





Green Homes & Mortgages

A TOOLKIT FOR RESIDENTIAL INVESTORS AND DEVELOPERS

Paying Less for More!

- ✓ Superior Building Quality
- ✓ Reduced Mortgage Default Risk
- ✓ Lower Energy and Repair Costs for Homeowners
- ✓ Better Health for Families
- ✓ Greater Environmental Responsibility for our Planet







Amber Gardens

by Alesonor - Tunari





responsible borrowing

versus

poor construction



there is one best time to invest in
building a home correctly



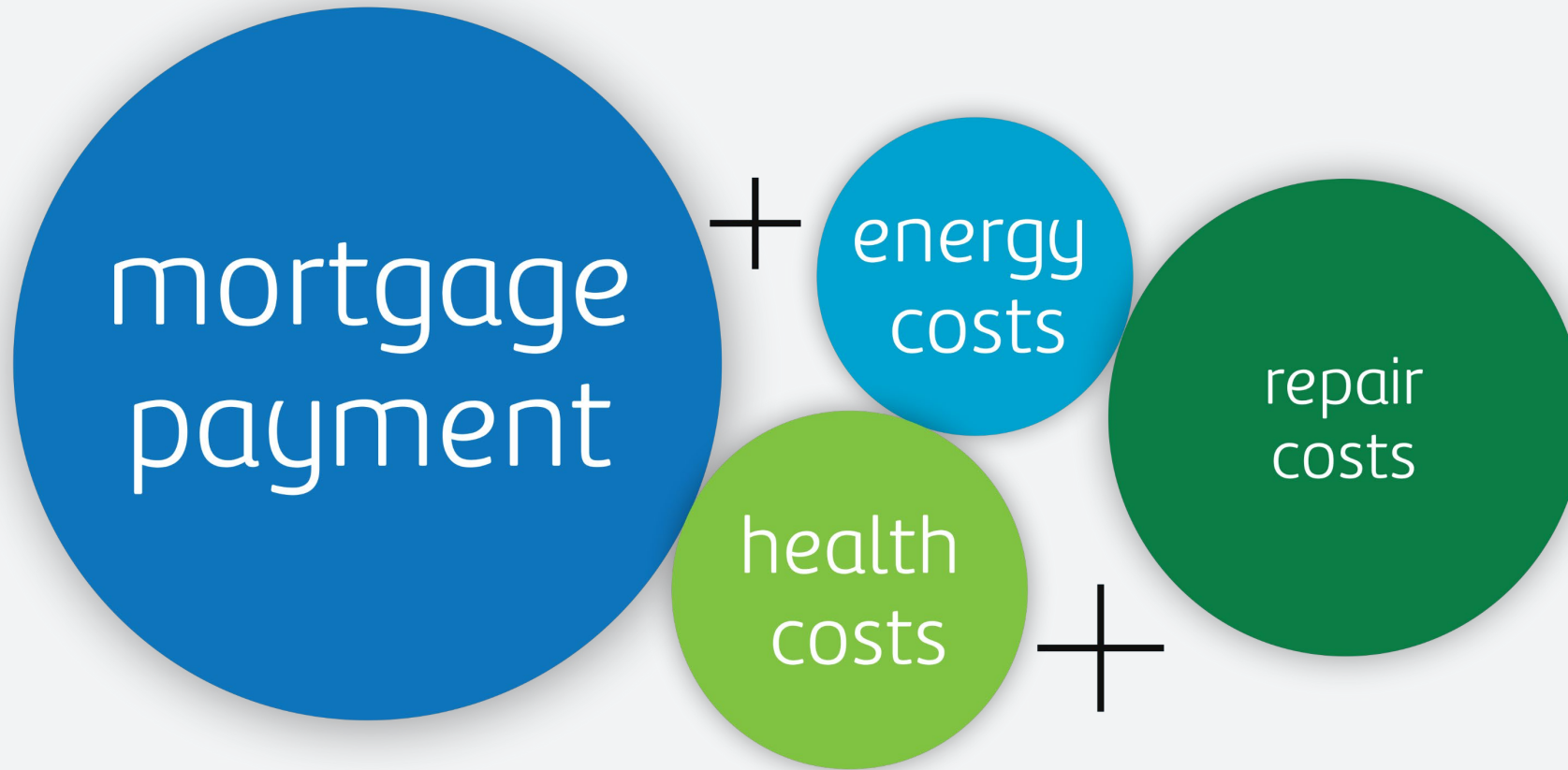
long term benefits → immediate benefits

monthly investment → monthly benefits

long term benefits → immediate benefits

monthly investment → monthly benefits

The Mortgage



Total cost of Monthly Ownership

so why not so many green homes
and green mortgages?





