



UN 

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environment  
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Principles for  
Responsible Banking

UNEP Finance Initiative

## Energy Efficiency Finance capacity building

25-28 April 2023

Workshop 3#

## Financing renovations in the buildings sector

28 April 2023



# Questions

Connect to Slido for Q&A

- go to **www.slido.com** and  
enter code: 3910962

- or scan QR code:



- Post questions in Slido Q&A or speak up
- Recordings and material will be shared after the meeting to participants

### 9.00 Opening (UNEP FI)

### 9.05 Focus on buildings (Jonathan Duwyn, Nora Steurer / UNEP-GlobalABC and Michelle M. Farrell / IFC)

- Renovations vs. new constructions
- Resource efficiency/circularity in constructions
- Concept of embedded carbons, zero carbon ready buildings

### 10.00 Stimulate consumers' demand for energy efficiency investments (Carsten Glenting / EEFIG)

### 10.40 Break

### 10.50 How to finance buildings energy efficiency? (commercial real estate focus) (Dirk Bartsch, Bodo Winkler-Viti / Berlin Hyp)

- The experience of Berlin Hyp

### 11.30 Putting the pieces together (UNEP FI)

- Recap key steps of target setting & implementation with bank examples
- UNEP FI Impact Management Tool

# Energy Efficiency in Buildings





# Towards a zero-emissions, efficient and resilient buildings and construction sector

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**Key trends, concepts and solutions**

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28 April 2023

# Agenda



## 1 Why buildings?

> Key trends

## 2 Towards net zero buildings?

> key concepts

> Solutions

## 3 The GlobalABC



# 1. Why buildings?

- The equivalent of Paris is added in floor space **every 5 days**.
- **Half of the buildings standing in 2060 have not yet been built.**
- Most **existing buildings need retrofitting** to increase energy efficiency and/or climate resilience.
- **The most cost-effective mitigation potential of any industrial sector.** Co-benefits including job creation, improved climate resilience.



# Key buildings trends: 2022 Global Status Report for Buildings and Construction



Global Alliance  
for Buildings and  
Construction

## A global reference document:

Seventh edition of this annual snapshot on the progress of the buildings and construction sector globally towards achieving the Paris Agreement goals:

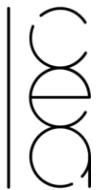
- An update on the drivers of **CO<sub>2</sub> emissions and energy** demand globally and
- Status of **policies, finance, technologies, and solutions** that support a zero-emission, efficient, and resilient buildings and construction sector

## A collaborative effort, building a global community.

This year's Buildings-GSR features contributions from:



Yale



Input from over 70 GlobalABC members and experts.



Download the  
2022 Buildings-GSR

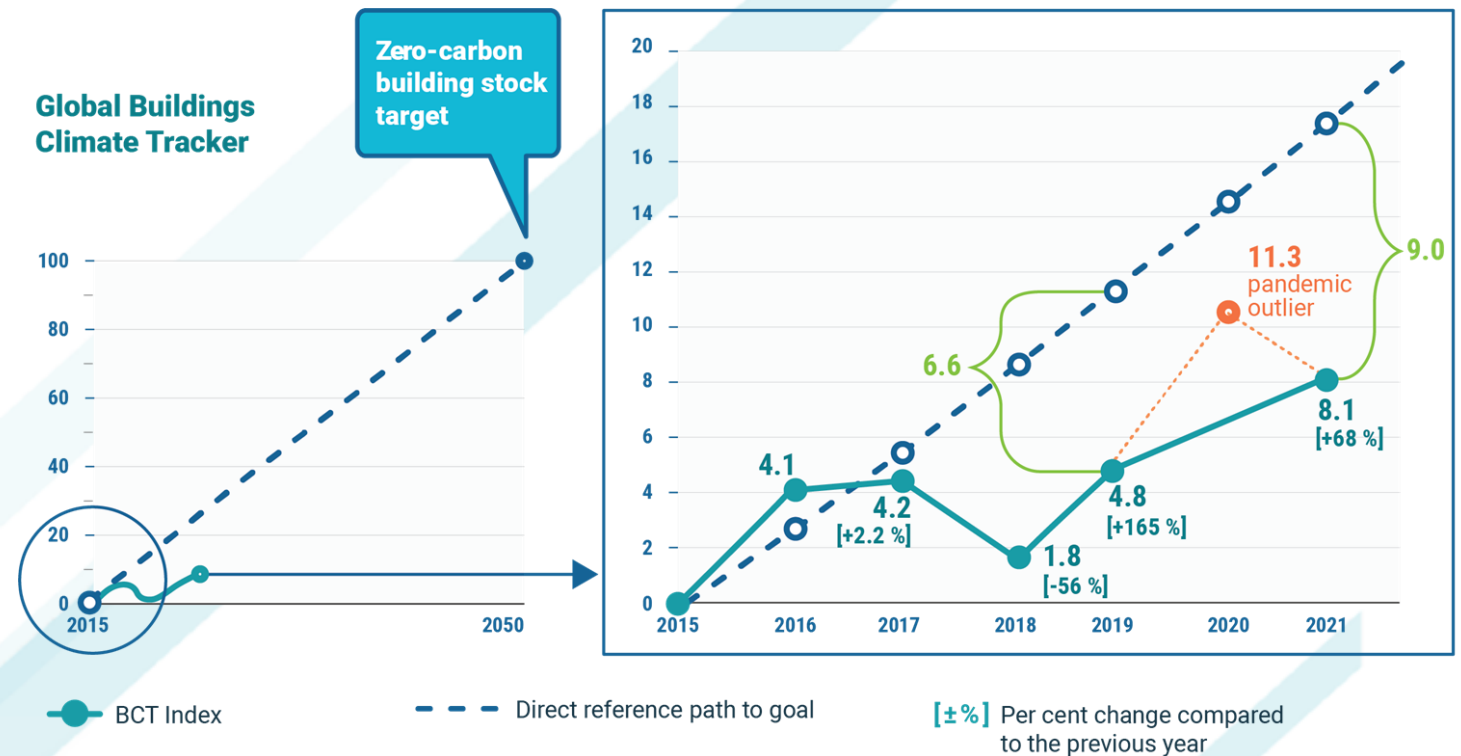


# The Global Buildings Climate Tracker (BTC)



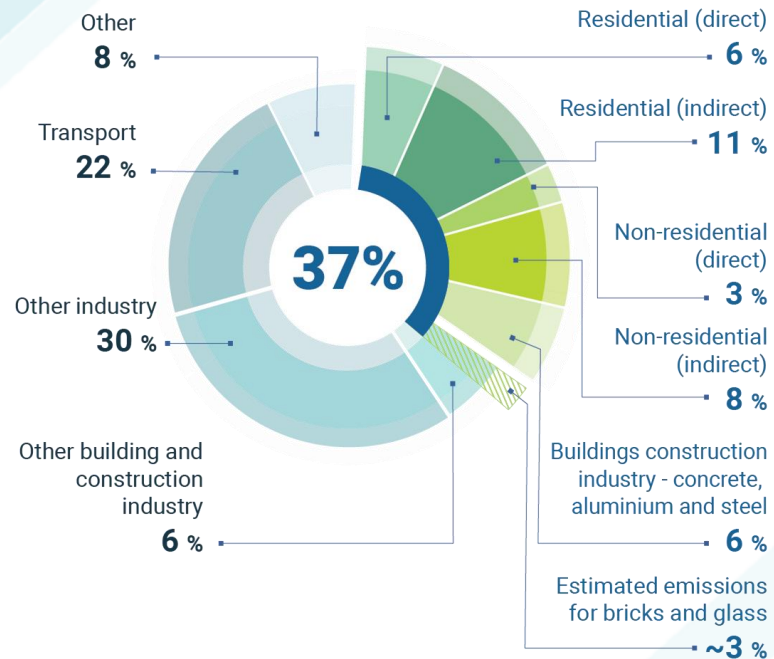
## Decarbonisation index trend for buildings and construction

- The BCT shows a **negative rebound since 2020** in the decarbonization of the buildings sector, with **increased energy intensity and higher emissions**.
- **No structural, systemic improvement** was achieved in the buildings sector, leaving it vulnerable to external factors.



Source: Adapted by the Buildings Performance Institute Europe.

# EMISSIONS: Global share of buildings and construction operational and process CO<sub>2</sub> emissions, 2021



- **Operational energy-related CO<sub>2</sub> emissions** from buildings grew by around 5% in 2021 compared to 2020 to around 10 GtCO<sub>2</sub>, exceeding the previous 2019 peak of 9.6 GtCO<sub>2</sub> by 2%.
- **Emissions from producing buildings materials** are around 3.6 GtCO<sub>2</sub> (concrete, steel, aluminium, glass, and bricks).
- Together buildings represented around **37% of global emissions in 2021**.

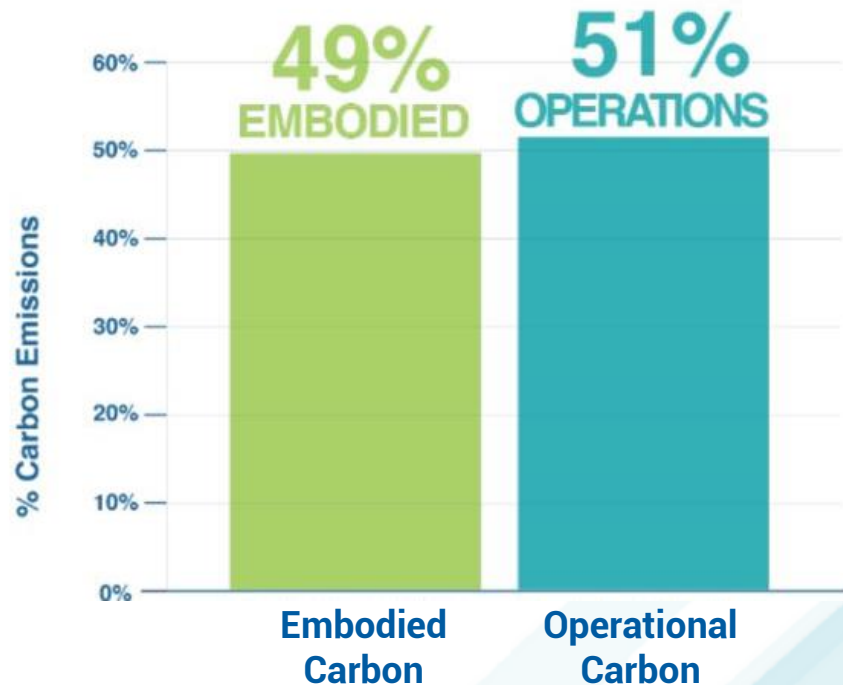
Source: International Energy Agency (2022). *Tracking Clean Energy Progress*. Paris.

# Embodied carbon:

Embodied carbon will be responsible for almost half of total new construction emissions between now and 2050.



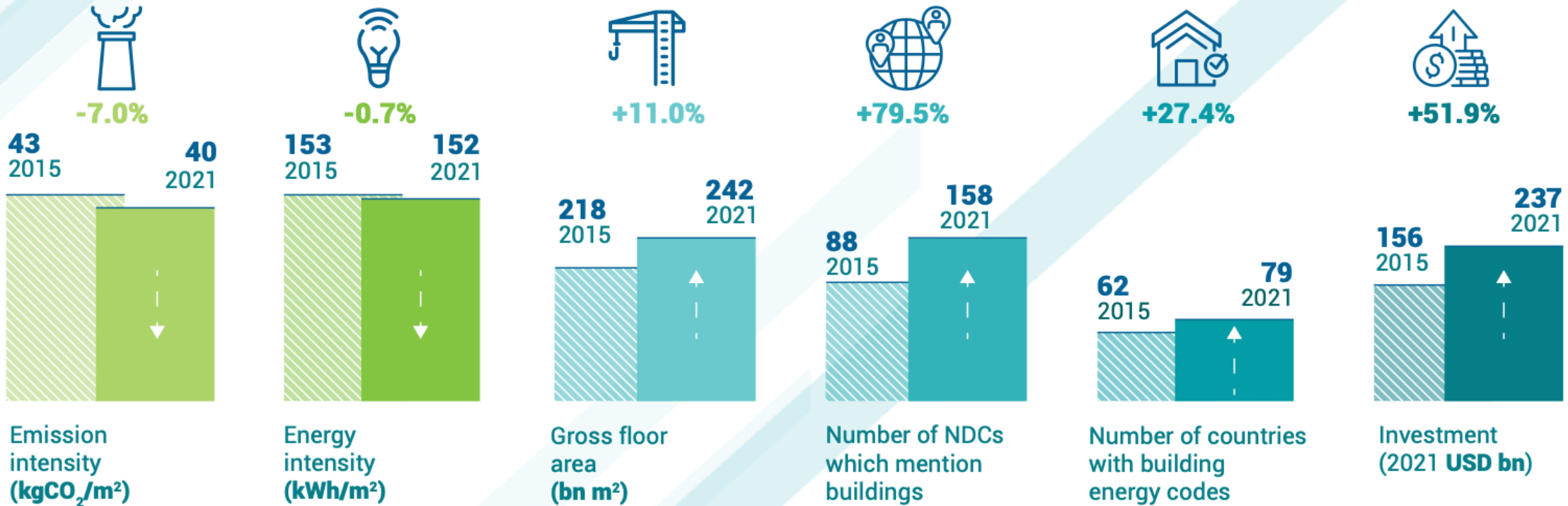
Total Carbon Emissions of Global New Construction from 2020-2050



“As building operations become more efficient, embodied impacts related to producing building materials become increasingly significant.”

Source: IEA 2022. All rights reserved. Tracking Clean Energy Progress 2022.

# Changes in global drivers since 2015



<sup>1</sup> Values included for the baselines have been updated from previous versions of the Buildings-GSR due to both historic input data updates for emissions and floorspace, and also deflation factors for USD. The proportional changes between previous years remains similar.

## 2. Towards net zero buildings?



### Emission goals to achieve the Paris Agreement Goals - UNFCCC Marrakech Partnership for Global Climate Action (MPGCA)

- **By 2030, the built environment should halve its emissions, whereby 100 per cent of new buildings must be net-zero carbon in operation.**
- **By 2050, all buildings must be decarbonized along the lifecycle.**

# Two Types of carbon emissions in buildings and construction



Image: Carbon Leadership Forum 2020

## Embodied Carbon

Manufacture, transport, and installation  
of construction materials

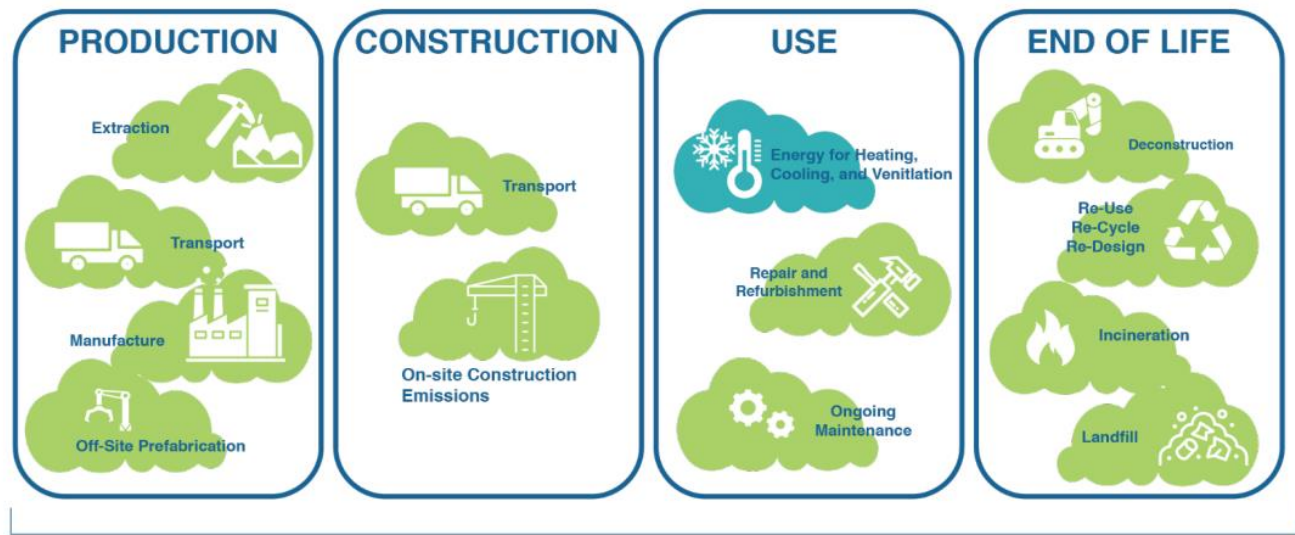
## Operational Carbon

Building Energy Consumption

# Decarbonizing along the lifecycle



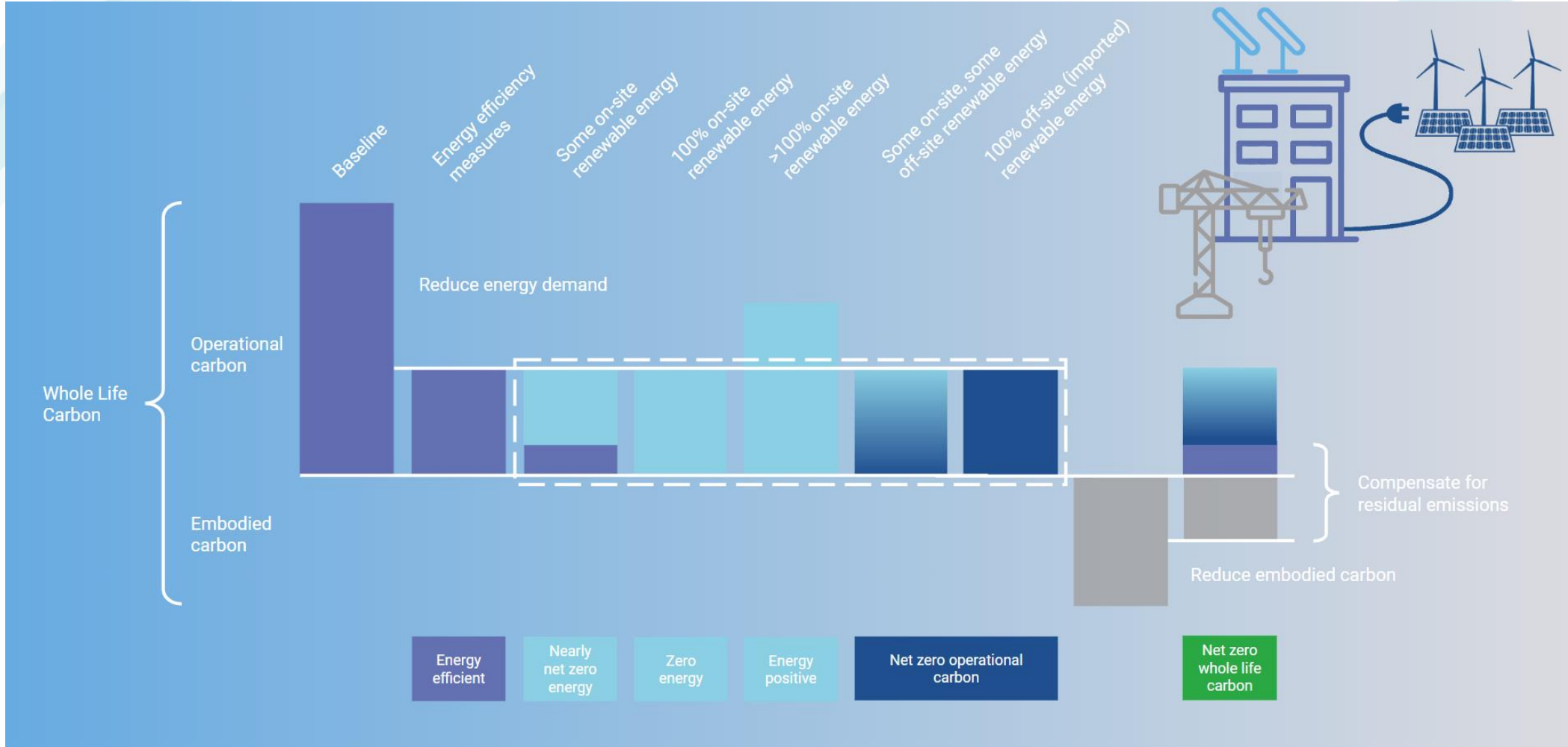
IMPACT OF MATERIALS  
ON WHOLE BUILDING  
LIFECYCLE CARBON



PHASES OF THE BUILDING LIFE CYCLE

A **Whole Building Life Cycle and Systems Approach** to decarbonisation is essential to maximizing long-term sustainability.