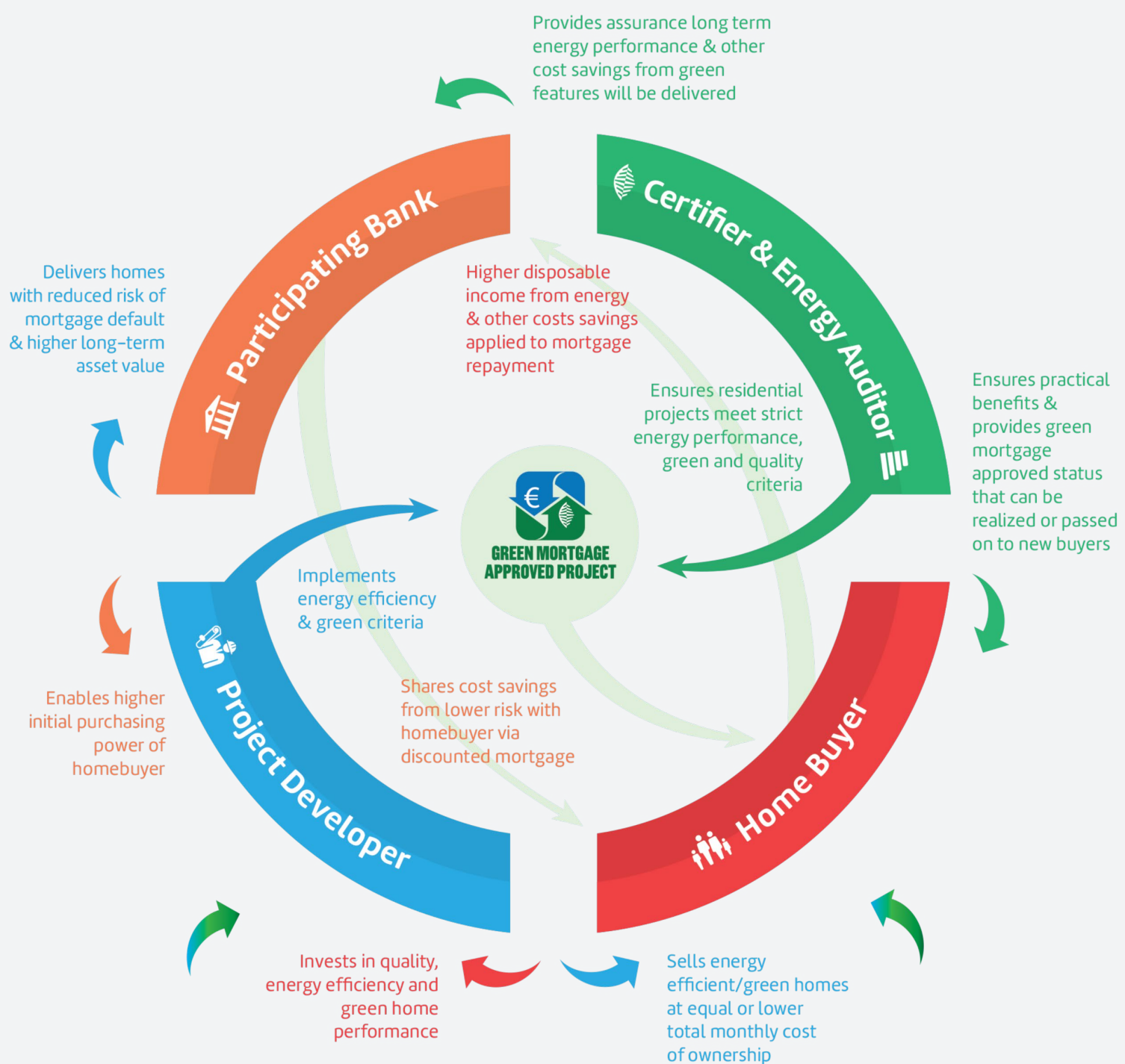




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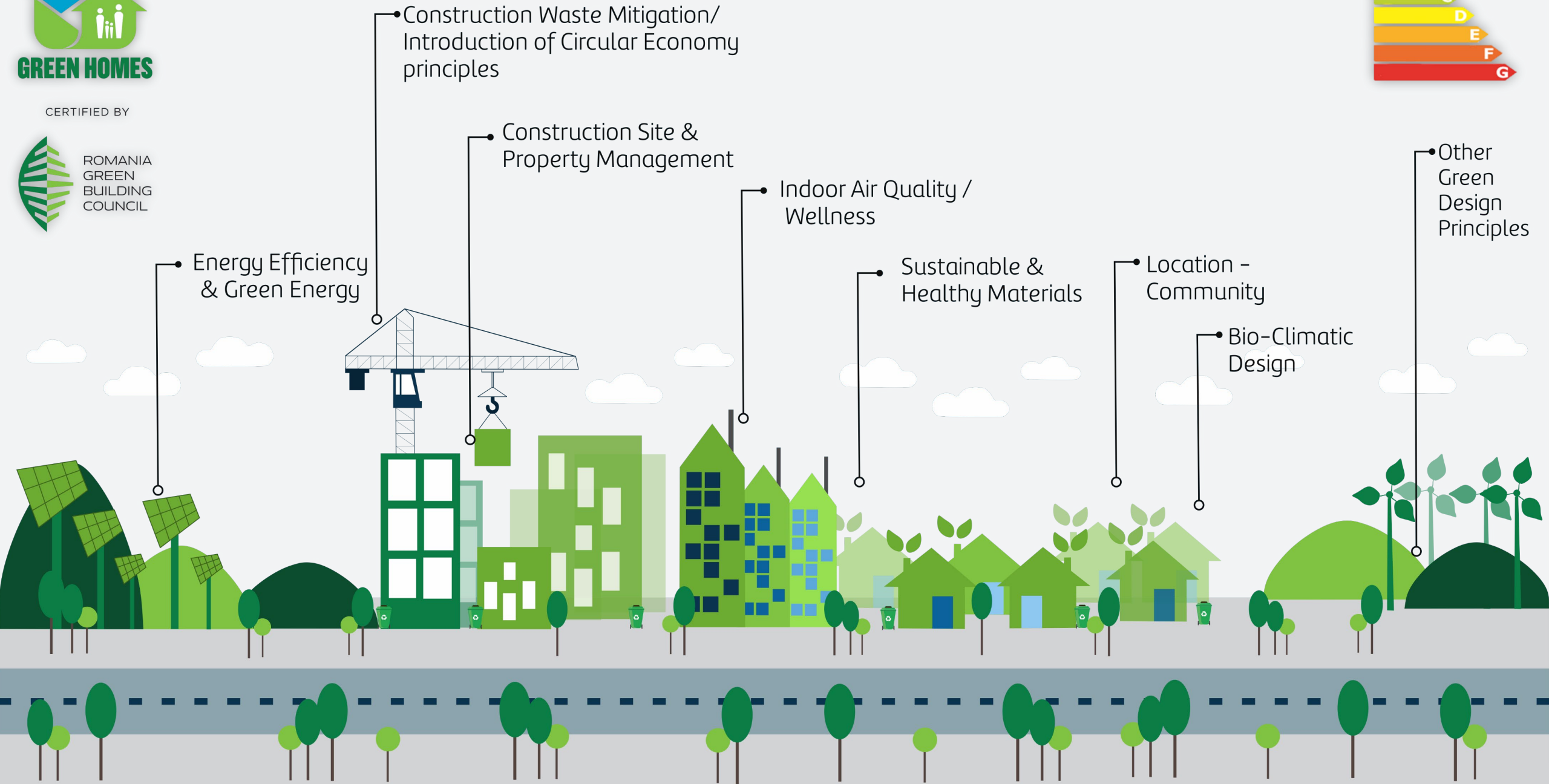


the concept





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Toolkit for Residential Investors and Developers

Locuințe & Ipoteci Verzi

GHID PENTRU INVESTITORII ȘI DEZVOLTATORII
DE CLĂDIRI REZIDENȚIALE

Plătești mai puțin pentru mai mult!

- Clădiri de calitate superioară
- Ipoteci cu risc redus
- Costuri mai mici la energie și reparații pentru ocupanți
- Sănătate și bunăstare pentru întreaga familie
- Responsabilitate mai bună față de Planetă

WWW.ROGBC.ORG



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GREEN HOMES

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ROMANIA
GREEN
BUILDING
COUNCIL



**GREEN MORTGAGE
APPROVED PROJECT**

NOTE – this is for demonstrative purposes and not a financial offer. Please contact Raiffeisen Bank Romania for more details on their latest Green Mortgage offer ([see “Casa Ta Verde” in Romanian](#))



	STANDARD OFFER		GREEN MORTGAGE OFFER	
	First 7 years	Variable (> 7 y)	First 7 years	Variable (> 7 y)
Interest rate formula		ROBOR 3M+ 3.25%		ROBOR3M+ 2.5%
Index Rate		2.10%		2.10%
Analysis Fee	1,600 Ron			
Interest rate	5.50%	5.35%	4.75%	4.60%



Green
Mortgage



**Raiffeisen
BANK**

	EPC "B" rated apartment**	EPC "A" rated apartment**	Green Homes qualified apartment
<i>Net savings with Green HOMES</i>			
Sale price of 70 sqm apartment (€)	79,738	81,731	85,000
Loan amount (€)	67,777	69,471	72,250
Monthly mortgage payment (€)	417	427	412
Cost of energy/apartment/month (€)	101	65	33
Total cost of monthly ownership (€)	518	492	445

[Details of Alpha Bank Romania's Green Mortgage program "Alpha Green". Link to website in Romanian.](#)

Creditul Alpha Housing



Fă-ți planuri de viitor în noua ta Casă Verde, prin oferta specială Alpha Green!

Alege oferta de finanțare
Alpha GREEN 
și ai doar avantaje!



Credit pentru achiziție,
renovare și construcție Casă Verde
certificată de RoGBC



Rata dobânzii și comision
analiză dosar reduce



Informații complete
despre Casa Verde



Perioadă maximă
de creditare: 35 ani






Oportunitate de finanțare
de până la 100%



ALPHA BANK

ALPHA Housing

Bucură-te de toate avantajele unei **case verzi** cu Alpha Green:

-  Credit pentru achiziție, renovare și construcție Casă Verde
-  Dobânzi și comisioane reduse
-  Oportunitate de finanțare 100%



În cadrul Valorii totale plătibile de client și calculul DAE au fost incluse: dobânda plătită de către Client pe întreaga perioadă de creditare, comisionul de analiză dosar 450 lei, cheltuielile legate de evaluarea garanțiilor 416,5 lei, taxa de înregistrare Arhivă Electronică de 64 lei,



green finance

Investments that bring environmental
and
social benefits

Network for Greening the Financial System
First comprehensive report

A call for action

Climate change as a source of financial risk

April 2019





Energy Efficiency

Financial Institutions Group

EEFIG.eu

EEFIG UNDERWRITING TOOLKIT

Value and risk appraisal for
energy efficiency financing

June 2017



Energy Efficiency
Financial Institutions Group

- 35 projects totaling over 7.000 apartments or villas certified or in progress (pre-certified)

- Cluj-Napoca, Iasi, Bucharest, Brasov



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ROMANIA
GREEN
BUILDING
COUNCIL

Amber Gardens

by Alesonor - Tunari



alesonor
real estate development

2014 - 2015

First luxury green
building complex





106 apartments



construction
waste reduction



operational waste
separation



occupant
educational program

Central District

by 
FORTY
MANAGEMENT
& INVESTMENTS



40 units

green facade &
terraces



complete LED
illumination



modular
apartments



Aviatiei Park



by **fortepartners**

379 unites in two phases

Green terraces & roof





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SMARTER FINANCE FOR FAMILIES



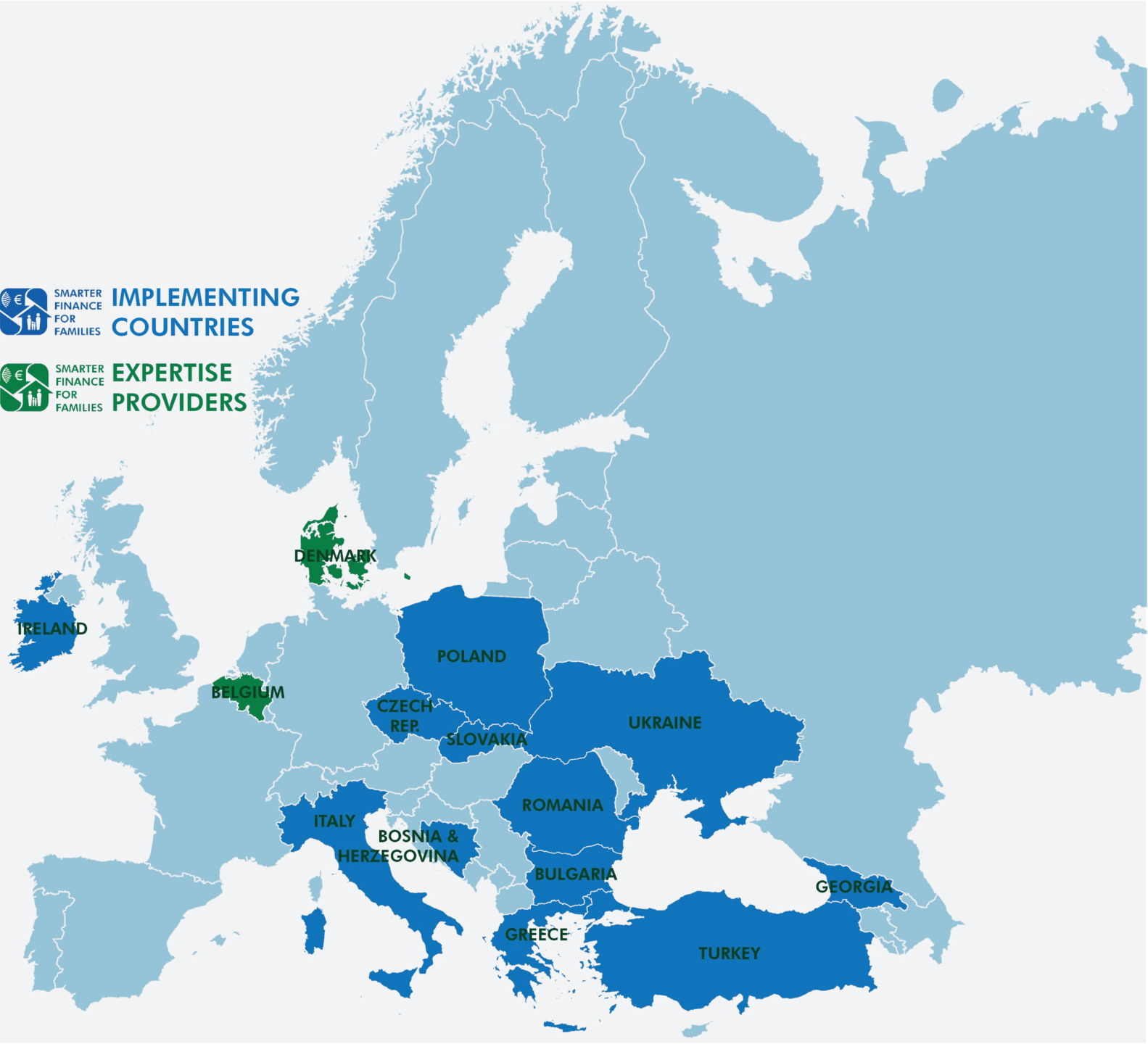
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FAMILIES

**IMPLEMENTING
COUNTRIES**



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FOR
FAMILIES

**EXPERTISE
PROVIDERS**



THE CONSORTIUM





**SMARTER
FINANCE
FOR
FAMILIES**

Listening Partners



CENTRAL & EASTERN EUROPEAN ENERGY EFFICIENCY FORUM

3-6 JUNE 2020

POIANA BRASOV, ROMANIA

REGISTER

GET EMAIL UPDATES

SUBMIT A PRESENTATION

The 3rd edition of the unique community-building and networking event on energy efficiency in Central and Eastern Europe

The Central & Eastern European Energy Efficiency Forum (C4E Forum)

will take place in **Romania, at Poiana Braşov** between **3 – 6 June 2020**

Opening high level plenary – **3 June 2020**

The Green Deal: How do we make it work for the CEE buildings?

For more information please visit c4eforum.net/c4e-forum-2020.





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Pat Barry, CEO
Irish Green Building Council