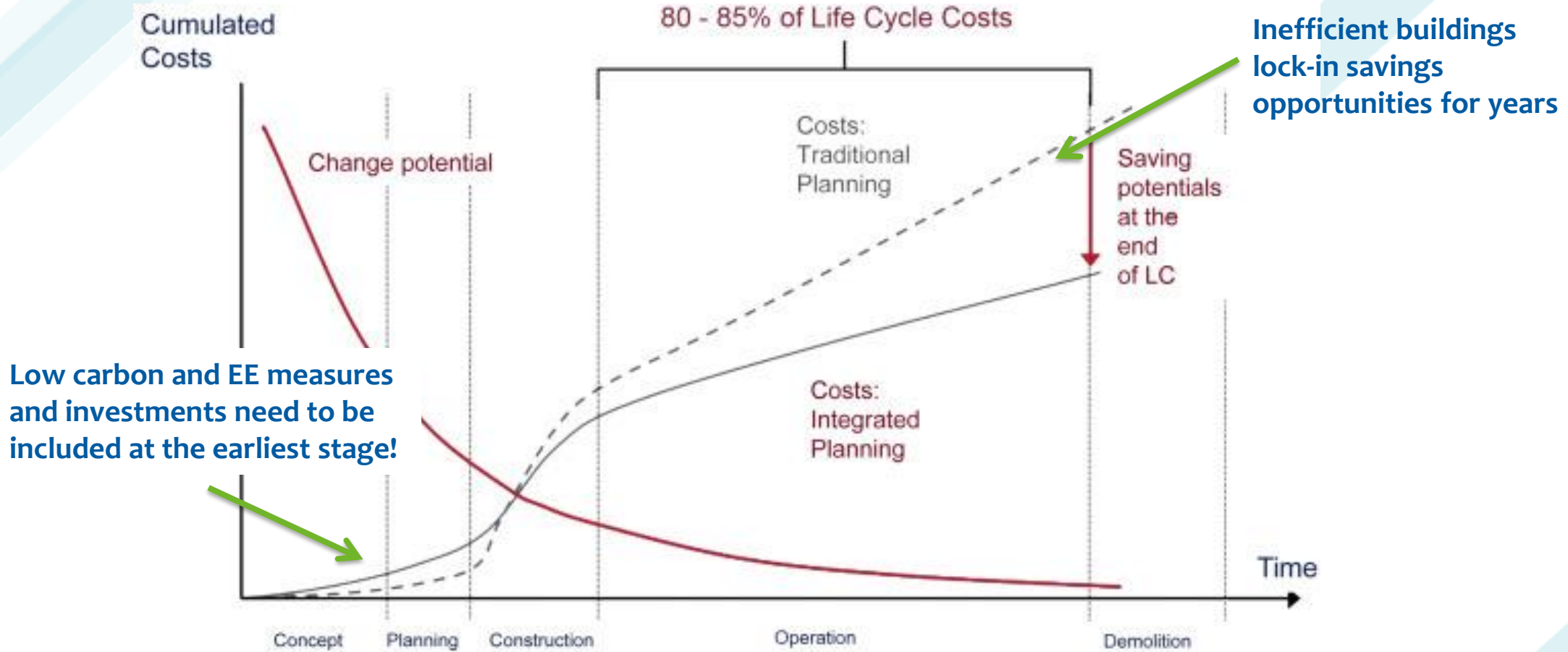
# Net Zero Building Definition



Source: WorldGBC [What is a net zero carbon building?](https://www.worldgbc.org/what-is-a-net-zero-carbon-building/) - World Green Building Council ([worldgbc.org](https://www.worldgbc.org/))








# Whole Life Cycle Carbon approach – new buildings







Source: Building life cycle optimization tools for early design phases  
(<https://www.sciencedirect.com/science/article/abs/pii/S0360544215003217>)

# Reducing carbon in buildings



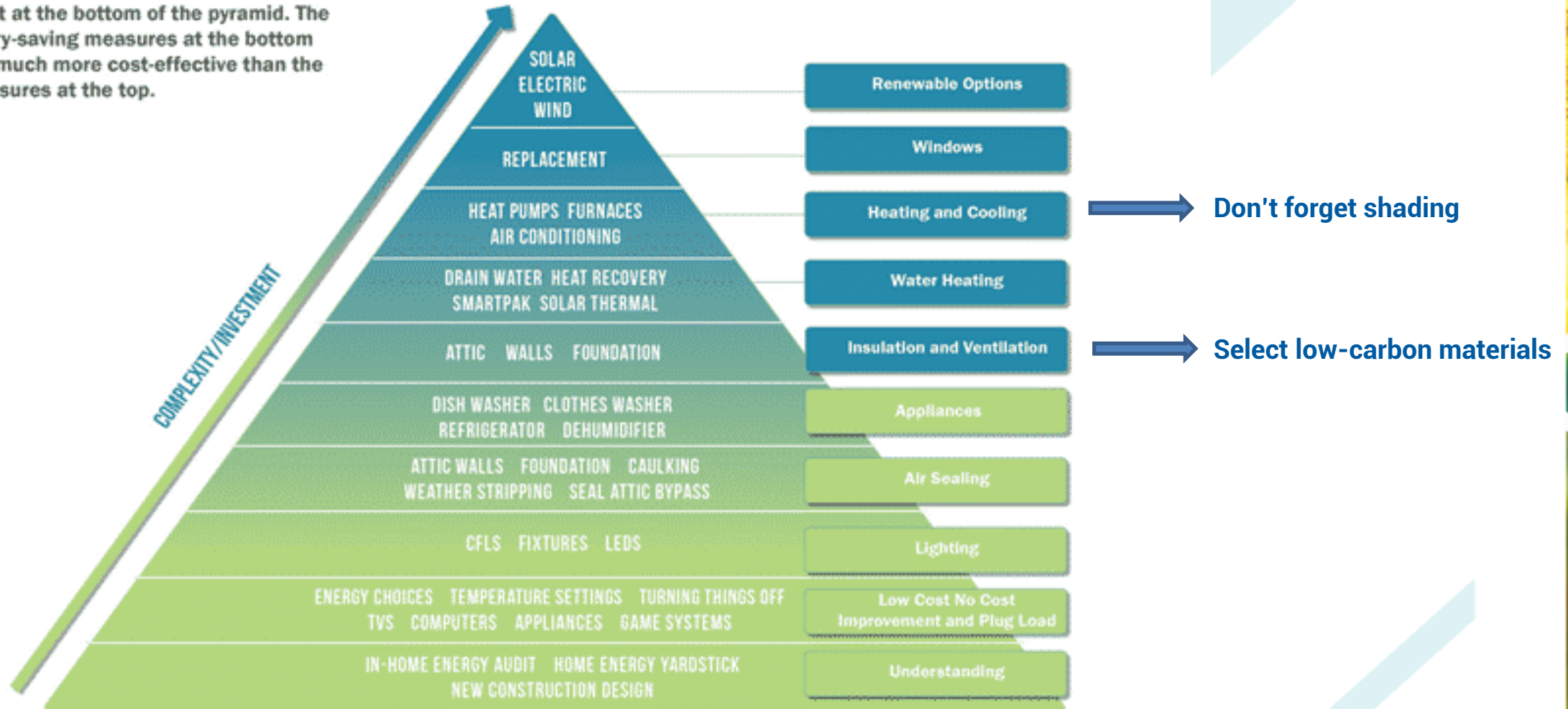
<b>Energy efficiency</b>	 <p><b>Building envelope</b></p> <ul style="list-style-type: none"> <li>• Best possible thermal insulation of façade, roof, windows, round floor</li> <li>• Effective shading</li> <li>• Air tightness and air leakage testing</li> </ul>	 <p><b>Heating, ventilation &amp; air conditioning</b></p> <ul style="list-style-type: none"> <li>• Highly efficient heat pumps</li> <li>• Highly efficient biomass boilers</li> <li>• Building automation</li> <li>• Natural refrigerants or sorption cooling technologies</li> <li>• Highly efficient district heating</li> <li>• Mechanical ventilation heat recovery</li> </ul>	 <p><b>Lighting &amp; appliances</b></p> <ul style="list-style-type: none"> <li>• Optimized lighting technology (LED)</li> <li>• Energy efficient appliances (A+++, Energy star)</li> <li>• Occupancy and daylight sensors</li> </ul>
	 <p><b>Efficient use</b></p> <ul style="list-style-type: none"> <li>• Awareness raising campaigns on efficient user behavior</li> <li>• Energy managementsystem (incl. sensors, controls, smart meters)</li> </ul>	 <p><b>Monitoring &amp; Maintenance</b></p> <ul style="list-style-type: none"> <li>• Monitoring and evaluation of consumption</li> <li>• Benchmarking and performance guarantees</li> <li>• Optimization of building operation</li> <li>• Timely maintenance</li> </ul>	

<b>Renewable energy</b>	 <p><b>On-site renewable energy</b></p> <ul style="list-style-type: none"> <li>• Solar thermal</li> <li>• Solar photovoltaics (PV)</li> <li>• PV thermal</li> <li>• Geothermal</li> <li>• Storage</li> </ul>	 <p><b>Renewable energy procurement</b></p> <ul style="list-style-type: none"> <li>• Renewable Energy Certificates (RECs)</li> <li>• Guarantees of Origin (GOs)</li> <li>• Power Purchase Agreements (PPAs) conveying RECs or GOs</li> <li>• Direct procurement</li> </ul>
	 <p><b>Transform &amp; reuse</b></p> <ul style="list-style-type: none"> <li>• Maximize use of existing assets</li> <li>• Refurbishment as preferred option</li> <li>• Reuse materials</li> <li>• Review of material efficiency</li> </ul>	 <p><b>Build low carbon</b></p> <ul style="list-style-type: none"> <li>• Whole life cycle assessment (WLCA)</li> <li>• Smart design (e.g. lean construction, smart floor plan)</li> <li>• Natural and renewable materials (fostering carbon storage) from sustainable forestry</li> <li>• Building site selection (e.g. availability of locally sourced materials/structures)</li> <li>• Streamline delivery processes</li> </ul>

# Reducing carbon in existing buildings



Start at the bottom of the pyramid. The energy-saving measures at the bottom are much more cost-effective than the measures at the top.



Source: Holland Home Energy Retrofit programme

# To address embodied carbon, there's no one magic solution... but multiple measures must be combined.



**AVOID**

## CIRCULAR APPROACHES AND RESOURCE EFFICIENCY IN DESIGN AND CONSTRUCTION

- **Life-cycle analysis** to guide design decisions
- **Resource-efficient construction** techniques that save material
- **Adaptability and durability** for a long lifetime
- **Circular economy:** Recyclability and reuse of components („urban mining“)
- **Local value chains** to lower transport emissions



**IMPROVE**

## DECARBONISE CONVENTIONAL BUILDING MATERIALS

- **Energy-efficiency and decarbonising energy supply** in production
- **Process innovation** to reduce CO2
- **Substitution** with waste materials or natural fibres

## INCREASE THE SHARE OF ALTERNATIVE BUILDING MATERIALS

- **Develop supply chains** for locally available materials
- **Standardise and certify** materials, e.g. **bio-based** (clay, wood, natural fibres) and **recycled** materials
- **Use** in “conventional” construction

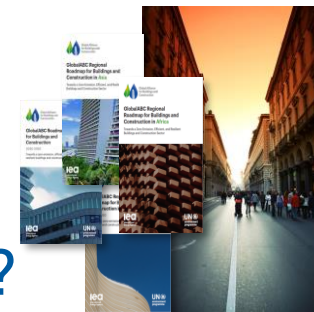


**SHIFT**

# 3. The GlobalABC



- Founded at COP21, hosted by UNEP and with 271 members, including 38 countries, the GlobalABC is the leading global platform for ALL buildings stakeholders committed to a common vision: **A zero-emission, efficient and resilient buildings and construction sector.**
- The GlobalABC aims to:
  - Be a global advocate and a catalyst to action
  - Be a trusted platform to set targets and track progress
  - Support countries in setting priorities and measures based on their situation



You have questions on buildings and construction?  
Contact us at [global.abc@un.org](mailto:global.abc@un.org)

## Links to useful resources



Global Alliance  
for Buildings and  
Construction

### **GlobalABC :**

<https://globalabc.org/database>

### **PEEB**

<https://www.peeb.build/knowledge-network/downloads>

<https://www.peeb.build/knowledge-network/external-ressources>

### **IFC Edge**

<https://edgebuildings.com/>

### **PCAF's Financing towards net-zero buildings closely on the project website:**

<https://carbonaccountingfinancials.com/financing-towards-net-zero-buildings>

### **CCFLA**

<https://citiesclimatefinance.org/financial-instruments/>

### **WorldGBC:**

<https://worldgbc.org/sustainable-building-certifications/>

<https://worldgbc.org/sustainable-finance/>

# Global Alliance for Buildings and Construction

**Find out more:**

[www.globalabc.org](http://www.globalabc.org)

[global.abc@un.org](mailto:global.abc@un.org)



Procredit HQ, Bulgaria, EDGE Zero Carbon Certified



# BANKING ON GREEN BUILDINGS

BROUGHT TO YOU BY



*Creating Markets, Creating Opportunities*



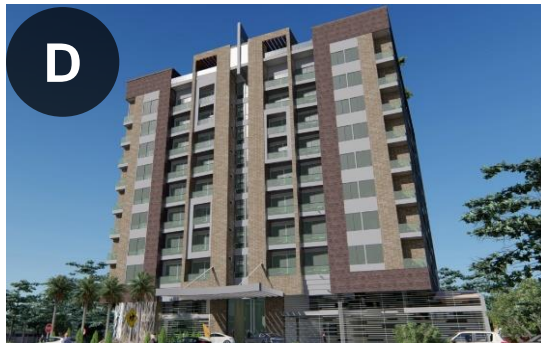
# BANKING ON GREEN BUILDINGS



- 1. Why Care About Green Buildings?**
- 2. What Is Their Commercial Value?**
- 3. How Does Certification Create Value?**
- 4. What Products Can Financial Institutions Offer Their Clients To Tap Into The Green Buildings Market?**
- 5. How Do You Develop a Successful Portfolio?**

# WHICH OF THESE IS A GREEN BUILDING?

QUIZ



# A GREEN BUILDING MUST BE AT LEAST 20% MORE EFFICIENT THAN LOCAL BUSINESS AS USUAL BASELINE



Certiably green\* as  
verified by an independent  
**THIRD PARTY**



More efficient  
performance than the  
**LOCAL BASELINE**



Quantified  
**IMPACT REPORTING**

**COMMON TO GLOBAL FINANCIAL STANDARDS AND DISCLOSURE PLATFORMS**

\* IFC's Excellence in Design for Greater Efficiencies (EDGE) certificate, Environmental Assessment Method (BREEAM) certificate as defined by the Building Research Establishment BREEAM, certificate issued by the German Sustainable Building Council (DGNB), GREEN STAR, Leadership in Energy and Environmental Design (LEED) certificate or an equivalent internationally-renowned green building certification system acknowledged by IFC.

**EDGE: Excellence in Design for Greater Efficiencies**

## **Green Building Certification**

### **New and Existing Buildings in Portfolio**



#### **Access Green Finance**

Comply with the Green Bond standards, REIT, access green finance

#### **Future proof your assets**

Identify underperforming buildings and address ahead of legislation

#### **Streamline ESG Reporting**

Easily prove compliance with ESG Reporting requirements

# WHAT IS THE COMMERCIAL VALUE OF GREEN BUILDINGS?

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# GREEN BUILDINGS COST ~3% MORE UPFRONT, BUT YIELD A ~3 YEAR PAY BACK

this translates to different business cases for different stakeholders.

STAKEHOLDER	BUSINESS CASE = reputational benefits + these other financial benefits...
<b>Developers</b> deciding to certify	faster sales, potentially higher prices, access to green finance
<b>Owners</b> buying green	lower operating costs, higher occupancy and rentals, stronger asset value appreciation, access to green finance
<b>Occupiers</b> renting space	lower operating costs
<b>FIs</b> launching a green building business	access to green finance (diversifying funding sources and potentially lowering funding costs), increase in business volume, capturing new forward-looking clients, greater loyalty from existing clients whose game they help raise, the opportunity to cross sell from construction to mortgage finance, lower NPLs, better collateral values
<b>Policy-makers</b> launching (non-fiscal) incentives	quantifiable results relevant to NDCs, more efficient infrastructure and hence more competitive businesses, lower subsidies for utility bills, and higher disposable income for all residents.

# THE BENEFITS OF BUILDING GREEN OUT-WEIGH ADDITIONAL UPFRONT COSTS

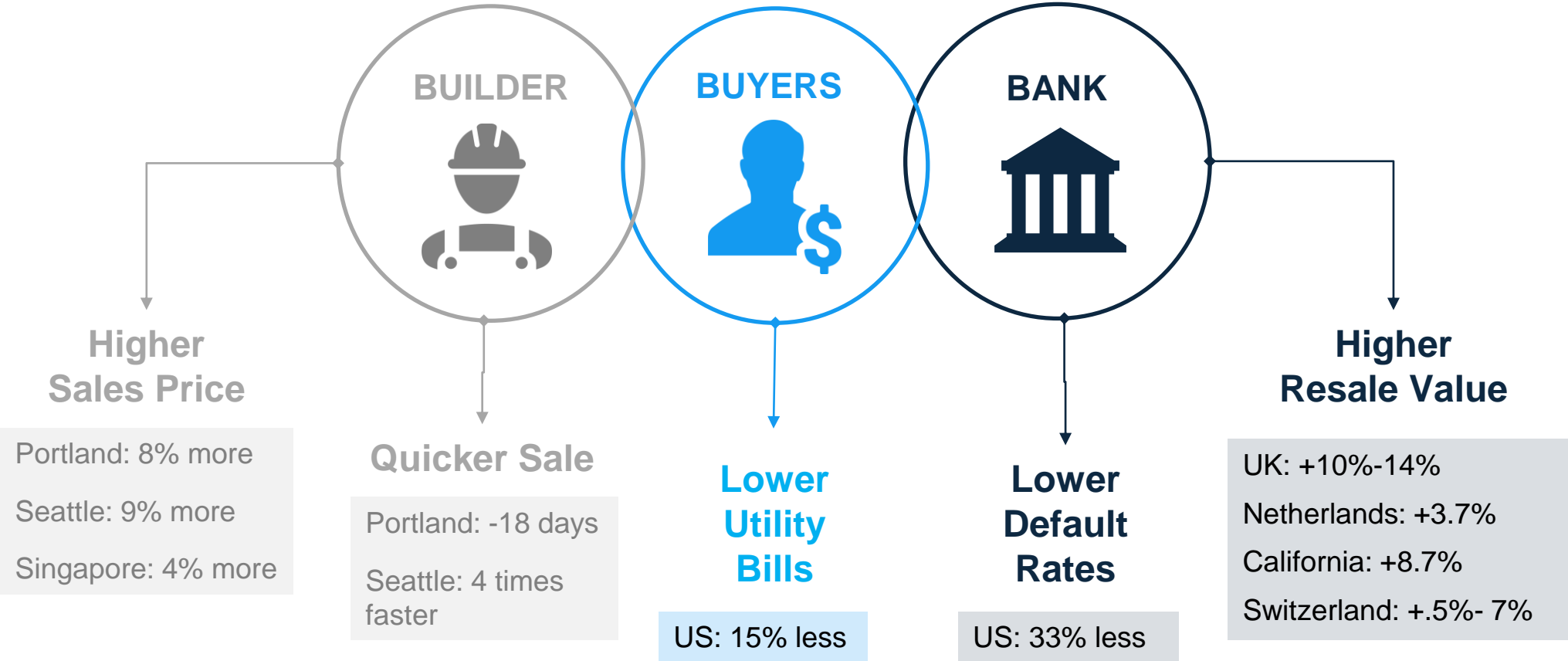
The incremental cost of building green is generally **less than 3%** of construction costs. These benefits more than justify any increase in costs:



- 1** LOWER OPERATING COSTS
- 2** SELL OR RENT FASTER AND AT HIGHER PRICES
- 3** FUTURE-PROOFING AGAINST HIGHER ENERGY COSTS AND CLIMATE CHANGE POLICIES

# GREEN BUILDINGS CREATE VALUE FOR ALL STAKEHOLDERS

Data from mature markets show green buildings have higher sales prices, quicker sales cycles, lower operational costs, lower loan default rates, and higher resale values.



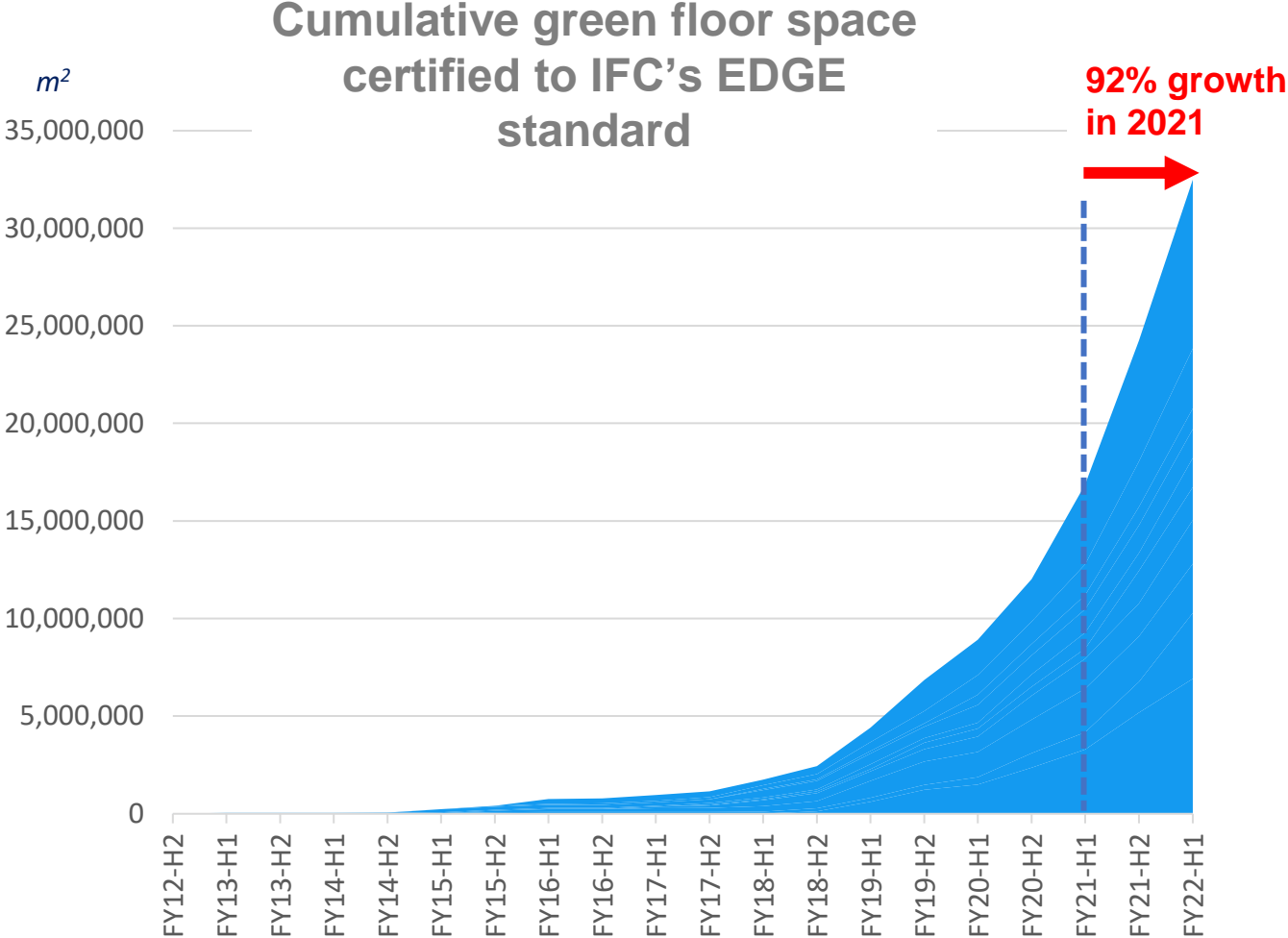


# WHY SHOULD FINANCIAL INSTITUTIONS CARE ABOUT GREEN BUILDINGS?

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# GREEN BUILDING IS GROWING FAST AND ACROSS THE WORLD



## Colombia mainstreams green buildings

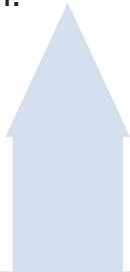
In less than 4 years the Colombian market for new construction moved from zero to **over 20% green-certified in 2021**

# INVESTORS AND REGULATORS ARE SETTING NEW STANDARDS

Standards responding to government and private investor demand for green definitions all include green buildings



- ICMA releases the [Green Bond Principles](#) as well as [guidelines for green buildings](#).
- EDGE is listed as an accepted certification standard. (See Section E: Certification Standards).
- Used by property developers and investors to obtain data on the performance of their investments.
- EDGE can be used completing the [Real Estate Assessment](#) or the [Developer Assessment](#).
- CBI releases standards for green bonds funding [residential](#) or [commercial](#) buildings.
- EDGE is included as a qualifying certification system.
- Global disclosure system for [investors](#), [companies](#), [cities](#), [states and regions](#) to manage environmental impacts.
- Protocol is established for reporting to CDP using EDGE.
- [EU Taxonomy](#) became law Dec 6 2021, enforced from Jan 2022.
- EDGE definition of 20% reduction in kWh / m<sup>2</sup> / year is aligned with EU Taxonomy Principles.
- **Dozens of emerging economies are now developing similar taxonomies**



[GFANZ](#) - Over 450 members from over 45 countries representing over \$130 trillion commit to science based targets for Paris-alignment, including 50% emission reductions by 2030 and reporting progress annually.



# BANKS ARE OFFERING INCENTIVES FOR GREEN BUILDINGS

Incentives can include lower interest rates or free technical assistance.



DAVIVIENDA

ProCredit Bank



# BANKS ARE OFFERING INCENTIVES FOR GREEN BUILDINGS



**ABOVE:** Greenox, Istanbul, Turkey  
**MIDDLE:** Dr. Lutfi Kirdar Kartal Training and Research Hospital, Istanbul, Turkey  
**BELOW:** Renault Bucharest Connected, Romania



# ADDED COSTS ARE LOW AND THE BENEFITS ARE HIGH EVEN IN AFFORDABLE HOUSING

A cost vs benefits empirical study of affordable housing in South Africa shows that the incremental cost of greening homes was only 1-1.5% more in construction costs and the home buyers saved that amount in utility bills within a year.

Renters annual utility bill savings equated to a whole months rent

Case Study	Type	Incremental cost per unit
1	1 bed 1 bath 34 m2 50 units	USD 500
2	2 bed 1 bath 46 m2 200 units	USD 560
3	2 bed 2 bath 75 m2 150 units	USD 450
4	2 bed 1 bath 66 m2 150 units	USD 370
5	2 bed 1 bath 55 m2 290 units	USD 900



Actual Savings On-site  
ZAR 555 = \$42/MONTH

# IF THERE IS SO MUCH VALUE IN GREEN BUILDINGS, WHY ARE WE NOT BUILDING AND FINANCING GREEN?

QUIZ



- MISPERCEPTION
  - Inexperienced developers over-estimate costs
- COMPLEXITY
  - Cost-benefit analysis of green options has been complex
- AFFORDABILITY
  - Certification has been unaffordable

# HOW DOES GREEN BUILDING CERTIFICATION HELP DEMONSTRATE THE COMMERCIAL VALUE?

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# SEVERAL GREEN BUILDING CERTIFICATION SYSTEMS EXIST

“Tools that examine the performance or expected performance of a ‘whole building’ and translate that examination into an overall assessment that allows for comparison against other buildings.”

- There are tens of green building rating systems worldwide.
- Some focus on a particular building type (residential or commercial)
- They all provide Green Targets or credits to rate level of sustainability



## THE MINIMUM REQUIREMENTS FOR ENERGY AND WATER REDUCTION IN THE MOST APPROPRIATE RATING SYSTEMS.

	Energy Efficiency	Water Efficiency	Materials Efficiency
LEED [USA]	10%	20%	0%
Energy Star [USA]	15%	0%	0%
Green Mark Singapore	20%	23%	0%
India: GRIHA	14%	23%	0%
Indonesia: Greenship	10%	20%	0%
Malaysia: GBI	10%	10%	0%
Malaysia			
UAE: Estidama	17%	23%	0%
BREEAM [UK]	0%	0%	0%
Philippines: BERDE	0%	0%	0%
Average	15%	17%	0%
Median	15%	20%	0%

# LEED, BREEAM AND EDGE ARE CERTIFICATIONS GLOBALLY RECOGNIZED BY GREEN FINANCE STANDARDS

Energy and Water use and CO2 emissions are the essential areas to focus on for a good green building rating system



# EDGE WAS DESIGNED BY IFC FOR FINANCIAL INSTITUTIONS



## OBJECTIVE

**To help banks launch a green buildings investment program for green construction finance, green mortgages, and/or green bonds.**

## ADVANTAGES FOR BANKS

- ✓ Leverage demand for green finance
- ✓ Diversify investor base.
- ✓ Lower investment risk with both developers and homebuyers.
- ✓ Future-proof portfolios against energy price rises
- ✓ Reduce reputational and policy risk.
- ✓ Capture greater market share.
- ✓ Achieve recognition.

# EDGE OFFERS A SUITE OF TOOLS

1.

## Free Software



Further Resource:  
[EDGE Software Demo](#)

2.

## Achievable Standards



EDGE standard: 20% reduction in **energy** and **water** use in operation and energy in **materials** relative to local BAU baseline

3.

## Third-party Verified Label



Administered by the largest network of green building certification providers in the world

# AN EDGE CERTIFICATE CAN BE USED AS A VERIFICATION INSTRUMENT FOR CONSTRUCTION LOANS AND MORTGAGES AS WELL AS THE ISSUANCE OF GREEN BONDS



THIS CERTIFIES THAT  
**Oficinas Santa Catarina**  
HAS ACHIEVED AN  
**EDGE CERTIFICATE**  
CERTIFICATE NUMBER  
GP2-MEX-17120610012949

Exemplifying achievement in the following areas:

- 34%**  
Energy Savings
- 32%**  
Water Savings
- 42%**  
Less Embodied Energy in Materials

24.00 tCO<sub>2</sub>/year  
Operational CO<sub>2</sub> emissions

12.40 tCO<sub>2</sub>/year  
Operational CO<sub>2</sub> savings


DEVELOPED BY  
**MIFINSA**

CERTIFIED BY  
**Green Business Certification Inc. (GBCI)**

*Mahesh Ramanujam*

Mahesh Ramanujam, President and CEO, Green Business Certification Inc.  
DATE OF ISSUE: 21-FEB-2019

**WORLD BANK GROUP**  
THE WORLD BANK IFC International Finance Corporation  
GBCI



**Edge** Excellence In Design For Greater Efficiencies

THIS CERTIFIES THAT  
**Oficinas Santa Catarina**  
Parque Finsa Santa Catarina  
Nuevo León,  
México

DEVELOPED BY  
MIFINSA

HAS ACHIEVED AN  
EDGE CERTIFICATE

CERTIFICATE NUMBER  
GP2-MEX-17120610012949

WAS AUDITED BY  
María de Lourdes Salinas  
EDGE Software Version: v2.1.5

CERTIFIED BY  
Green Business Certification Inc. (GBCI)

*Mahesh Ramanujam*

Mahesh Ramanujam, President and CEO, Green Business Certification Inc.

**GBCI**

DATE OF ISSUE  
21-FEB-2019

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**ENERGY MEASURES**  
Reduced Window to Wall Ratio  
Reflective Paint/Tiles for Roof  
Variable Refrigerant Volume (VRV) Cooling System  
Energy-Saving Light Bulbs - Internal Spaces  
Energy-Saving Light Bulbs - External Spaces  
Occupancy Sensors in Bathrooms, Conference Rooms, and Closed Cabins

**WATER MEASURES**  
Low-Flow Faucets in Bathrooms  
Dual Flush for Water Closets in Bathrooms  
Water-Efficient Faucets for Kitchen Sinks

**MATERIALS**  
Floor Slabs - Concrete Filler Slab  
Roof Construction - In-Situ Reinforced Concrete Slab  
External Walls - Precast Concrete Panels  
Internal Walls - In-Situ Reinforced Wall  
Flooring - Finished Concrete Floor  
Window Frames - Aluminium

[www.edgebuidlines.com](http://www.edgebuidlines.com)  
EDGE is a registered trademark of IFC. © IFC 2019

The EDGE standard requires 20% efficiencies in energy, water and materials compared to a local benchmark. Predicted efficiencies are not a guarantee of future operational performance. Energy savings may be associated with virtual energy for comfort depending on the presence of heating and cooling systems. Virtual energy does not contribute savings to utility bills.

This certificate is issued by the Certifier based on information provided by the client and the audit by the Auditor, and is subject to the terms and conditions of the Certifier. Contact [edge@ifc.org](mailto:edge@ifc.org) if the above measures are not consistent with your observation on the project.