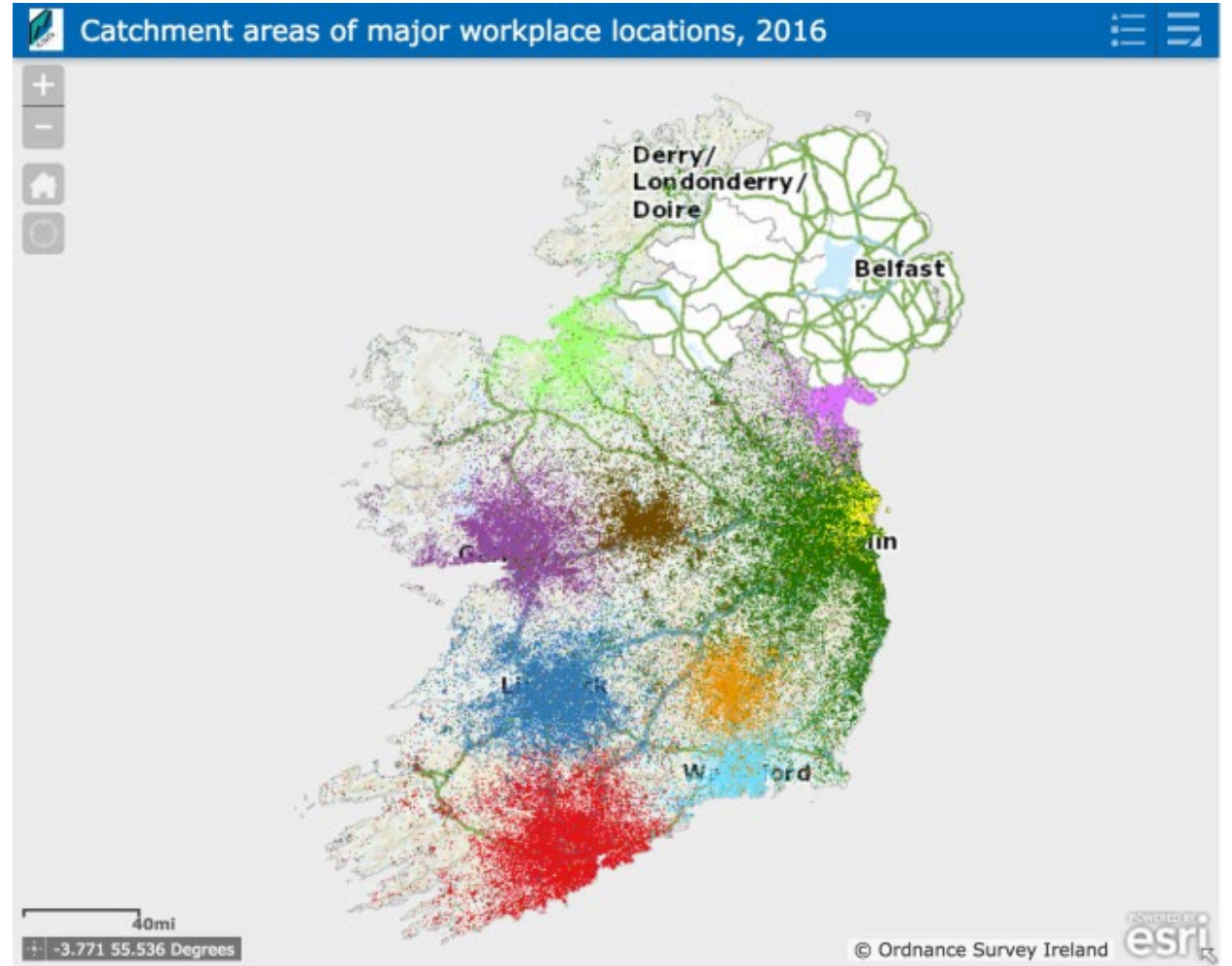
Just one reason 'A' rated Energy efficient mortgages are not enough!-Ireland



*Rural oversized one off homes with dereliction in town centres
Account for 25% of new homes
Average size in 2016 - 252sqm*



Car dependent sprawl



Ireland has reduced its carbon emission by less than 1% against its EU target of 20% as carbon emissions from transport continue to rise

HPI homes built



“

*Energy bills
€155 per
year
heating + hot
water*



HPI homes built



DLR Architects win RIAI Awards for Housing



“ *What we love about our new home is that as well as being warm, there are no drafts. The windows are huge – we get brilliant light...* ”