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**GREEN CERTIFICATION ENSURES GREEN PERFORMANCE**

# WHAT PRODUCTS CAN FINANCIAL INSTITUTIONS OFFER TO TAP INTO THE GREEN BUILDINGS MARKET?

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QUIZ



# GREEN CONSTRUCTION FINANCING COULD ALLOW BANKS TO OFFER LARGER LOANS AND BETTER TERMS

Higher loan-to-cost ratio and a greater collateral to sales ratio

	STANDARD CONSTRUCTION LOAN	GREEN BUILDING CONSTRUCTION LOAN	%
BASE BUILD COST	\$ 50,000	\$ 50,000	
EE IMPROVEMENTS		\$ 1,000	
TOTAL COST	\$ 50,000	\$ 51,000	
CONSTRUCTION LOAN	\$ 33,000	\$ 34,000	3%
LOAN-TO-COST	66%	68%	3%
PRE-SALES (MAX 20%)	\$ 10,000	\$ 10,000	20%
DEVELOPER'S EQUITY	\$ 7,000	\$ 7,000	14%
HIGHER SALES PRICE	\$ 65,000	\$ 70,200	8%
COLLATERAL-TO-SALES RATIO	1.97	2.06	5%
RATE	15%	15%	
TERM	3	3	
QUICKER SALE		4X	

## HIGHER LOAN AMOUNT



- Additional cost of efficiency measures
- Costs can be lowered if EDGE is utilized early in process

## HIGHER LOAN-TO-COST



- Lower risk to borrower allows for higher loan-to-cost ratio

## WIN-WIN



- Higher valuation, better collateral

# A GREEN MORTGAGE EXAMPLE

	STANDARD BUILDING: STANDARD MORTGAGE	GREEN BUILDING: GREEN MORTGAGE	
BASE PURCHASE COST	50,000	50,000	
GREEN MEASURES		1,500	
20% DOWN PAYMENT	(10,000)	(10,300)	
LOAN AMOUNT	40,000	<b>41,200</b>	3%
RATE	11%	11%	
TERM	20 yrs	20 yrs	
MONTHLY PAYMENT	\$413	\$425	
ENERGY SAVINGS		(20)	
NET MTHLY PAYMENT	\$413	<b>\$405</b>	-2%
BANK INCOME (YR 1)	4,371	<b>4,502</b>	3%

## HIGHER LOAN AMOUNT



- Additional cost of efficiency measures
- Costs can be lowered if EDGE utilized early in process

## TERMS CAN VARY



- Benefits accrue even on commercial terms, but bank can incentivize adoption

## WIN-WIN



- Lower bills for the borrower
- Higher income for the bank



# COLOMBIA: BANCOLOMBIA ISSUED GREEN BONDS AND USED ITS OWN RESOURCES FOR GREEN CONSTRUCTION FINANCING AND GREEN MORTGAGES



## 1. First Bond

**\$117M**

- IFC was the sole investor.
- 1st issuance in Colombia.
- 17 events with 300 developers, supported by a major marketing push.

## 2. Own Resources

**\$175M**

- \$175M invested in green construction financing and green mortgages.
- Green mortgages only for EDGE-certified properties.

## 3. Second Bond

**\$100M**

- IFC was not involved.
- Oversubscribed 2.8 times.
- 72 domestic investors.
- Objective to achieve better pricing than original bond.



**OFFER FOR DEVELOPERS:** variable loan for green construction financing from 0.5% up to 2% less than conventional market rates

**OFFER FOR HOMEBUYERS:** discounted rate of 65 basis points for the first seven years of the loan

# ROMANIA: GREEN BUILDING COUNCIL (ROGBC)'S GREEN MORTGAGE MODEL WITH RAFFEISEN BANK

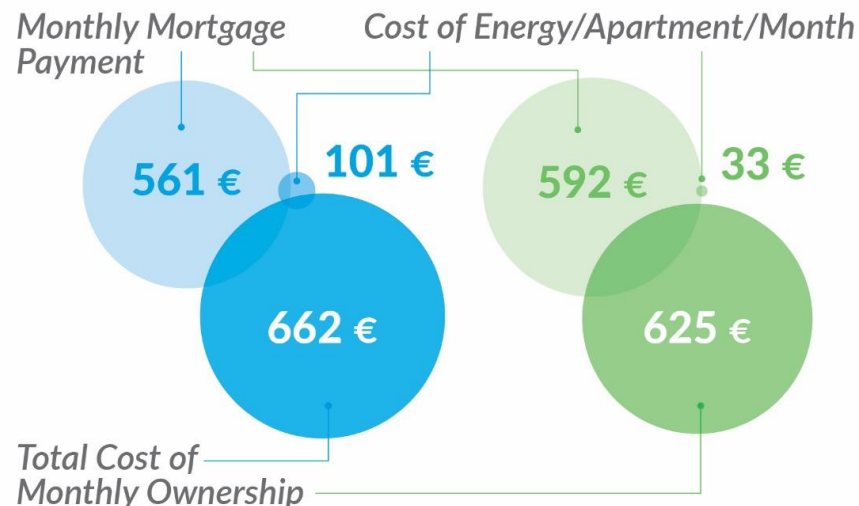
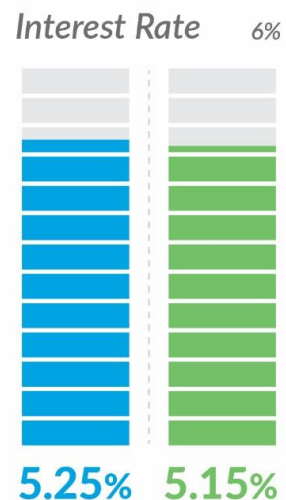


EDGE Advanced Certified properties qualify for green mortgages and commercial loans in Romania.

**Raiffeisen Bank: the Green Mortgage category, over 50% of the volume of real estate loans granted by the bank in 2022**

## RoGBC's GREEN HOMES & GREEN MORTGAGES CALCULATION

■ EPC "B" Rated Home ■ RoGBC Qualified Green Home



# WHAT STEPS CAN A BANK TAKE TO DEVELOP A GREEN PRODUCT?

---

QUIZ



# STEPS TOWARDS A SUCCESSFUL GREEN BUILDING PORTFOLIO



# DISCUSSION: THOUGHTS AND IDEAS

---



# ANNEXES

**The free EDGE software gives developers  
a rough idea of costs in 20 minutes  
– see how here**

<https://bit.ly/EDGEtutorial>

# EU Taxonomy alignment with EDGE

## EU Taxonomy

## EDGE

### Construction of new buildings

10% savings on primary energy demand ( $kWh/m^2/yr$ ) based on EU member states' Nearly Zero Energy Building (NZEB) standards

20% savings over local EDGE baseline (i.e. business as usual today for new construction measured in  $kWh/m^2/yr$ )

### Building renovation

Meet local requirement as per the Energy Performance of Buildings Directive, **or**

30% savings over the performance of the same building before the renovation

20% savings over local EDGE baseline

### Acquisition and ownership

Built on or after 2021 – 10% savings over NZEB standards, **or**

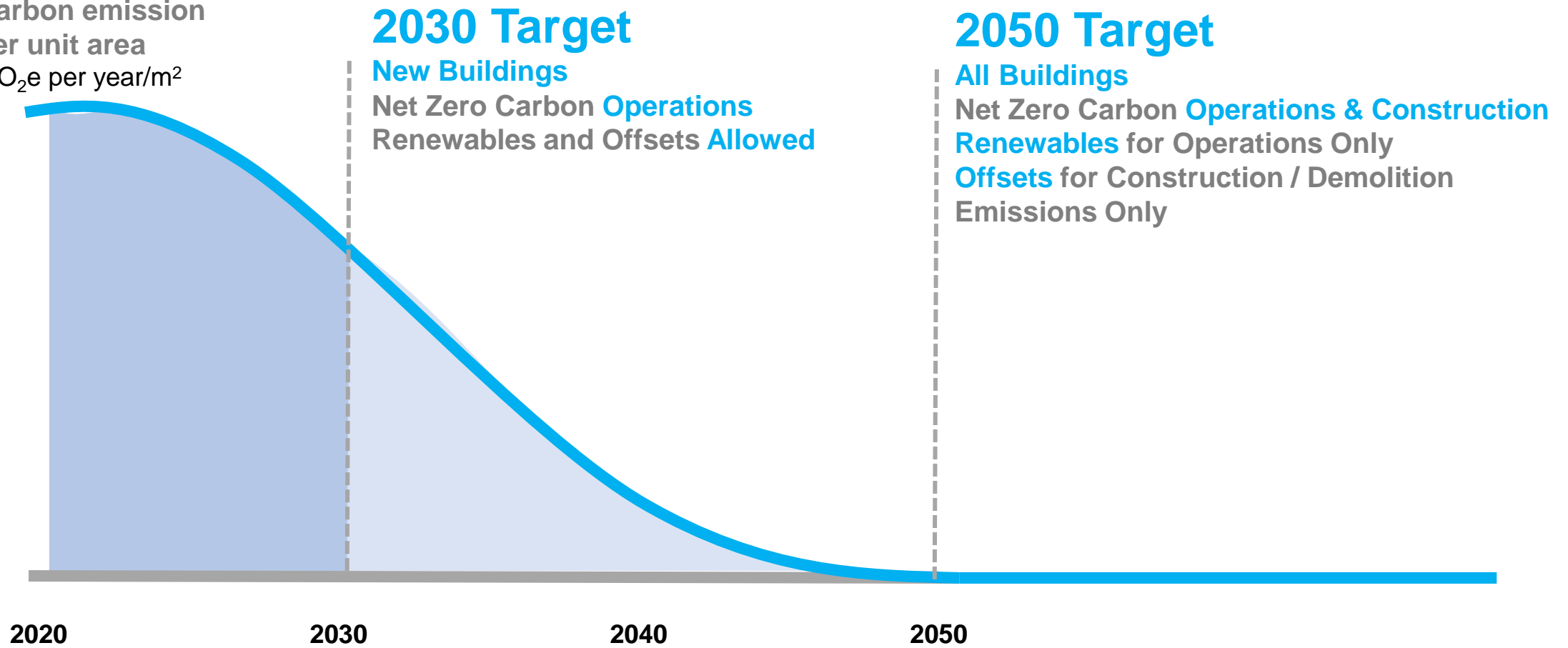
Built before 2021 – comparable performance to the top 15% of the national stock or it has an EPC class A

20% savings over local EDGE baseline

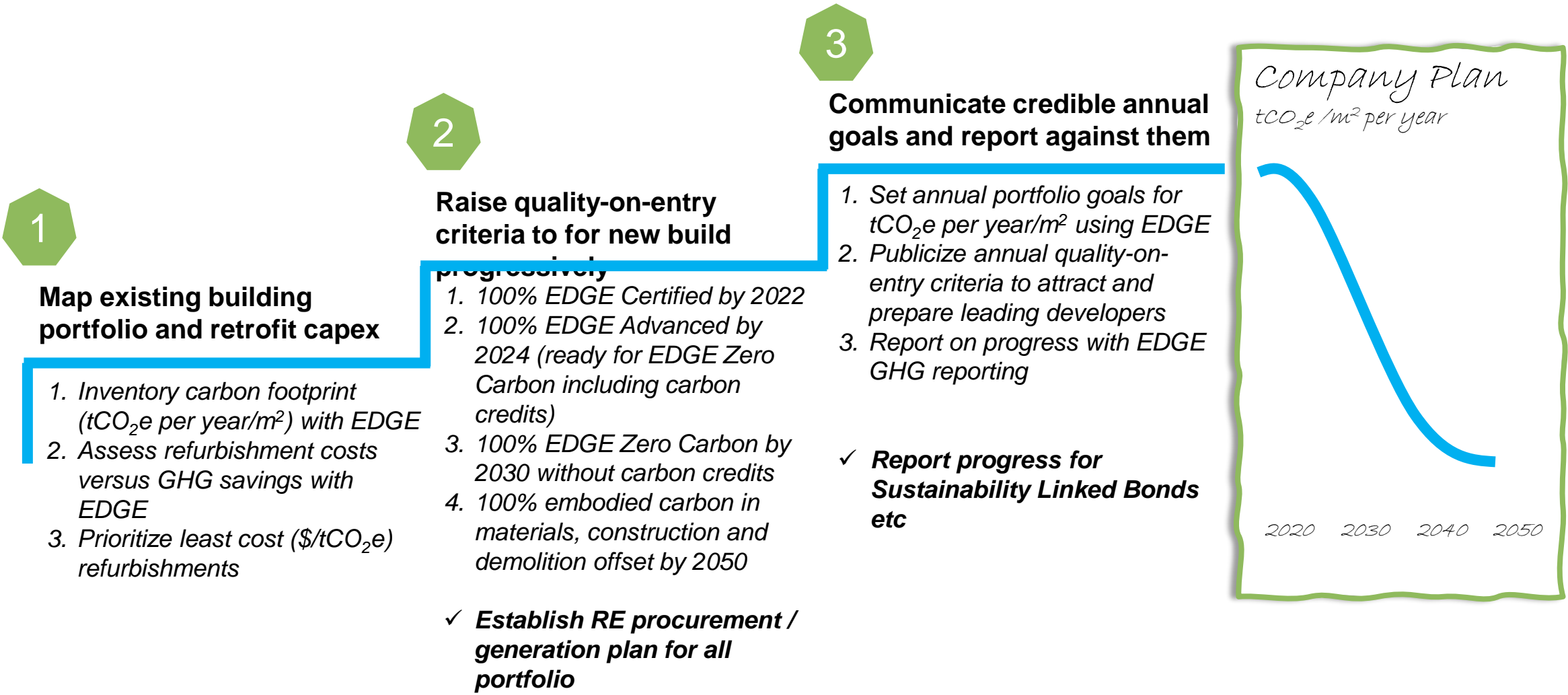


# Mapping a Zero Carbon Pathway for Buildings

Carbon emission  
per unit area  
tCO<sub>2</sub>e per year/m<sup>2</sup>



# Mapping a Zero Carbon Pathway for a Building Portfolio with EDGE



# EDGE Zero Carbon Certification of Whole Portfolio: NEO Case Study

## 1. Map building portfolio

Seven office buildings (289,376 m2) constructed 1999-2016.

## 2. Plan retrofits

Three-year plan.

## 3. Design-certify retrofit plan

✓ **EDGE Advanced**

Energy efficiency 41% to 49%

## 4. Offset non-renewable energy for

✓ **EDGE Zero Carbon for Retrofits**

Preliminary Certified October 2021



“Net zero buildings can be achieved by applying a creative approach to building design, construction, and operations and by looking at the overall impact of emissions on your built environment. Our existing buildings are not initially designed to be net zero, but through deep management commitment and strategic policy structures, we were able to achieve Net Zero for all 7 buildings. If we at NEO can do this, I’m sure all our fellow owners, developers, and managers can also make the commitment and reach net zero.”

#IntentToAction  
#TogetherForOurPlanet  
#COP26

NEO

Gie Garcia, MD, Neo Property Management Inc.



“Net-zero is far from simple but it’s realistic and possible”

EDGE Zero  
Carbon Pledge  
Wall pipeline  
exceeds  
**\$10bn**  
by 2030



[www.edgebuildings.com/take-the-zero-carbon-pledge/](http://www.edgebuildings.com/take-the-zero-carbon-pledge/)

# Consumers' demand for energy efficiency investments





# Stimulating Consumers' Demand for Energy Efficiency Investments

Emerging results from EEFIG's work on the subject



*Presentation by Carsten Glenting, [cag@vmas.dk](mailto:cag@vmas.dk),  
at UNEP FI Energy efficiency capacity building,  
28 April 2023*



# The issue

- Energy efficiency in buildings and industries are a key enabler for the ambitious climate ambitions of the EU.
- The EC has developed a broad policy foundation for energy efficiency including legislative instruments such as the Energy Efficiency Directive (EED) and the Energy Performance of Buildings Directive (EPBD).
- This policy framework is supplemented by policies and programmes at the national, regional and local levels through transposing EU policies and by initiating others including different financing programmes and support facilities to promote energy efficiency.
- However, the demand for energy efficiency investments from the consumers and final energy users' side is still sub-optimal to sufficiently contribute to the Europe Green Deal, the objectives of the REPowerEU Plan and the EU's commitments to the Paris Agreement on climate change.

# The EEFIG Working Group

The Working Group on Stimulating Consumers' Demand for Energy Efficiency Investments under the Energy Efficiency Financial Institutions Group (EEFIG) analyzed the issue during 2022-2023

The objectives of the WG were to:

- identify and assess the main barriers and drivers to demands for EE investments from consumers and final users
- identify best practices for stimulating demand for EE investments
- formulate general and specific recommendations on what tools and policy instruments are likely to be most effective in increasing consumers and final users demand for EE investments.

The members of the WG were:

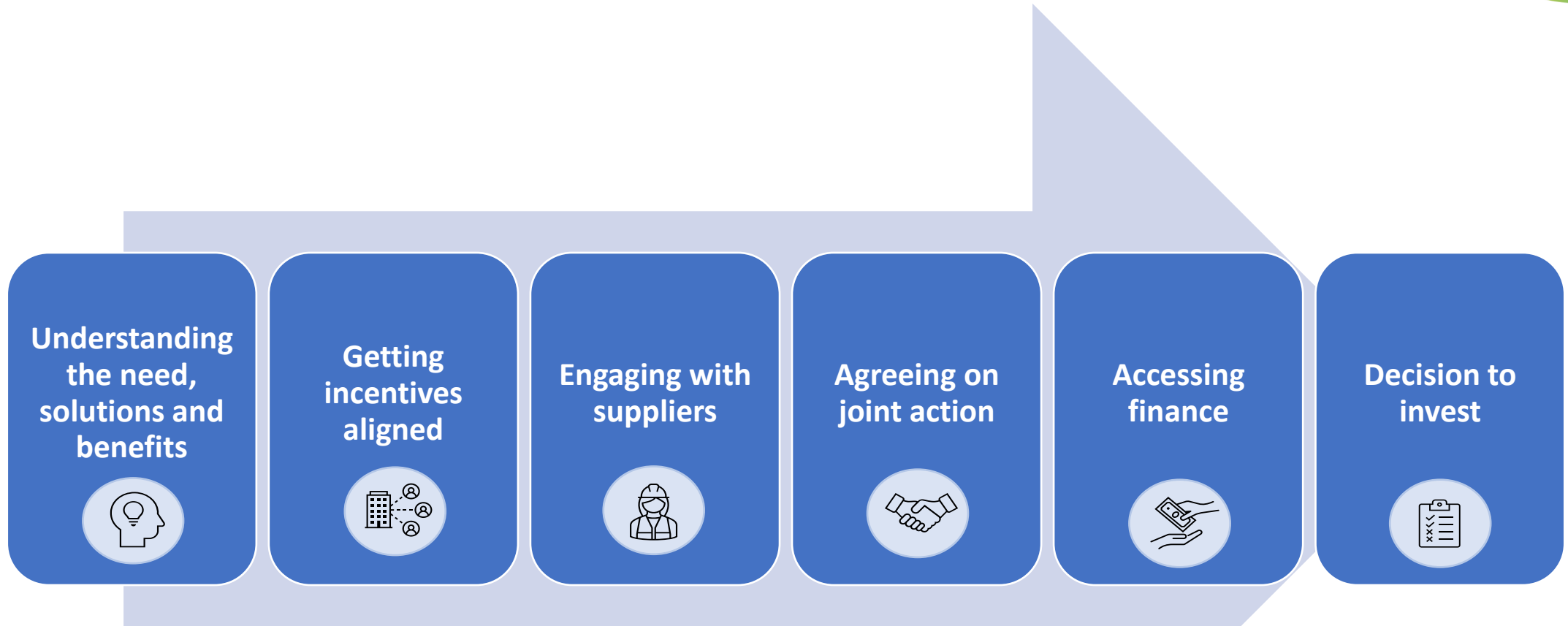
- Financial Institutions including public and private banks, commercial and impact investors
- EU funded projects within demand activation and EE financing
- Public energy agencies
- Housing associations
- Technology providers and industry associations
- Research institution and consultancy
- European Commission



# Types of consumers and final energy users

- A typology of consumers and final energy users was established to allow differentiated analysis of barriers and best practice interventions.
- This included:
  - differentiation between owners, tenants and investors,
  - differentiation between professional property owners and private rental sector,
  - differentiation between single and multiple unit buildings, and
  - recognition of the special challenges for energy poor and vulnerable households and for SMEs.
- This typology proved useful in understanding the differences in barriers faced by different groups of consumers and energy users, and hence the differences needed in designing interventions to overcome the barriers.

# The decision process for an EE investment









# The barriers to uptake of EE investments

Barriers to demand for EE investments from consumers and final users can be grouped:

- **Information barriers** (understanding the energy efficiency opportunities, the economic and broader benefits and risks, and the process for support and implementation)
- **Incentive barriers** (getting split incentives aligned in rental property)
- **Trust barriers** (trusting market participants in the supply chain)
- **Coordination barriers** (agreeing joint action in multi-family and multi-business buildings, coordination of works, obtaining relevant permits)
- **Finance barriers** (limited or no access to financing for the investments, or support arrangements that inadequately target less affluent households)
- **Preference barriers** (prioritizing other needs over energy efficiency investments).

# Key barriers to uptake of EE investments

The barriers occur at different decision steps and affects different consumers in different ways:

Decision step	Barriers	Relevancy for different consumers
 Understanding the need, solutions and benefits	Information	Important to most types of consumers and final energy users in residential properties, but very important to vulnerable and energy poor households and to individual landlords in the Private Rental Sector.
 Getting incentives aligned	Incentives	Very important for tenants and landlords in rented properties.
 Engaging with suppliers	Trust	A general barrier in the residential sector where many decision makers have limited hands on experience with energy renovation.
 Agreeing on joint action	Coordination	Very important in multi-family, multi-business and mixed building units, whether owner occupied, rental or mixed.
 Accessing finance	Finance	Important to most types of consumers and final energy users in residential properties, but very important to vulnerable and energy poor households and to individual landlords in the Private Rental Sector.
 Decision to invest	Preferences	A general barrier as energy renovation always competes with other needs for attention and allocation of limited funds.

# Best practices for stimulating demand for energy efficiency investments - Buildings

- One-Stop Shops (OSS) - independent, credible, readily available guidance on how to identify the right solution for the individual building, who to contact for reliable implementation, and how to access available support instruments
- Financing mechanisms dedicated to the energy renovation of buildings
- Capacity building and qualifications of professionals (to improve the technical capacity to design, construct and maintain energy efficient buildings)
- Area-based approaches (delivered by city councils with local delivery partners)
- Digital demand activation tools – integration with public Energy Performance Certificate (EPC) database can help national government drive transition in synergy with local governments by providing homeowners with personalised information and assisting municipal officers in developing targeted campaigns, while respecting privacy.

# Best practices for stimulating demand for energy efficiency investments - SMEs

- One-Stop Shops (OSS), Financing mechanisms and Capacity building are also important for SMEs
- For SMEs the push for decarbonisation and energy efficiency is increasingly coming through the supply chain (SBTi).
- Investment decision making in enterprises can benefit from understanding and integrating the multiple benefits of energy efficiency into the assessment of investing options.
- Companies increasingly want an integrated approach to broader decarbonisation including energy efficiency and renewable energy.
- Facilitators (energy auditors, energy efficiency networks, FIs, ESCOs) can have an important role.

# Recommendations for key groups of stakeholders

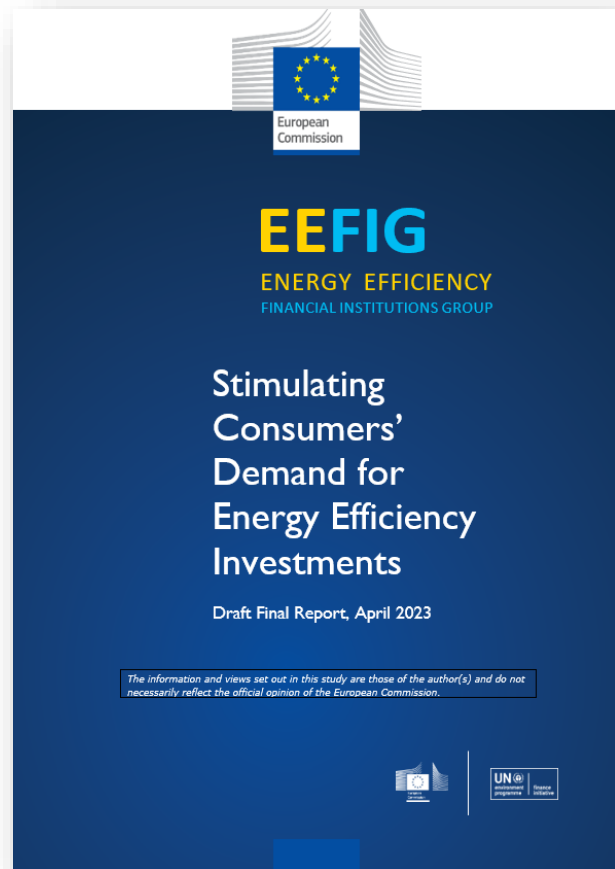
- **Sector stakeholders** (including builders and the supply chain) should facilitate consumer uptake of EE solutions through clear and trustworthy information, attractive renovation value propositions, simplified customer journeys, and cooperation with governments and financial institutions.
- **National governments** should facilitate the necessary framework conditions for consumers demand and uptake of EE solutions.
- **EU institutions** should continue to lead the establishment of a policy framework supporting demand activation for EE investments and facilitate replication of best practice examples outside of the geography where they are originated.
- **Financial institutions** should develop dedicated EE financing instruments, engage with national governments on blending of public guarantees and private funding for EE, and embed EE1st principles in their financing procedures.

# Specific opportunities for Financial institutions

- Take into account the EE1st principle in engaging with households and SMEs and offer solutions favouring deep retrofits over single measures.
- Invest in innovation around the business models and programme designs to develop dedicated EE financing instruments for households, building owners and SMEs, including in cooperation with solution suppliers.
- Engage actively with the public sector on the challenge of home refurbishment, including on blending of public guarantees and private funding for EE.
- Develop creative initiatives similar to the green mortgage label to create awareness for consumers to invest in EE measures.
- Work with other stakeholders to promote the benefits of investing in EE.
- Simplify existing products and standardise lending procedures as much as possible to make it easier for consumers to access financing support.



# Report to be published in June 2023



[The Energy Efficiency Financial Institutions Group \(EEFIG\) \(europa.eu\)](https://europa.eu)

[Working Group - Stimulate consumers' demand for energy efficiency investments \(europa.eu\)](https://europa.eu)

Thank you!

# Energy Efficient mortgages:- The case of Berlin Hyp



A company of LBBW

Berlin Hyp

## Green Finance at Berlin Hyp

Dirk Bartsch, Head of ESG

Bodo Winkler-Viti, Head of Funding & Investor Relations

UNEP FI energy efficiency capacity building workshop  
28 April 2023

# Berlin Hyp – Brief Overview



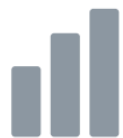
- > Founded 1868
- > One of Germany's leading commercial real estate financiers
- > Main refinancing instrument: Mortgage Pfandbrief



- > **Since July 1, 2022 Berlin Hyp AG is a 100% subsidiary of Landesbank Baden-Württemberg**
- > Member of the Savings Banks Finance Group
- > Institutional Protection Scheme; 0% risk-weighted for savings banks



- > ESG bonds as an important expansion of the bank's funding mix
- > Issuer of the first Green Pfandbrief
- > Most active European bank issuer of green bonds
- > 18 benchmark-sized green bonds outstanding in three different formats (Covered Bonds, Senior Preferred, Senior Non-Preferred)
- > First bank that issued a Sustainability-Linked Bond
- > May 2022: Inaugural Social Bond (Social Covered Bond)



	2022	2021	2020
Total Assets (EUR bn)	34.4	36.2	33.4
Operating income before risk-provisioning (EUR mn)	261.2	239.3	158.2
Allocation to the fund for general banking risks (EUR mn)	75.0	187.0	70.0
Pre-tax profit (EUR mn)	99.7	50.4	23.6
CET1 Ratio	13.7%	14.3%	13.4%



### Ratings








Moody's  
Fitch

	Senior Non-Preferred	Senior Preferred	Pfandbriefe
Moody's	A2	Aa3	Aaa
Fitch	A-	A	--



# Sustainability Management

## ESG structure – relevant topics handled from sustainability management team

-  Central coordination of ESG-relevant topics and internal ESG-committees
-  Stakeholder management and engagement in ESG-initiatives
-  Non-financial reporting as GRI, TCFD, PRB and UNGC
-  Sustainability ratings with focus on ISS-ESG, Sustainalytics and MSCI
-  Regulatory issues, for example CSRD, taxonomy materiality assessment, new topics like biodiversity
-  Strategic alignment (target setting, regularly check of internal process, guidelines)
-  ESG-Education via trainings for employees

### Hot Topics



- Decarbonization of financed emissions
- Regulatory assessment regarding CSRD and Taxonomy



# Sustainability Ratings 2022

Industry Leader

Corporate ESG Performance

Prime

RATED BY ISS ESG

Ranked 4th out of 130 banks in the peer group Financials/Mortgage & Public Sector (April 2022)

S/G Rating	C+	„Prime“
Environmental Rating	B	„Prime“
Total:	B-	„Prime“

SUSTAINALYTICS

Ranked 1st out of 101 thrifts and mortgage banks worldwide (March 2023)

ESG Risk Report	7.1 out of 100	Negligible
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MSCI ESG RATINGS

AAA

CCC B BB BBB A AA AAA

Sustainability Rating (March 2022)	AAA
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# Our Path to Becoming a Green/ESG Real Estate Financier

## 2015

- Issuance of the first **Green Pfandbrief**
- Establishing a **Green Building Commission**  
Introduction of standardized processes



September 2015:  
Best Debut Deal

## 2016

- **Sales promotion:** price incentives for green building loans
- Publication of first **Annual Green Bond Reporting**
- Development/documentation **Green Bond Program**
- Issuance of Berlin Hyp's first **green senior unsecured bond**



February 2016:  
First Green Covered Bond

## 2017

- **Strategic objective:** 20% of loan portfolio to be green by 2020
- **Most active European bank issuer of green bonds**



September 2017:  
Most Impressive Bank  
Green/SRI Bond Issuer

## 2018

- Further **strengthening of eligibility criteria** in Berlin Hyp's Green Bond Framework
- Participation in **EeMAP** pilot scheme



September 2018:  
Best Green/ SRI Issuer  
for Impact Reporting

## 2019

- **Transfer of brand rights** „Green Pfandbrief“ to the Association of German Pfandbrief Banks (**vdp**)
- **Update** of impact reporting methodology
- **Development** of minimum standards for **Green Pfandbriefe** on national level (**vdp**)
- **Early achievement of strategic goal for 2020:** 20% of the loan portfolio green by the end of 2020



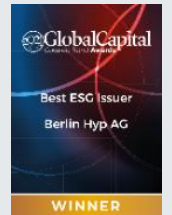
September 2019:  
Most Impressive  
Green/  
SRI Covered Bond  
Issuer

## 2020

- First issuance of **green private placements**
- **New strategic sustainability goals:** climate neutral by 2050, 1/3 green by 2030, complete carbon transparency by 2023, launch of transformation loan (Transformationskredit)
- First issuance of **green bond in foreign currency** (CHF 125 mn)

## 2021

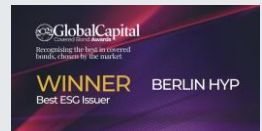
- Development/launch of **Carbon Footprint Assessment Methodology** to calculate carbon emission and intensity of the entire loan portfolio
- First bank to issue a **Sustainability-Linked Bond**
- Publication of a new ESG Target Vision



September 2021:  
Best ESG Issuer

## 2022

- Launch of a new **EU Taxonomy-aligned** Green Bond Framework
- Sustainable Finance Framework: Definition of Green Loan products
- **First taxonomy loan** for 100% EU taxonomy-compliant project development
- Publication of the **Social Bond Framework** / Issuance of the first Social Pfandbrief



September 2022:  
Best ESG Issuer

## 2023

- Issuance of the **first ESG dual tranche** as a combination of a **Social and a Green Pfandbrief** (EUR 1 bn)
- Publication of the first overarching **ESG Bond Report** for Green, Social, & Sustainability-Linked Bonds



April 2023:  
Asset-backed/Asset-based  
covered Social Bond of the  
year



## ESG targets: Dimensions and ambitions





# Sustainable Product Portfolio





# Taxonomy Loan - Financing Reference

Project “neuplan KI 140 München”

## Project "neuplan KI 140 Munich" - first taxonomy loan



<b>Customer</b>	<b>Neuplan zwei GmbH &amp; Co. KG</b>
<b>Asset class</b>	Office / commercial building
<b>Function Berlin Hyp</b>	Sole Lender
<b>Financing volume</b>	EUR 111 mn
<b>Loan period</b>	3 years

**Berlin Hyp is providing a loan of EUR 111 million to neuplan zwei GmbH & Co. KG to finance a development for “neuplan KI 140 München”, a new office building in Munich. The loan is provided as a Berlin Hyp taxonomy loan.**

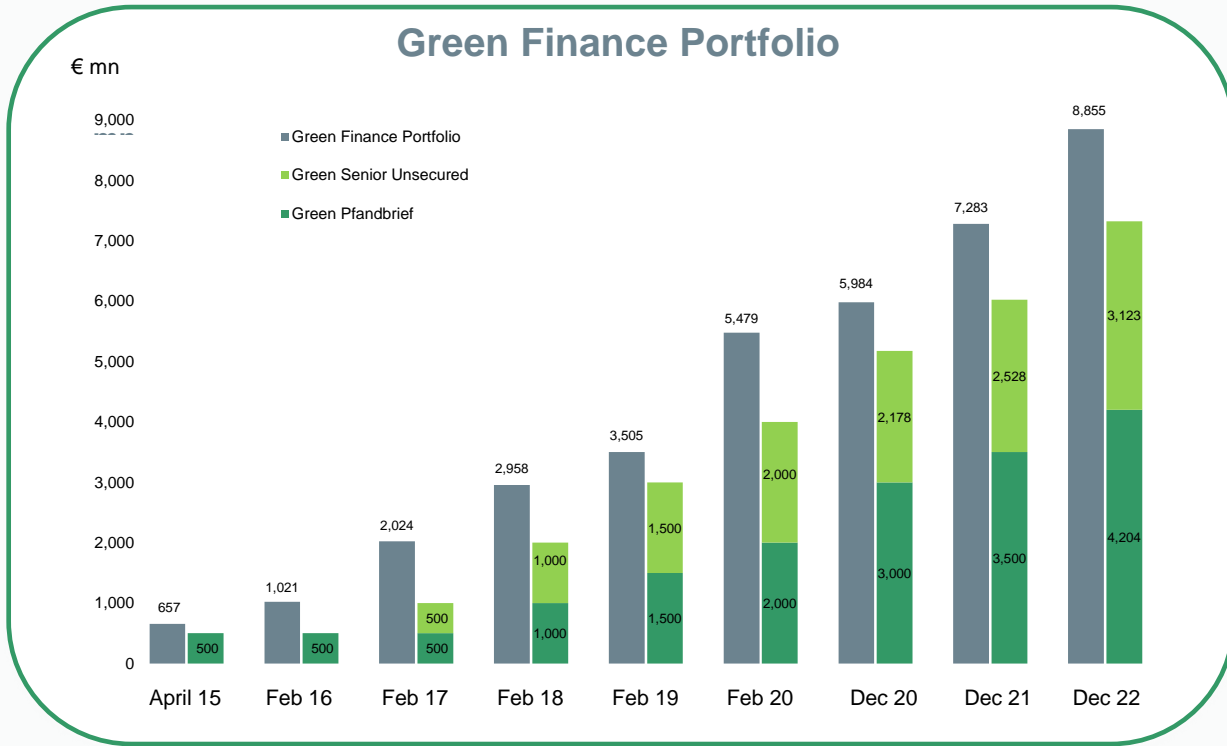
This will finance the construction of a new seven-story office building with three basement levels. The modern, u-shaped building has approximately 17,100 square meters of usable space and is rented to the Bavarian Red Cross on a long-term basis. Construction is planned to be completed at the end of 2024.

The construction plans are unique, both in the energy efficiency of the building and in the EU taxonomy-compliant project development. The project is also aiming to obtain the DGNB “Climate Positive” award for the building operation. This particular combination qualifies the financing as a Berlin Hyp Green Loan i.e. taxonomy loan and thus also makes it suitable for a Green Bond. The requirements of the loan include not only the achievement of the environmental goal "climate protection" but also compliance with minimum social requirements (Minimum Safeguards) and the DNSH (Do No Significant Harm) criteria at the same time. The taxonomy loan also benefits from preferential interest rates.