Home Performance Index homes registered – 2350 homes

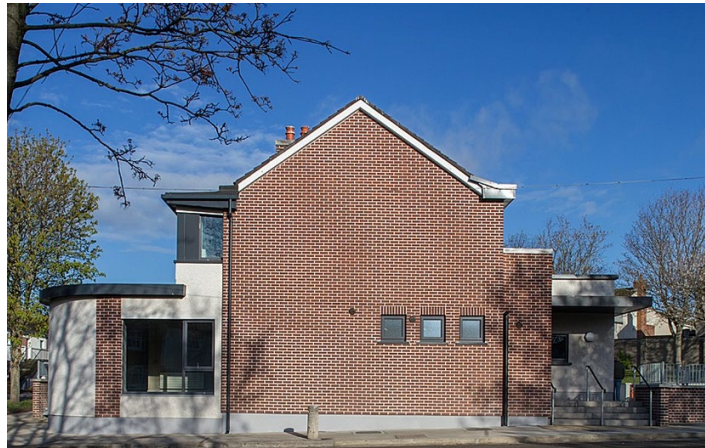


HPI homes being built





Retrofit



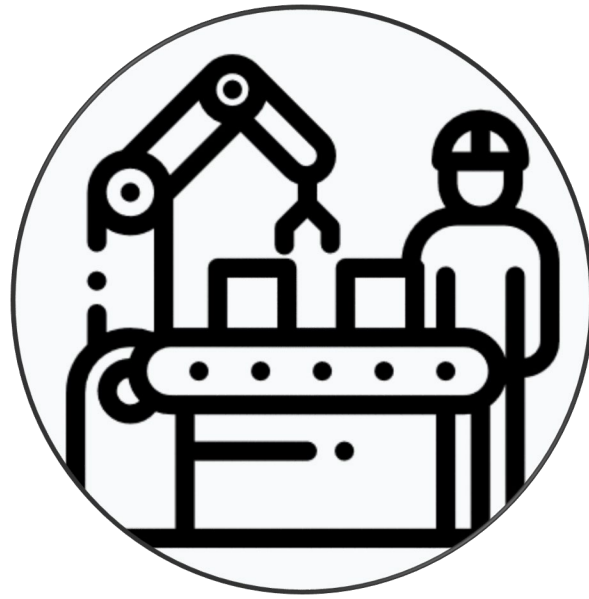
“

A minimum 80% reduction in energy use and minimum 80% reduction of CO₂ emissions

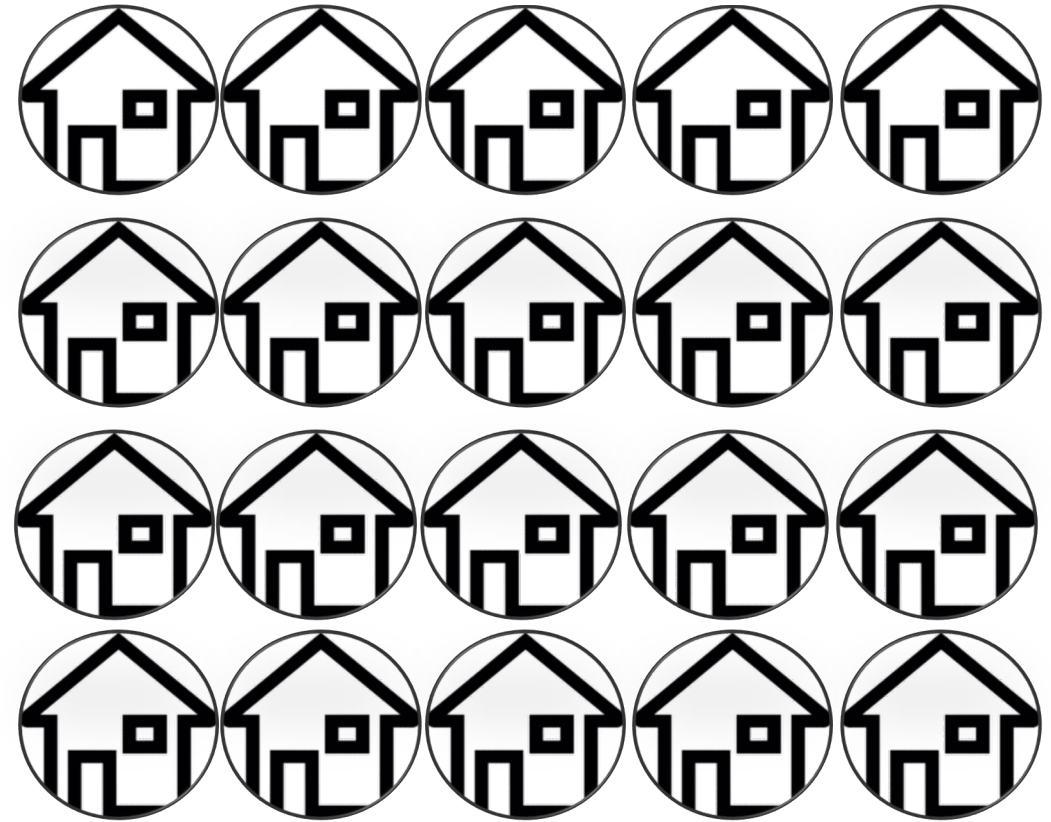




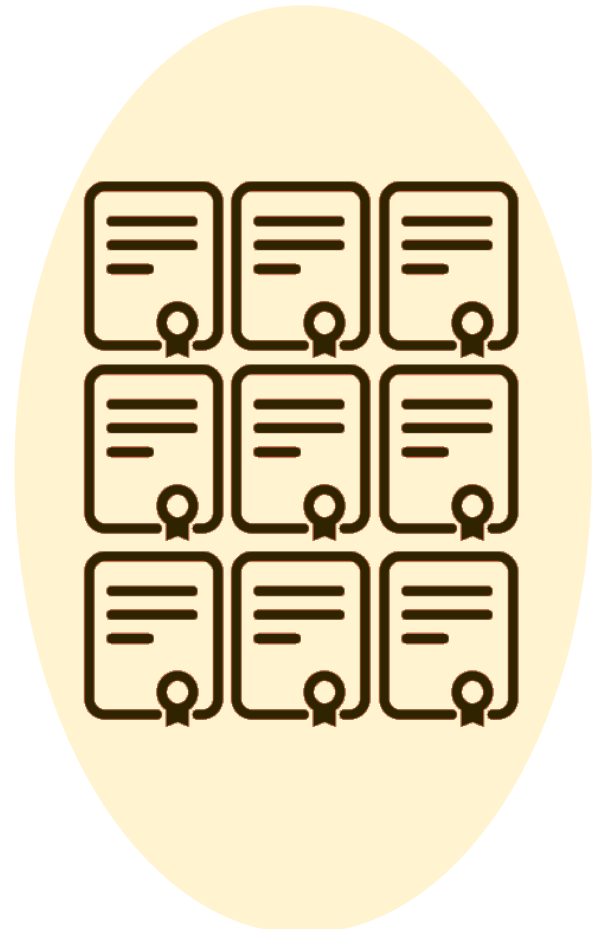
New Projects - New Homes



Controlled environment

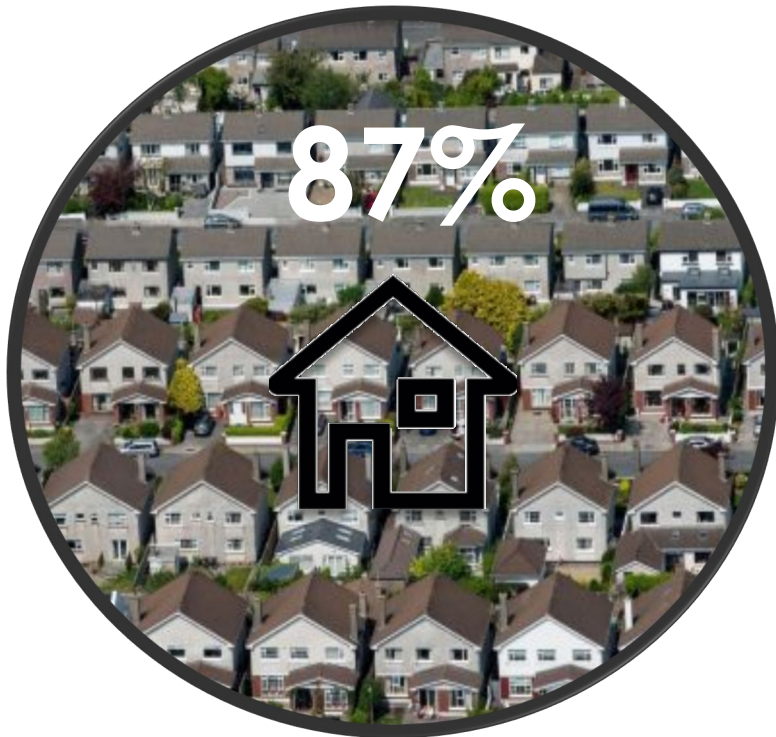


Larger numbers



Certification costs spread across

Green mortgages for renovation- need different approach without large additional cost