The new building will be located in the commercial area of the Obersendling district in Munich, which is historically characterized by a mix of industrial and residential buildings. This sustainable project development marks another step towards climate neutrality in addition to contributing to the continuous development of the neighborhood into an urban residential district with available office space.



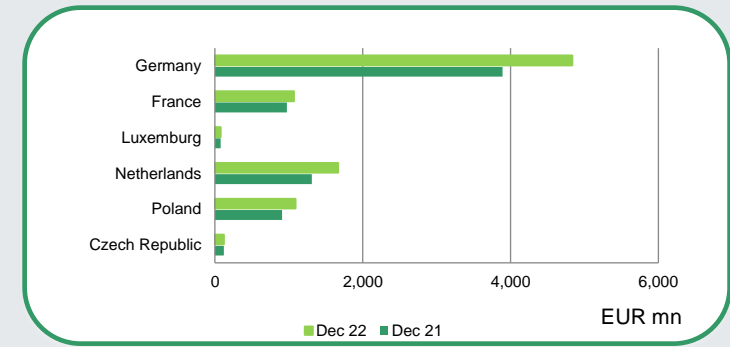
# Use of Proceeds – Portfolio Development



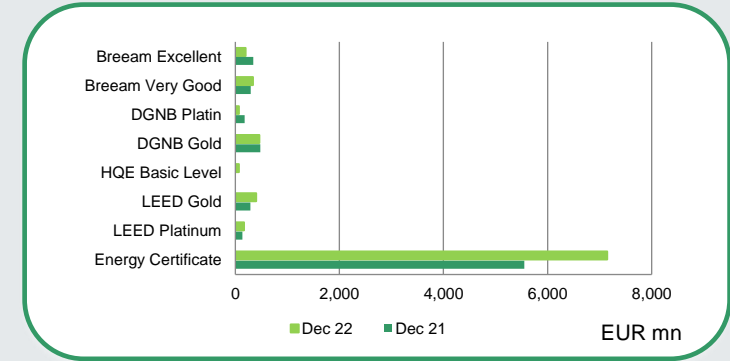
## 2022 & 2023 Green Bonds

- > January 2022: **Green Senior Preferred** EUR 500 mn due January 2027
- > February 2022: **Green Senior Preferred** CHF 100 mn due February 2025
- > July 2022: **Green Pfandbrief** CHF 200 mn due August 2026
- > August 2022: **Green Pfandbrief** EUR 1,000 mn due August 2025
- > January 2023: **Green Pfandbrief** EUR 500 mn due January 2033
- > February 2023: **Green Senior Preferred** CHF 150 mn due February 2026

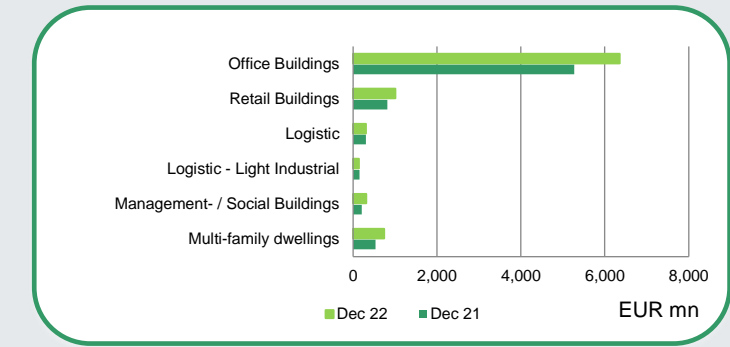
## Countries



## Certificates



## Type of Use





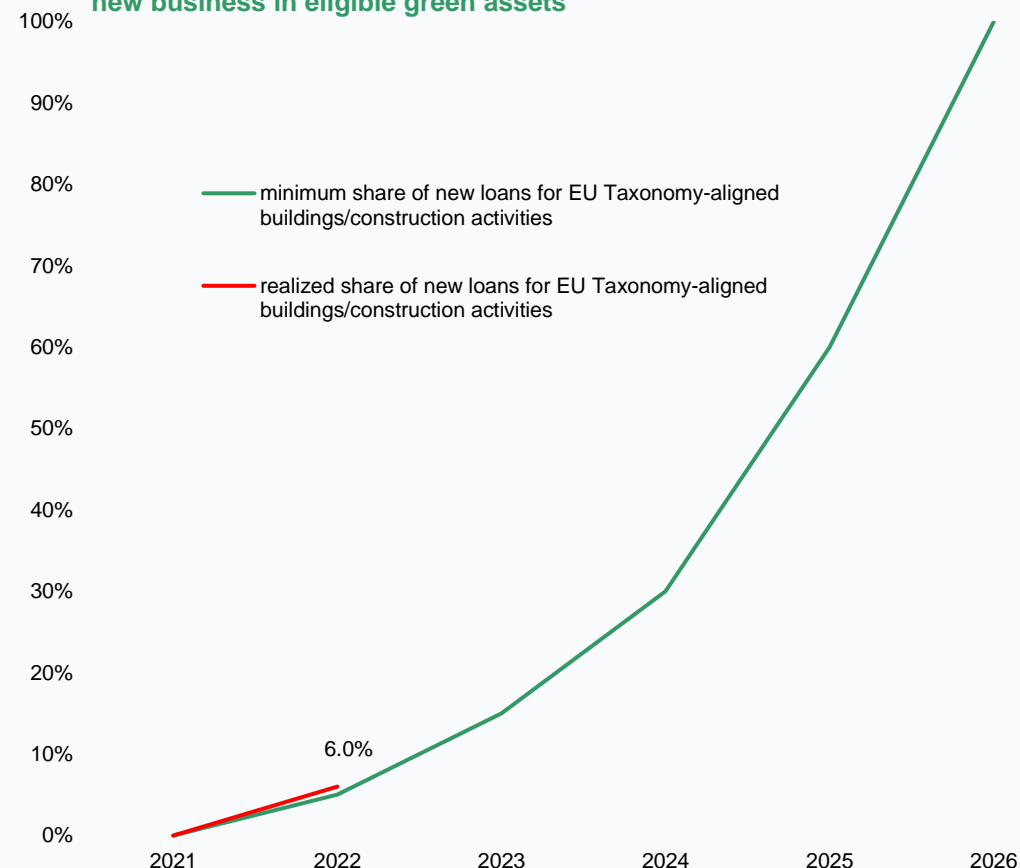
# Development Path Towards 100% Compliance with EU Taxonomy

## Creation of two green products aligned with two sets of eligibility criteria and which will co-exist in the Green Bond Framework until 2025

- > **Loans for energy-efficient green buildings** meeting the Eligibility Criteria defined under Berlin Hyp's 2020 Green Bond Framework and updated in 2021.
- > **Loans for EU Taxonomy-aligned buildings/construction activities** meeting the Eligibility Criteria aligned with the EU Taxonomy.

New Eligible Green Assets		
Year	Maximum share of new loans for energy-efficient green buildings (by year-end)	Minimum share of new loans for EU Taxonomy-aligned buildings/construction activities (by year-end)
2022	95%	5%
2023	85%	15%
2024	70%	30%
2025	40%	60%
2026	0%	100%

EU taxonomy-aligned building/construction loans as a percentage of new business in eligible green assets



Due to its long track record of activities supporting clients' efforts to avoid and reduce greenhouse gas emissions in the real estate sector, Berlin Hyp is focuses on Environmental Objective 1 of the EU Taxonomy, climate change mitigation.



# Process of Evaluation and Selection (I) – Eligibility Criteria Energy-efficient Green Buildings Loans

Criteria I			
Construction of new commercial and residential buildings	EPC energy efficiency class: buildings whose energy certificate corresponds at least to energy efficiency class A, or		
	Top 15 percent: buildings that are in the top 15 percent of the national or regional building stock in terms of primary energy demand, or		
	Buildings/construction projects that meet another technical review criterion of the EU Taxonomy.		
Criteria II			
Property type	Eligibility Criteria		
	Energy demand heating kWh/(m <sup>2</sup> *a)	Energy demand electricity kWh/(m <sup>2</sup> *a)	Total kWh/(m <sup>2</sup> *a)
Residential	60	-	60
Office	80	60	140
Retail	60	75	135
Hotels	95	60	155
Logistics buildings (use: storage)	30	35	65
Light Industrial (use: production)	105	65	170

Acquisition and ownership of commercial and residential buildings

Refurbishment of commercial and residential buildings





Eligible assets shall also meet other environmental and/or social criteria. These assets are not to be used for the production of arms, pesticides, tobacco, pornography, nuclear power, coal, oil and fossil fuels.



# Process of Evaluation and Selection (II) – Eligibility Criteria EU Taxonomy-aligned Loans

Buildings and construction activities are compliant with the EU Taxonomy if they fulfill the following technical screening criteria:

Green sub-categories	Eligibility criteria	UN SDGs
<p>Construction of new commercial and residential buildings <u>before 12/31/2020</u></p> <p>Acquisition and ownership of commercial and residential buildings built <u>before 12/31/2020</u></p>	<p><u>EPC Class</u>: Buildings which hold an Energy Performance Certificate that is at least Class A</p> <p>OR/AND</p> <p><u>Top 15%</u>: Buildings within the top 15% of national or regional building stock in terms of Primary Energy Demand based on one of the following approaches:</p>	 
<p>Construction of new commercial and residential buildings <u>after 12/31/2020</u></p> <p>Acquisition and ownership of commercial and residential buildings <u>built after 12/31/2020</u></p>	<p>The Primary Energy Demand of the building is at least 10% lower than the thresholds set for Nearly Zero-Energy Building (NZEB) requirements in national measures implementing Directive 2010/31/EU. It is verified by an Energy Performance Certificate (EPC), or before the reception of such an EPC, any document provided to building authorities proving the building's energy performance.</p> <p>For buildings larger than 5000 m<sup>2</sup>, the building resulting from the construction undergoes testing for air-tightness, thermal integrity and global warming potential.</p>	
<p>Renovation of commercial and residential buildings</p>	<p>Building renovation complies with the applicable requirements for major renovations: The energy performance of the building or the renovated part that is upgraded meets cost-optimal minimum energy performance requirements in accordance with the respective directive.</p> <p>OR/AND</p> <p>Renovation leads to a reduction of Primary Energy Demand of at least 30% when comparing the latest EPC before renovation with the one issued after renovation.</p>	

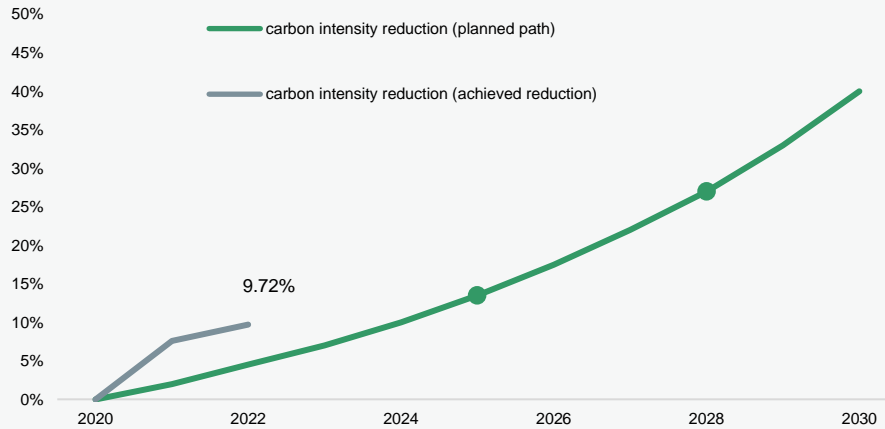
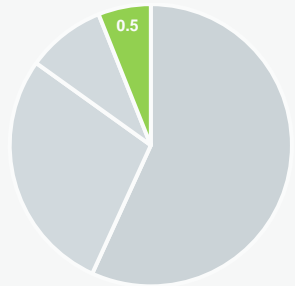
To be eligible in terms of loans for EU Taxonomy-aligned buildings/construction activities assets have to comply with Technical Screening Criteria and with the relevant „Do No Significant Harm“ criteria and in addition with Minimum Social Safeguards.



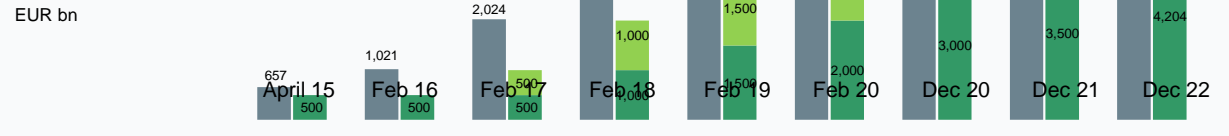
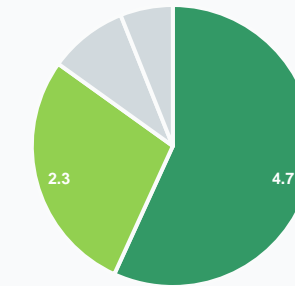
# ESG Bonds Overview



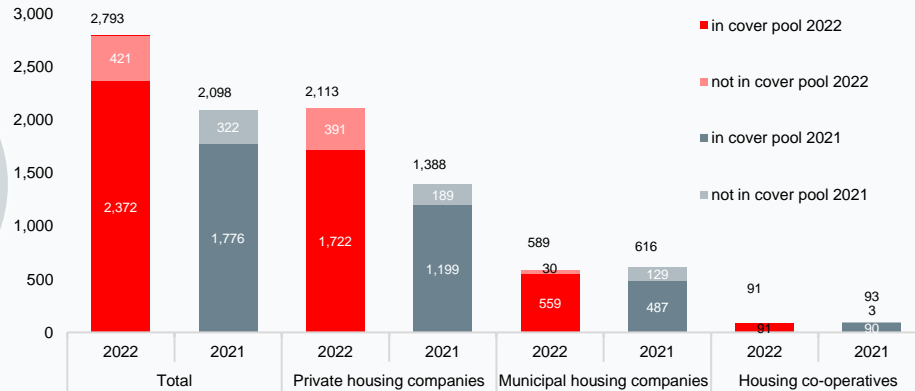
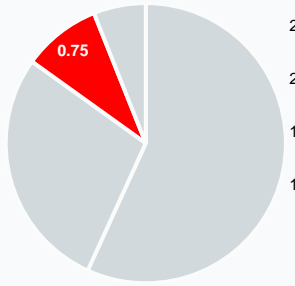
## Sustainability-Linked Bond



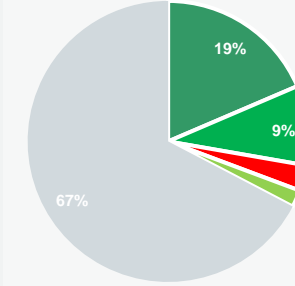
## Green Bonds



## Social Bond



## Status quo ESG Goals



- Green Pfandbrief
- Green Senior
- Social Pfandbrief
- SLB
- Conventional

- 9.72% carbon intensity reduction → 40% until 2030
- 33% ESG Bonds → 40% until 2025
- 30% Green Buildings → 33% until 2025
- 65% EPC transparency quota → 100% until 2023





## Your Contact at Berlin Hyp

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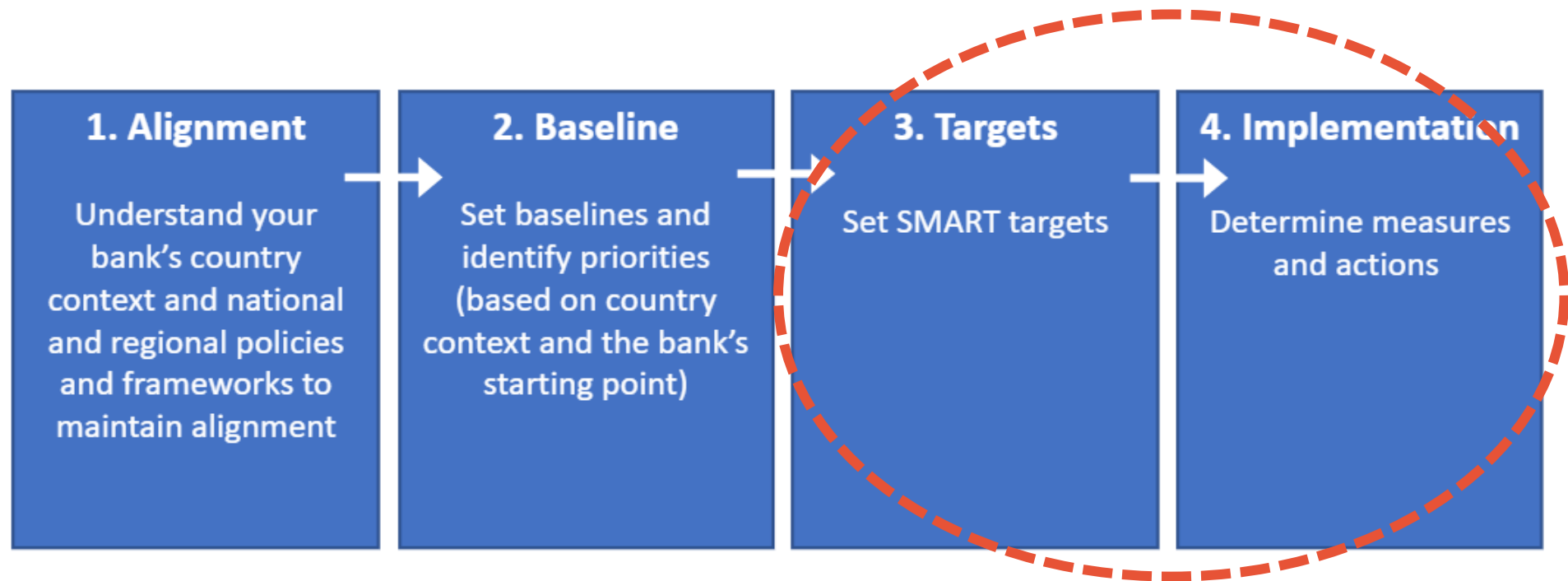
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# EE target setting: Target setting & implementation