% Homes - single family houses

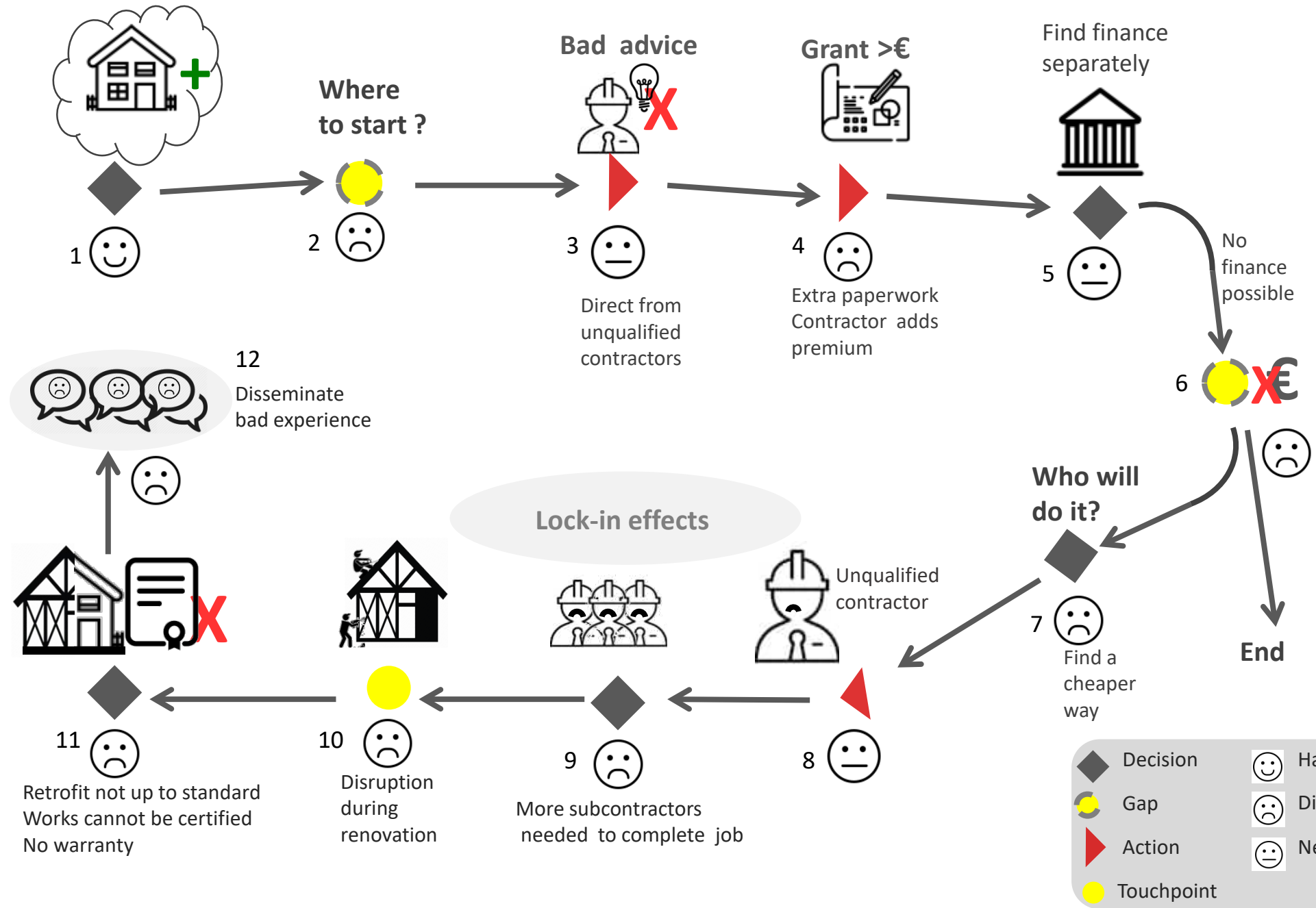


homes by 2030



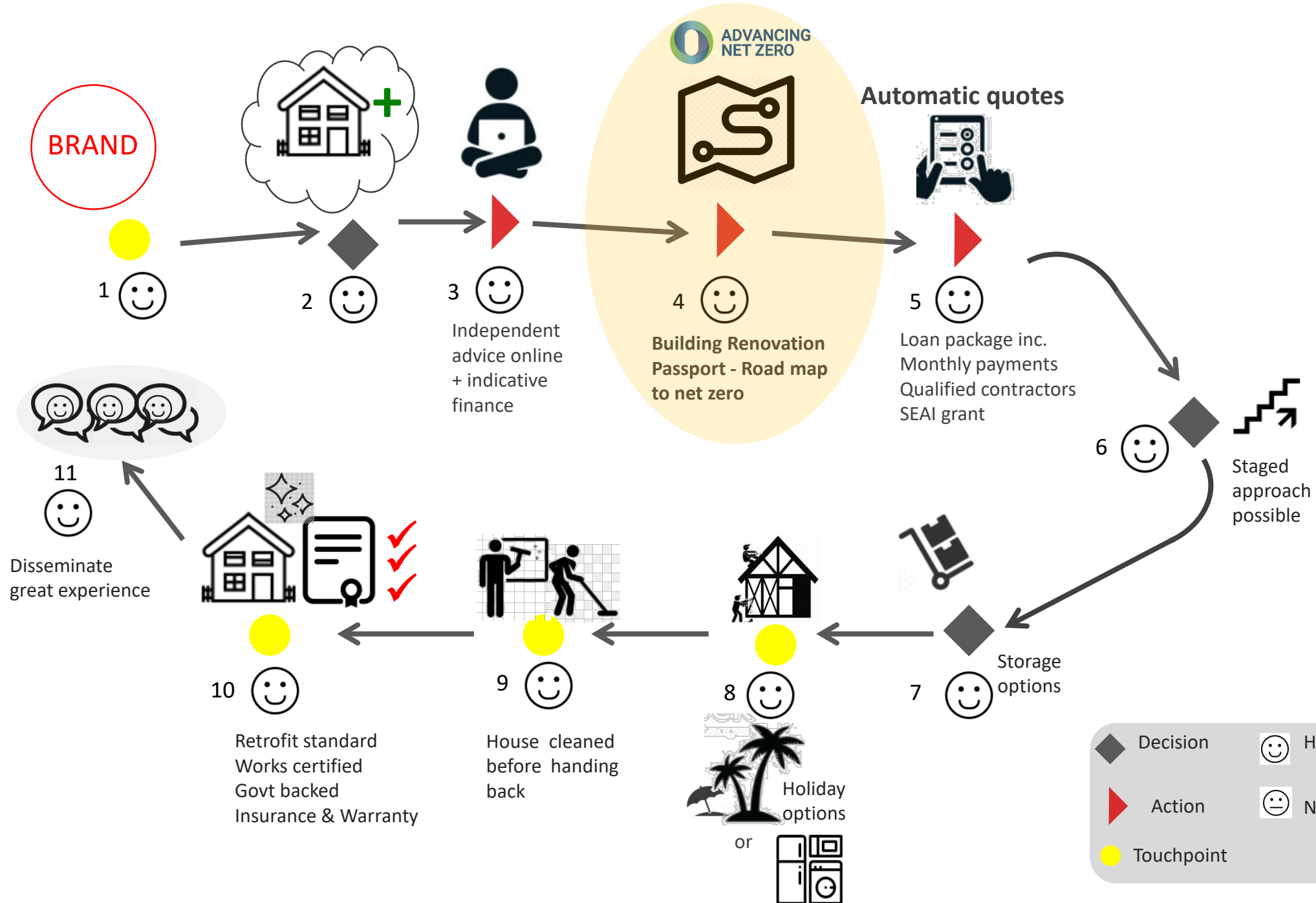
10K - 75K
invested per house

Existing Customer Journey from the customer perspective



◆	Decision	😊	Happy
●	Gap	😞	Disappointed
▶	Action	😐	Neutral
●	Touchpoint		

Ideal Customer Journey from the customer perspective



◆	Decision	😊	Happy
▶	Action	😐	Neutral
●	Touchpoint		



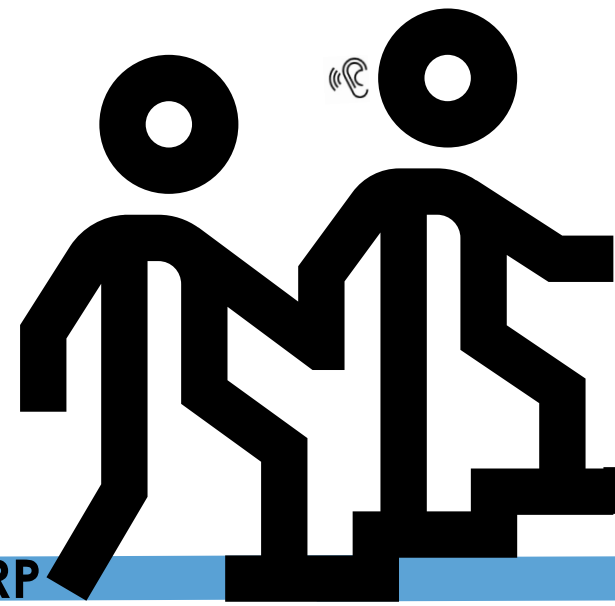
Building Renovation Passport - more benefits than BER / EPC



BER / EPC

Standard solution for an average household
Does not account for how you live

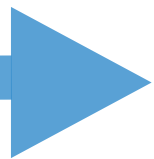
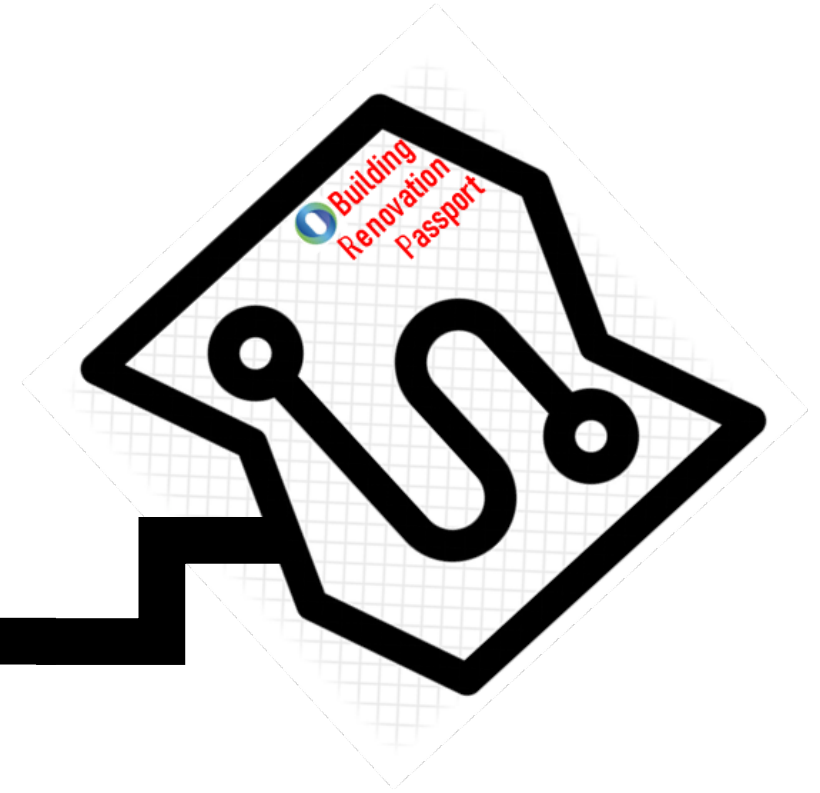
BRP



Customer

Trusted advisor

Listens to your needs
Works with you
Evaluates + balances decisions
Accounts for how you live
Provides options





BER/EPC → BRP Systematic Renovation

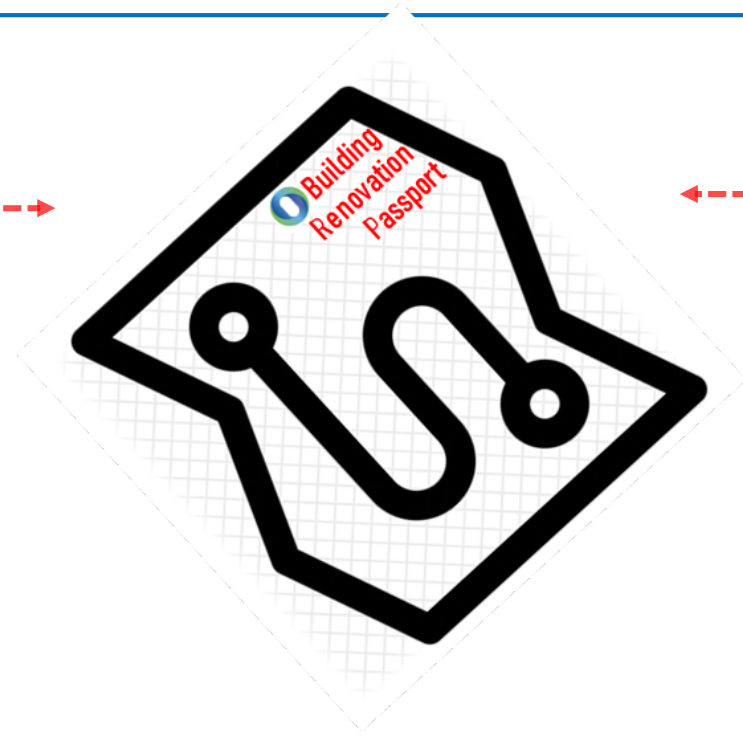
Building Renovation Passport BRP

Renovation Roadmap

- Systematic Renovation in a sensible order + packages
- Comprehensive audit
- Long term perspective
- Considers individual context

Log book

- Inventory of non dynamic info
- Manage + monitor real time energy consumption
- Linking building users +3rd parties



Existing EPC

Onsite gathered information

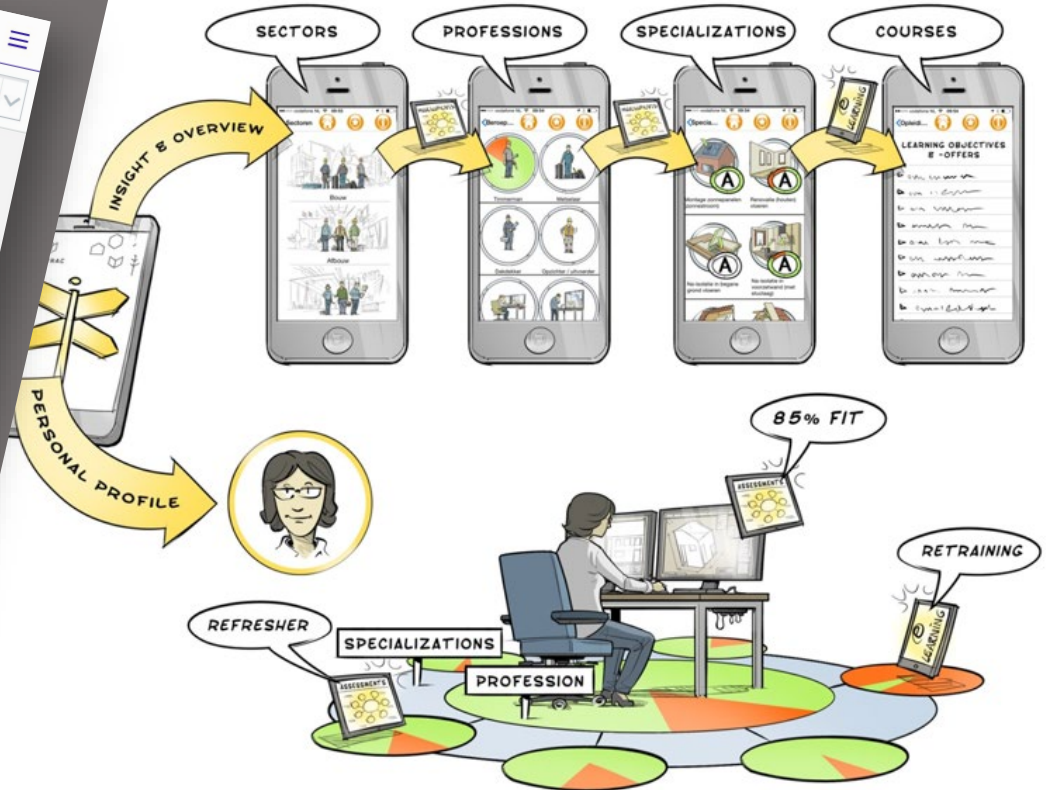
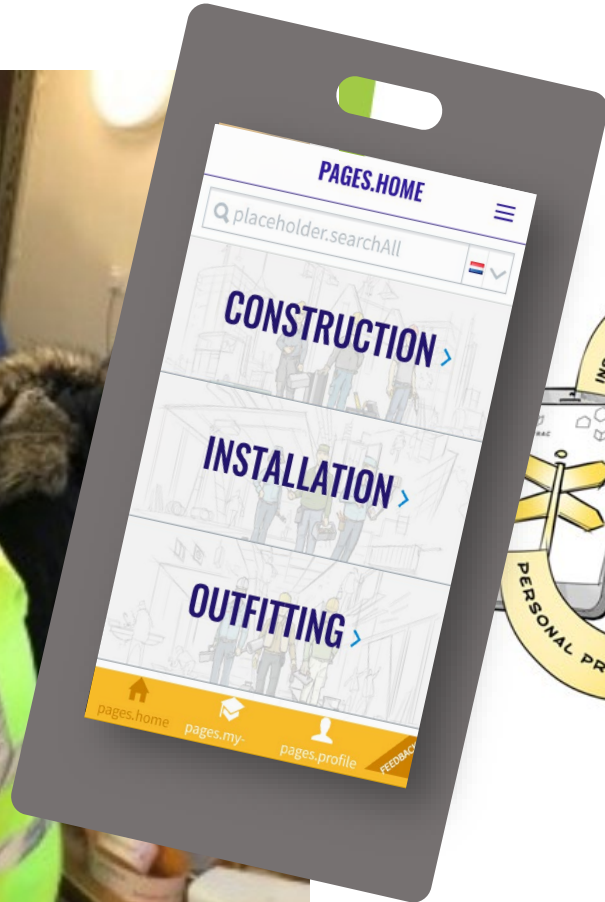
- Energy Audit
- Building professionals
- Building owner or tenant
- Public Authorities