# The target setting process (climate or resource efficiency)



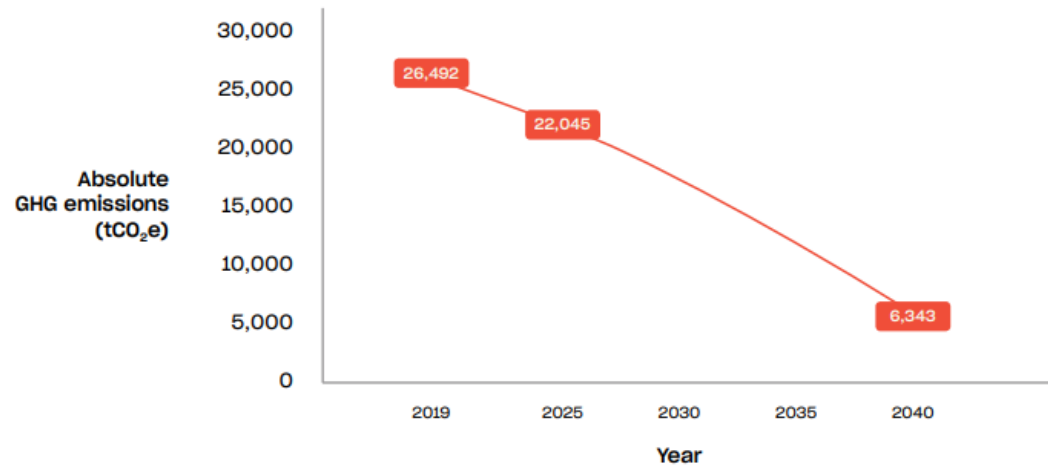
# Public examples from banks for climate targets with EE focus (Canada, Vancity)

## Residential buildings

- A 17% reduction in absolute emissions by 2025 from base year
- A 76% reduction in absolute emissions by 2040 from base year

Year	Target emissions (tCO <sub>2</sub> e)
2019 (base year)	26,492
2025	22,045
2040	6,343

Absolute emissions reduction targets



- To establish our 2025 targets, we used the Science Based Targets initiative Sectoral Decarbonization Approach (SBTi's SDA) tool for residential and service buildings. The SBTi defines and promotes best practice in science-based target setting.
- This tool uses data from the International Energy Association's Energy Technology Perspectives (IEA's ETP) 2017 and applies a 'beyond 2 degrees' scenario (B2DS), which falls within the Paris Agreement range of ambition: >50% probability of limiting global warming to 1.75°C above pre-industrial levels.
- While the scenario we used meets the *Guidelines for Climate Target Setting for Banks*, it does not meet the NZBA's ambition of >50% probability of limiting global warming to 1.5°C.
- However, we believe our targets meet the NZBA's ambition for two main reasons: our pathway and endpoint were modified to meet 2050 targets by 2040; and the SBTi's SDA tool resulted in more aggressive targets than the CRREM's Carbon Risk Assessment 1.5 degree aligned tool. This is because the SBTi tool uses global data whereas the CRREM tool considers a cleaner grid in Canada.
- Once updated SBTi tools become available based on a net-zero scenario, we will revisit our approach and look at updating targets if needed.

Explaining scenario choice

# Public examples from banks (Canada) - Vancity

PCAF data quality score	Mortgage balance (\$ million CAD)	% loan balance	% emissions
5	683 (A)	5%	6%
4	12,381 (B)	95%	94%

## Emission factors and external data used

Grid factors	British Columbia	Ontario <sup>1</sup>	Year	PCAF database	Source	Publication date
<b>Generation intensity</b> gGHG/kWh electricity generated	18.6	30	2019	Same source but more recent year <sup>2</sup>	BC: National Inventory Report 1990-2019 Part 3 – Page 70 <sup>3</sup> Ontario: Page 66 of the same report	2021

<sup>1</sup>We applied this emission factor to commercial real estate residential homes located on Ontario (see commercial real estate section)

<sup>2</sup>PCAF uses 2018 data that references the National Inventory Report. We used 2019 data, drawing directly from the National Inventory Report 1999-2019

<sup>3</sup>[https://publications.gc.ca/collections/collection\\_2021/eccc/En81-4-2019-3-eng.pdf](https://publications.gc.ca/collections/collection_2021/eccc/En81-4-2019-3-eng.pdf)

Energy use by building type in British Columbia	Energy use/GHG emissions	Year	PCAF database	Source
<b>Electricity use</b>	<b>PJ</b>	2018	Same source but more recent year	Office of Energy Efficiency, Natural Resources Canada and Statistics Canada Tables 32, 34 and 36 <sup>1</sup> .
Detached homes	44.0			
Attached homes	8.2			
Apartments	15.4			
<b>GHG emissions - non electricity</b>	<b>Mt of CO<sub>2</sub>e</b>			
Detached homes	2.8			
Attached homes	0.5			
Apartments	0.8			
<b>Data quality 5: Building stock in British Columbia</b>	<b># Buildings (thousands)</b>	Year	PCAF database	Source
Detached homes	959.9	2018	Same source but more recent year	Office of Energy Efficiency, Natural Resources Canada and Statistics Canada Table 14 <sup>1</sup> .
Attached homes	250.7			
Apartments	689.9			
<b>Data quality 4: Floor area by building type in British Columbia</b>	<b>Million m<sup>2</sup></b>	Year	PCAF database	Source
Detached homes	189.0	2018	Same source but more recent year	Office of Energy Efficiency, Natural Resources Canada and Statistics Canada Table 18 <sup>1</sup> .
Attached homes	36.6			
Apartments	69.8			

<sup>1</sup>[https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/menus/trends/comprehensive/trends\\_res\\_bct.cfm](https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/menus/trends/comprehensive/trends_res_bct.cfm). At the time of writing, data for energy use by building type is now available for 2020. We understand that 2019 building stock data will be published in 2022. We will formalize our approach to applying updated emission factors in 2022.



# Implementation measures

- Portfolio composition & financial flows
  - ✓ Targets for new lending (x EUR mln; Y %) or for outstanding stock (reach Z% by target year)
- Client engagement
  - ✓ Engage with key clients to develop data collection templates
  - ✓ Engage with clients to collect data, starting with key clients and progressively broadening to all clients
  - ✓ Engage with clients to raise awareness and share knowledge
- Financial products and services
  - ✓ Develop new financial products
  - ✓ Develop technical assistance to clients
  - ✓ Develop tools for clients
  - ✓ Helping clients' access to government grant programs about EE

## Example: KBC mobile app + renovation program for employees

**KBC introduces new features in KBC Mobile to help customers save on energy, time and money, and launches pilot project to guide its employees on the energy transition journey.**

Tuesday, November 29, 2022 – Driven by alarmingly high energy prices, many households are turning to smart, energy-efficient solutions to help them slash costs and keep a tighter rein on their energy bills.

KBC has launched a pilot project for 250 of its employees who will be offered the opportunity – in conjunction with external professional partners – to have solar panels and/or a home battery installed in their home with minimum effort required on their part. The installation includes an energy management system to help them make maximum use of their self-generated solar power and optimise their energy consumption. Based on the insights gained from this pilot project, KBC intends to develop solutions for all its customers in the near future.

KBC already offers its customers a number of new tools free of charge in the KBC Mobile app (such as an 'Energy Barometer' and 'Energy insights') to help them become more energy-efficient and save money.

Customers can also simply ask our personal digital assistant Kate a question about energy and get directed to the right tool. One of Kate's future updates will include the ability to proactively provide energy-saving tips to interested customers.

The 'energy tools' in KBC Mobile are available under 'Home and energy' in the app's additional services.

[See details: KBC introduces new features in KBC Mobile App](#)



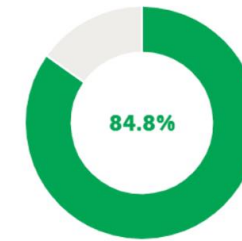
# Example: Lloyd's Green Buildings Tool

- The Green Buildings Tool helps clients (who own or lease properties) understand their emission reduction opportunities and build a sustainability strategy.
- The tool has a simple interface allowing customers to assess the business cases for up to 58 cost-saving measures to improve the green credentials of a property or portfolio of properties.
- The impact of all measures can be viewed in terms of their potential impact on EPC ratings, estimated payback period and annual savings, investment required and the reduction in carbon emissions.
- The tool is free to use and designed for clients of all sizes, from SMEs with single premises to the largest companies in the UK.
- The tool is also designed to be updated after measures have been implemented so that clients can review their progress.
- Once clients have determined the optimal investments to reduce the emissions of their properties, they can apply for discounted financing

See details at [www.lloydsbank.com/business/sustainability/green-buildings-tool.html](http://www.lloydsbank.com/business/sustainability/green-buildings-tool.html)

## Registered EPCs

84.8% of your EPCs are valid.



Not registered Registered

## EPC ratings

76.1% of your improved EPC ratings are green.



Current Improved

## Top cost-saving measures

The top cost-saving measures of the entire portfolio shown in pounds.

LED lighting instead of fluorescent tubes (retrofit)	£115,010
Solar panels (photovoltaics)	£90,440
Energy management and energy control	£45,981
Cavity wall insulation	£38,100
LED lighting instead of CFL (retrofit)	£37,998

# Implementation measures

- Internal measures
  - ✓ Awareness raising & trainings
  - ✓ Incentivise (e.g. bonuses tied to energy efficiency mortgage volume target etc.)
  - ✓ Internal policies and processes
  - ✓ Bank or staff building energy efficiency improvements to enhance credibility and build internal awareness
- Partnering and engaging in industry initiatives
- Partnering with Development Financial Institutions
- Policy advocacy to support the transition to a low-carbon and circular economy
  - ✓ Cooperating with governments to design grant+loan subsidy schemes
  - ✓ Access to EPC data
- Public awareness raising and research

## The Energy Efficient Mortgages Initiative at a glance

> 1

### Creating a 'virtuous circle'

EEM definition, property valuation guidelines & building energy performance parameters

> 2

### Making the business case

Dedicated to empirical evidence gathering

> 3

### Building confidence through transparency

Launch of the EEM Label

> 4

### Roll out across EU markets

National hubs & consumer research

> 5

### Keeping pace with EU legislation

EEMI as a bridge

# Implementation measures

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  - ✓ Access to EPC data
- Public awareness raising and research

# Example: NatWest's Energy efficient housing tracker



**Less planning sustainability improvements**  
 The proportion of homeowners planning to make improvements to the environmental sustainability of their properties in the next 12 months and over the next ten years has decreased for the first time since Q2 2021.



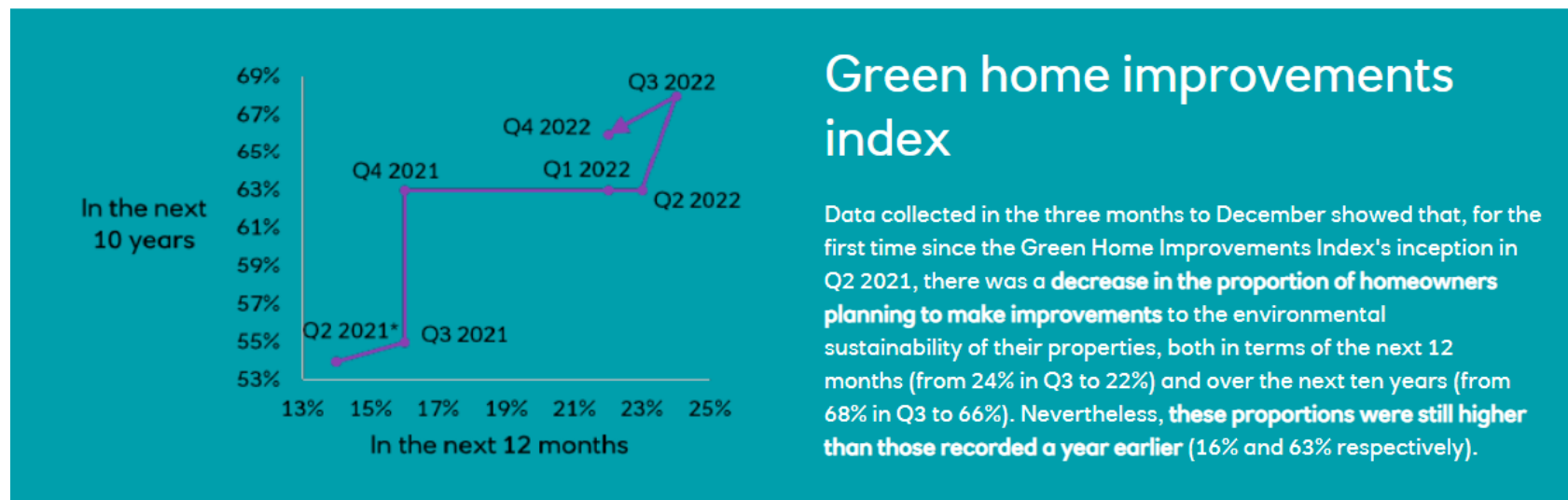
**Cost of living impacting plans for home improvements**  
 Over a quarter (26%) of homeowners said the rise in the cost of living had made them less likely to implement energy efficiency measures in the next 12 months, up from 23% in Q3.



**Smart meters are still the most popular improvement.**  
 A smart energy meter was the item most likely to be installed over the next year, although just over half (54%) of homeowners reported having a smart energy meter already installed. Rental properties lag behind with 48% of households saying they already had one installed.



**Future plans for solar panels and electric car chargers.**  
 Medium to longer term, consumers desire electric car charging points and solar panels to improve energy efficiency (stated by 39% and 38% of homeowners respectively).

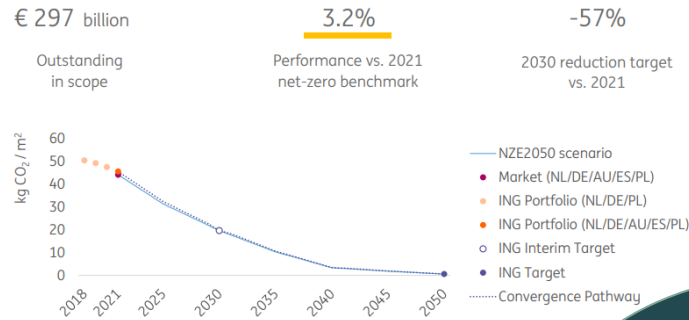


## Green home improvements index

Data collected in the three months to December showed that, for the first time since the Green Home Improvements Index's inception in Q2 2021, there was a **decrease in the proportion of homeowners planning to make improvements** to the environmental sustainability of their properties, both in terms of the next 12 months (from 24% in Q3 to 22%) and over the next ten years (from 68% in Q3 to 66%). Nevertheless, **these proportions were still higher than those recorded a year earlier** (16% and 63% respectively).

# Some public examples from banks active in the CEE-SEE region: ING

## Residential real estate



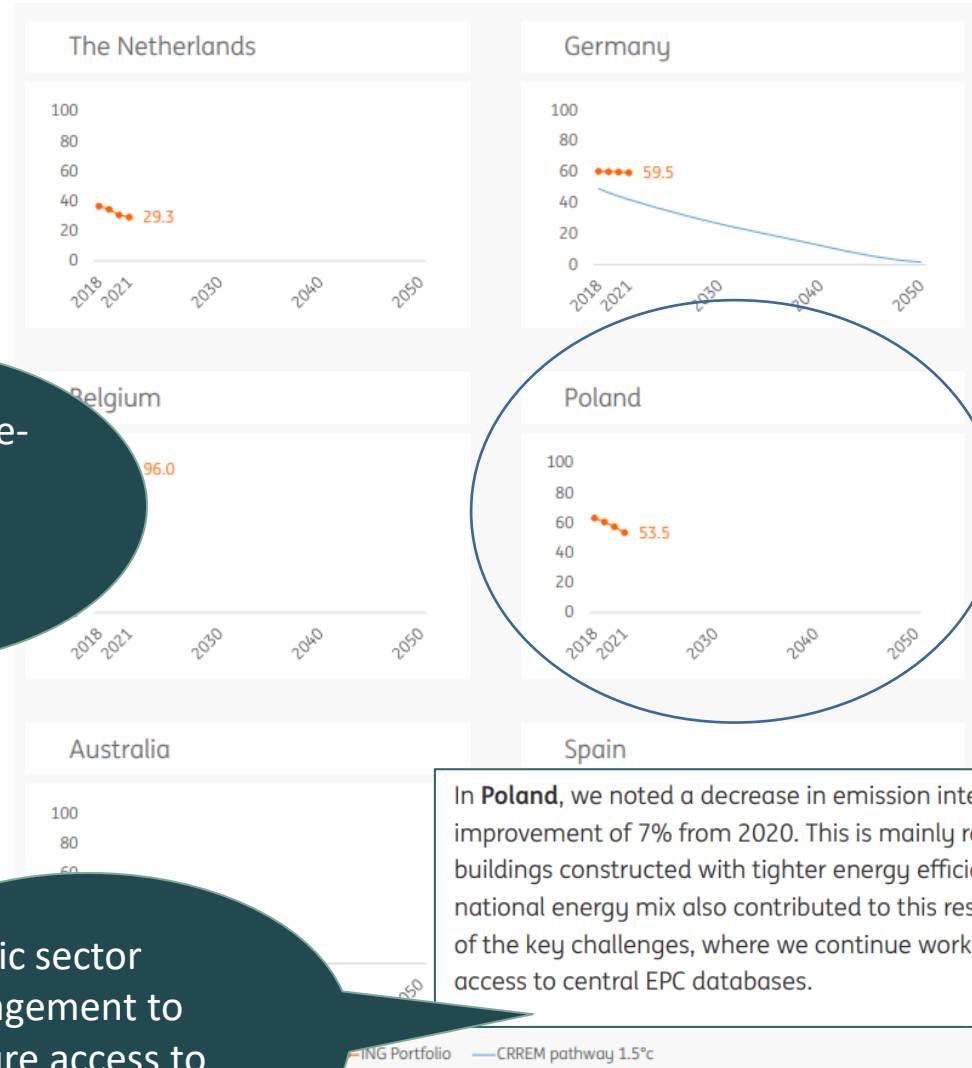
Buildings account for 40% of EU energy consumption and 36% of direct and indirect GHG emissions, two-thirds of which can be attributed to housing. More than 95% of EU buildings are not energy efficient. 1% of buildings undergo energy-renovation per year, according to the EU's climate ambitions and shows the need to address the existing building stock.