Automated Data

- Smart meters
- Monitoring system e.g. RES, heating, CO₂



Renovation Contractors Upskilled



seai

High Quality Renovation with Benefits

<p>01 / Healthy and clean air inside</p> <p>If your home is not ventilated well, there may be a build up of pollutants, damp and mould. If outdoor air is polluted, it requires filtration and de-humidifying to make it good for your health and wellbeing.</p> <p>Ireland has the 4th highest prevalence of asthma in the world. Prolonged exposure to indoor dampness and mould can cause chronic health problems.</p> 	<p>02 / Bright</p> <p>We spend 87% of our time indoors so we'll feel better if our homes are bright. Exposure to daylight helps us sleep better at night and improves our mental wellbeing. Sitting in a sunny place in your home boosts vitamin D levels which is good for you.</p> <p>In Ireland 1 in 8 adults over 50 has a vitamin D deficiency making them vulnerable to cardiovascular disease, type 2 diabetes and osteoporosis.</p> 	<p>03 / Good Building Energy Rating (BER)</p> <p>BER is an energy efficiency rating based on energy and carbon emissions on your whole house. It's a calculation of energy usage of heating, hot water, ventilation and water consumption. A good BER usually means less energy used, less carbon emitted and lower bills.</p> <p>In Ireland the BER calculation does not include energy plug loads. So if you plug in a lot of appliances, your energy bills could increase, although the BER rating will remain the same.</p> 	<p>04 / Low embodied carbon</p> <p>Building materials emit large amounts of carbon even before they are made into a home. Embodied carbon is the carbon emitted during the extraction, transportation, manufacture and installation of building materials. Transparency on this life cycle helps designers specify materials with low embodied carbon that can reduce the global warming impact.</p> 
<p>05 / Sustainable location</p> <p>A network of schools, shops, public transport and amenities are located nearby, away from the risk of flooding. If you can walk, cycle or catch a bus easily to work, it gives you more time for other things – improving the quality of your life.</p> 	<p>06 / Acoustic comfort - reduced noise intrusion</p> <p>Quietness and minimal noise intrusion contribute to our sense of security, privacy and comfort which increases our physical and mental health.</p> 	<p>07 / Water quality testing and water saving</p> <p>Water from your taps are tested for chemical and microbiological quality, hardness and odour to ensure it is safe. The larger the volume of hot water from your tap the more energy you use. In green homes, water saving devices are installed that give a sensation of a high coverage of water but provide less water per minute. The difference can be as much as 40 litres per minute.</p> 	<p>08 / Reduced waste</p> <p>The construction industry in Europe produces 30% of all waste generated. Much of the materials from an old building could be recovered and recycled if it was considered early in the design stage. A green home is designed to encourage recovery, reuse, recycling and reduction of waste both during and after construction.</p> 
<p>09 / Low Volatile Organic Compounds (VOCs)</p> <p>Harmful gases known as VOCs can be emitted from building materials, furniture and paints in a process called off-gassing. Breathing in VOCs can increase the risk of respiratory illnesses, allergies and cancer.</p> 	<p>10 / Safe from Radon</p> <p>Radon gas may slip through tiny cracks or holes in the floors and walls of your home, causing harm to people inside. The EPA Ireland recommends that all householders test their homes for Radon leaks.</p> <p>Radon is a natural radioactive gas found in igneous rock, soil or well water. It is the 2nd biggest cause of lung cancer in Ireland.</p> 	<p>11 / Biodiversity friendly</p> <p>Natural habitats are lost when land is used for building homes. Improving the ecological value of an area encourages native plants and animals to flourish. This sustains healthy ecosystems that improve human health.</p> 	<p>12 / Lifetime Accessible Homes</p> <p>Accessible for reduced mobility and adaptable throughout the different stages and changing needs in your life time.</p> 


Green Homes & Mortgages

A toolkit for residential investors and developers

↓

Paying less for more!

- Superior Building Quality →
- Reduced Mortgage Default Risk →
- Lower Energy and Repair Costs for Homeowners →
- Better Health for Families →
- Greater Environmental Responsibility for our Planet →



Measuring renovation impact – Its not just energy efficiency!



- Cost to renovate 75-100k/unit
- Occupants remain car dependent
- Further state investment needed for broadband/roads/healthcare



- Cost to renovate 30-50k/unit
- Non car dependent occupants
- Regeneration benefits



- Cost to renovate 50-75k /unit
- Non car dependent occupants
- Regeneration impacts benefits
- Very high Cultural heritage benefits

Should mortgages reward co-benefits?

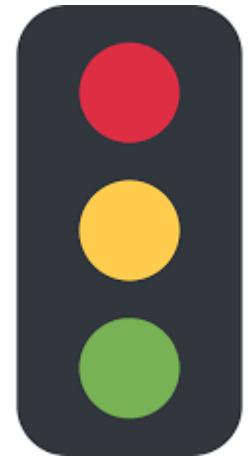
Environmental – Economic – Social

A simple matrix using easy to measure criteria rewarding the best with deeper discounts.

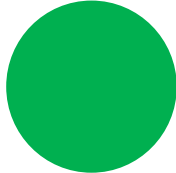
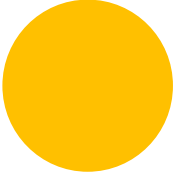
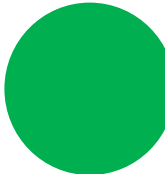
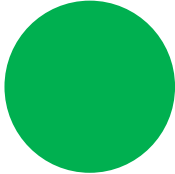
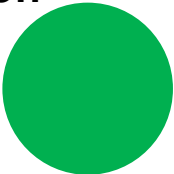
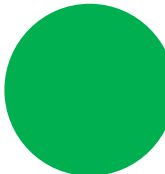
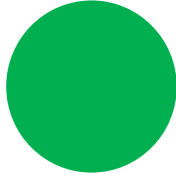

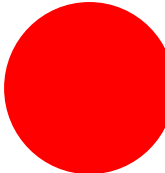
Good

Fair

Poor



Rate total renovation impact - from poor to outstanding

Current structural quality 	Overall spatial quality / functionality 	Safety from flooding /climate risks 
Cultural Heritage protection 	Urban regeneration potential 	Health Benefit Improvement potential 
Transport Carbon Low or High Car dependency 	Carbon Mitigation potential of renovation measured in CO ₂ /m ² /annum 	Ratio of post renovation property value to renovation cost 

Improving Citizens' Health

Comfort and Financial Well-Being
by Supporting Banks

**Residential Investors and Solution
Providers with
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*a bio-climatic,
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