At year-end 2021 our combined mortgage portfolio (Netherlands, Germany, Australia, Spain, and Poland) reached a CO<sub>2</sub> intensity of 45.7 kg per m<sup>2</sup>. Belgium is not included in this total, as their way of calculating the emission intensity (including power generation) is not comparable with the other countries in our portfolio.

In previous years we compared our portfolio results with the Beyond 2°C Scenario (B2DS) for the EU. Starting this year, we can not only compare with the more ambitious IEA Net Zero by 2050 scenario, but also calculate a country weighted starting point, based on country level net-zero pathways, as published by Carbon Risk Real Estate Monitor (CRREM) in 2022. We have used the CRREM scenario to model the targets we describe below.

Clarifying science-based scenario used for target setting

Public sector engagement to ensure access to relevant data



In Poland, we noted a decrease in emission intensity, reaching 53.5 kg CO<sub>2</sub>/m<sup>2</sup>, an improvement of 7% from 2020. This is mainly related to new loan origination for buildings constructed with tighter energy efficiency norms. Slight improvement in national energy mix also contributed to this result. Data availability still remains one of the key challenges, where we continue working with other Polish banks to establish access to central EPC databases.



See further details: [ING Climate Report 2022](#)

## Public examples from bank

Using proxies until granular data is available

## SEE region: ING

In line with the recommendations for mortgages outlined by PCAF, we continue to use energy labels as a proxy for properties' energy performance. We continue to collect EPC labels for new mortgages in our markets, meaning each year we will have an increasingly accurate picture. However, data on energy labels is still not widely available in most of our markets outside of the Netherlands. We therefore continue to develop our own means of determining CO<sub>2</sub> intensity for those markets using other available data such as building year, modernisation, and subsidised loans. In all markets we aim to align these methods with local peers and stakeholders.

We have focused on tracking primary energy demand of the homes, but some of our markets are including other energy use at the home into account, such as that used for cooking. Recently published joint guidance from PCAF, CRREM, and GRESB on measuring GHG emissions for real estate suggests that over time we should expand our focus to all emissions from within the building boundary and not only of the building itself. As scenarios and data become available to do this, we will explore how our reporting can adapt to accommodate for this ambition.

In the Netherlands, we also started a pilot with other banks to explore the option of using real energy usage data, which can improve our methodology beyond the use of energy labels. Shifting to a methodology based on real-energy use is key to uncovering the real picture of housing emissions, and we continue to urge governments and other stakeholders to work together to make data available for this purpose.

countries where those homes are located. Meaning that governments and institutions steering and installing new renewable electricity capacity and shifting away from fossil fuels like natural gas, thereby greening the energy mix available to homeowners, is the most important factor for the residential real estate sector to reach net zero.

Next to this the energy efficiency of those homes, as represented by the energy label is likely to be the next largest factor. This is something which we can influence as a joint stakeholder with homeowners, where the willingness of the homeowners is critical to unlock progress. Finally, homeowners influence an additional factor, in terms of how much energy they use at home. This is likely to be the third most important element in reaching those milestones and requires the involvement of all members of a household to succeed.

To show the significance of how these factors relate, even if all homes in our portfolio were label A or equivalent in the six markets by 2030, houses in our portfolio would not reach the milestone described above unless a significant and rapid greening of the grid continues in all countries, and homeowners consciously use less energy. At the same time, it is possible that a greening of the energy mix in many markets could carry the sector well towards the targets without major improvements to the energy label composition.

Like in other sectors, we take an inclusive approach in empowering our customers to improve their efficiency. We do not see our role as a bank to limit finance to customers with G and F label homes for example, where doing so may show positively in our portfolio reporting but would not create real-world change to helping homeowners' transition. Should a national government regulate minimum energy labels for example, in line with the EU's Energy Performance of Buildings Directive, such as barring G label properties from 2030 and F labels from 2033, then we as a bank can support customers with those labels, facilitating them in financing their renovations ahead of those deadlines, but for now it is not our place to directly exclude such houses from access to our lending.

Importance of combining EE and renewable energy

## Public examples from banks active in the CEE-SEE region: ING

### Products and Services

In order to leverage our financing toward net zero, we have set... green alternatives for our key retail products will be offered

Internal training + Client engagement

In 2022 in the Netherlands and Germany, we launched new... offer a discount, of 10 basis points in Germany and 15 basis points (energy label A+ and higher) or 10 basis points (energy label A) in the Netherlands, for homes with energy labels of A and above. In the Netherlands this was offered to both new and existing customers with those labels. We also launched an Eco mortgage in our Italian market in 2022. This accompanies our Eco Mortgage in Poland, which was recently redesigned in order to adjust towards some of the requirements under the EU Taxonomy (EUT). ING is planning to roll out Eco Mortgages in all countries where we offer mortgages product model in all mortgage markets, and to align our definition of eco-mortgage products with the EUT definition of Green Mortgages.

However, in order to achieve net zero, we need to empower customers in homes with lower energy labels in their eco renovations. ING also continues to tackle this challenge, where we have lending products in place in both Belgium and Poland for customers that are renovating to improve the energy label of their home by for example improving insulation or adding solar panels. In the Netherlands, clients can also extend their mortgage loan to cover additional eco-renovations. Further eco-renovation products are planned for launch in Romania.

We continue to build our customer advisory services. In the Netherlands, our mortgage advisors received external training on advising clients on how they can improve the sustainability of their homes. This is then discussed in every mortgage consultation. Furthermore, ING intensifies the use of a tool where people can not only become aware of the improvements they can make, but also can have them realised. ING also participates in the National Insulation Week programme of the Dutch government.

In Germany we launched a renovation calculator with KfW bank in September 2021, where ING customers are offered insights into what sustainability measures they can take in their homes. Traction since then has shown growing relevance for customers, where those taking part have mostly implemented the suggested measures. The calculator will now be rolled out gradually to all our brokers to reach larger customer groups.

While our products have shown the promise of change to come, we note that demand among clients is still not at the level required to drive the transition. We continue to call on governments to implement ambitious and consistent legislation that mandates... for residential real estate.

Product development for both new constructions and renovations



# Public examples from banks active in the CEE-SEE region: KBC



## Real estate

Mortgages, residential and non-residential commercial real estate

## Context

Mixed forces are influencing renovation trends in the real estate sector. For many years, the EU has had a regulatory framework in place, imposing high energy-efficiency standards

on new buildings. However, with its 'Fit for 55' package, the EU is now also laying down rules targeting the radical renovation of existing buildings and the replacement of polluting energy technologies. All EU Member States will be required to facilitate and encourage this endeavour through amongst others gradual financial incentives, when and where possible. At the same time, high energy prices are acting as additional impetus to invest in renewable energy technologies and deep renovation, whereas, by contrast, high commodity prices may act as a brake given the subsequent rapidly increasing construction costs they trigger.

## KBC portfolio Loan exposure

Real estate financing accounts for around 47% of KBC's total outstanding loan portfolio. Retail mortgage loans are a core financial product in all our core countries, accounting for financing of 77.6 billion euros at year-end 2021. Commercial real estate financing<sup>6</sup> for developers and investors amounted to 11.5 billion euros in the same year.

## Financed emissions

According to the [2021 Sustainability Report](#) financed emissions calculations, KBC's real estate portfolio accounts for around 12% of the total GHG emissions financed by KBC, of which 3% relates to mortgage loans and 9% to commercial real estate. In total, this amounts to around 6.9 Megatonnes CO<sub>2</sub>e (Mt CO<sub>2</sub>e) in 2021.

## Targets

### Residential property

For the residential property sector (financed both privately and commercially), a target was set for the relative emission intensity of CO<sub>2</sub>e emitted per financed m<sup>2</sup> per year. The target scope focuses on emissions from building operations and therefore includes real estate ownership and investments but excludes pure commercial real estate development as this financing exclusively relates to the construction phase.

Residential real estate	Baseline 2021 (kg CO <sub>2</sub> e/m <sup>2</sup> /y)	2030 target (kg CO <sub>2</sub> e/m <sup>2</sup> /y)	2050 target (kg CO <sub>2</sub> e/m <sup>2</sup> /y)
Aggregated KBC Group target	50	29	7
Percentage reduction		-43%	-85%

Residential real estate GHG intensity targets (kg CO<sub>2</sub>e/m<sup>2</sup>/y)  
The graph with baseline 2021 shows the 2030 and 2050 KBC targets (dots) for this loan portfolio and the main climate benchmark (line) that has informed our target setting.



<sup>6</sup> Commercial real estate finance relates to the development of or investment in real estate assets (or a portfolio of such assets) by property developers or investors, which are subsequently sold or let to third parties.

# Public examples from banks active in the CEE-SEE region: KBC

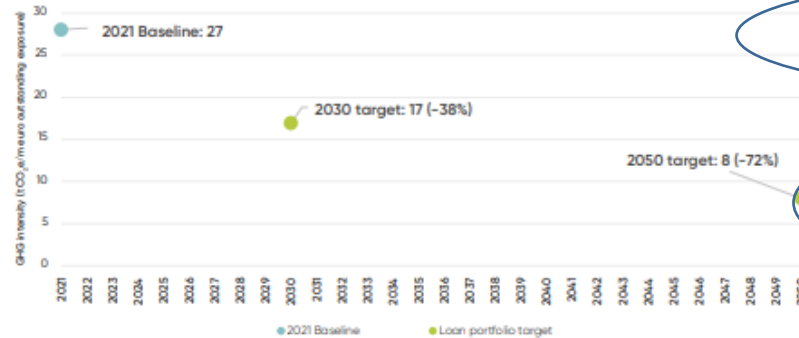
## All real estate

For the commercial real estate sector (including business premises, schools and shops), there is currently a lack of data to set physical GHG emission intensity targets. Therefore, a financial emission intensity target was set for the real estate sector as a whole, in addition to the targets for residential real estate. The target scope focuses on emissions from building operations and is therefore limited to real estate ownership and investments. Pure commercial real estate development is excluded as such financing exclusively relates to the construction phase. This target is expressed in financed tonnes of CO<sub>2</sub>e per one million euros.

Real estate whole sector	Baseline 2021 (t CO <sub>2</sub> e/m euro)	2030 target (t CO <sub>2</sub> e/m euro)	2050 target (t CO <sub>2</sub> e/m euro)
Aggregated KBC Group target	27	17	8
Percentage reduction		-38%	-72%

The financial targets have not been adjusted for inflation.

Real estate GHG intensity targets (t CO<sub>2</sub>e/m euro outstanding exposure)  
 Scenario benchmarks are not shown in these charts, as this sector consists of a combination of several sub-sectors for some of which the necessary data are lacking and/or for which no uniform scenario benchmarks exist.



## Actions

To achieve these targets, KBC will seek to encourage its clients to improve the energy performance of their properties, and also focus on real estate with a (more) favourable EPC (Energy Performance Certificate) rating. We will do so by sharing information on sustainable construction and renovation, advising on subsidies, working with partners on energy efficiency exercises and the supervision of constructions or renovations. We also aim to gradually offer the best available interest rates on loans for buildings with a favourable EPC rating and/or incentivise this aspect through energetic renovation upon purchase, in many cases backed by government support.

Note: These targets are set and expressed against a background in which not all of KBC's home countries already have government schemes and incentive packages in place to substantially boost the much needed building energy efficiency improvements.

Client engagement

Products with pricing linked also to energy efficiency

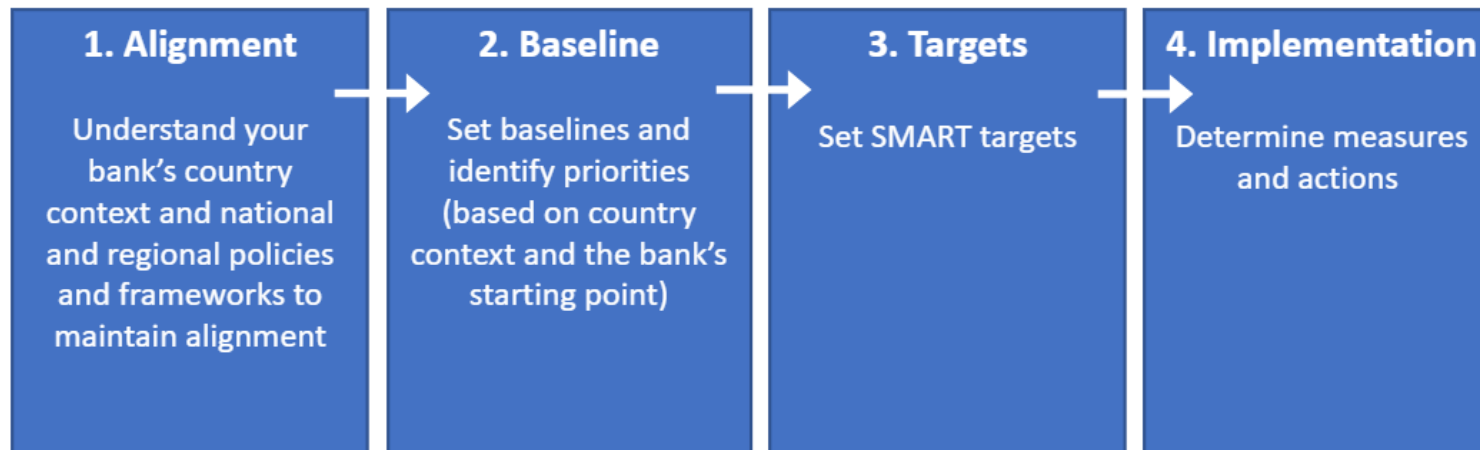
# EE target setting: UNEP FI Impact Analysis Tool for banks



## Worked example: using the Impact Analysis Tool to set EE targets

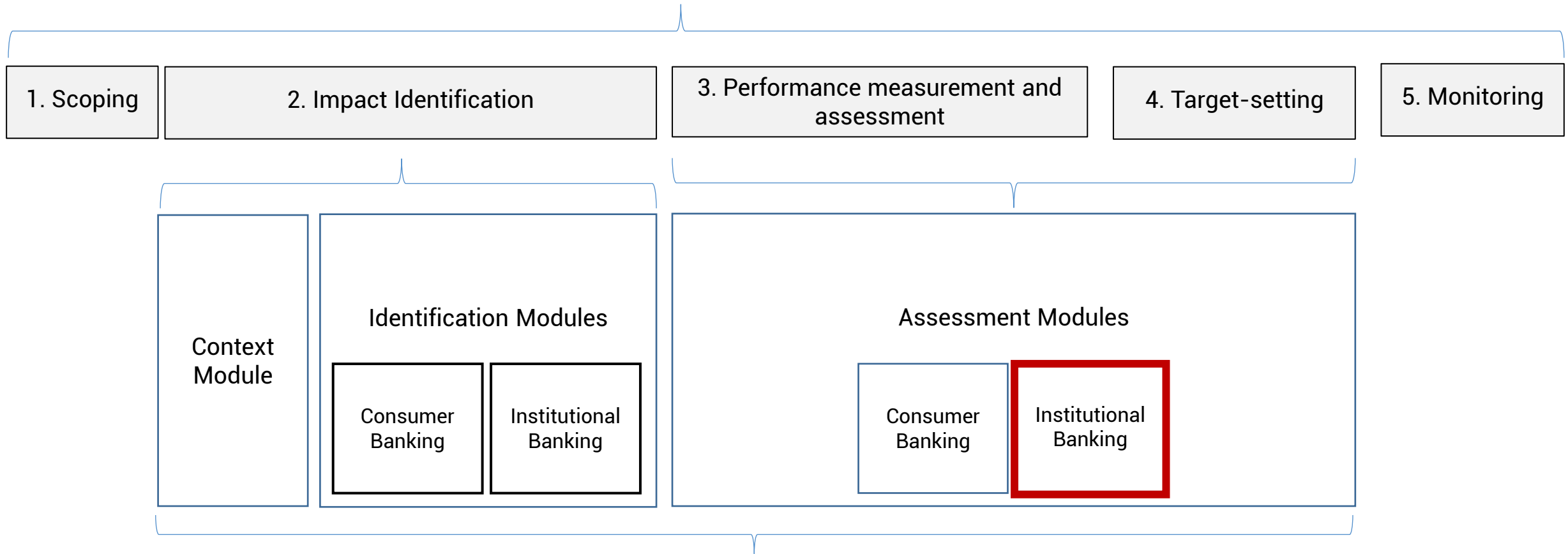
*Bank X is one of the leading banking groups in a Southern European country and has an international presence. Bank X has covered its consumer, business and corporate banking portfolios in its impact analysis and for the business and corporate portfolios has identified resource intensity and in particular energy efficiency as one significant impact topic.*

*It has therefore decided to set targets on Energy Efficiency following the steps outlined in the 'Resource Efficiency and Circular Economy Target Setting guidance' and using the Assessment Module of the UNEP FI Impact Analysis Tool for banks.*



# Relevant Tool Module

## Impact Management Process



## Portfolio Impact Analysis Tool for banks

# Institutional Banking/Assessment Module

## Overview

### List of Worksheets

	Welcome
	Navigation
	My Parameters
	Impact Area 1
	Impact Area 2
	Impact Area 3
	Impact Area 4
	Impact Area 5
	Dashboard
	Impact Radar
	Interlinkages Map
	Data IN-Context
	Data IN-Identification
	PivotP
	PivotN
	Correspondence Tables
	Lists

### Four types of worksheets:

- Reference worksheets (white)
- Workflow worksheets (green)
- Data transfer worksheet (black)
- 'Back-end' worksheets (grey) (hidden)



# Worked example

## Prioritize sectors for target setting

### 3. Impact areas/topics and geographies

a.1 What significant impact area/s or topic/s will you be covering (based on the outcome of the identification phase of your impact analysis)? <i>Please select accordingly</i>	Resource intensity
a.2 What geography/ies will you consider for the selected impact areas/topics? <i>Please select accordingly</i>	Italy
Positive Interlinkages	Natural disasters, Health & safety, Energy, Sector diversity, Climate stability, Waterbodies, Air, Soil, Species, Habitat, Waste
Negative Interlinkages	Flourishing MSMEs

Bank X specified Resource Intensity as one of the prioritized significant impact areas/topics. The Tool automatically displayed the interlinkages with other areas to help the bank think about associated positive/negative impacts

### Resource intensity | Italy

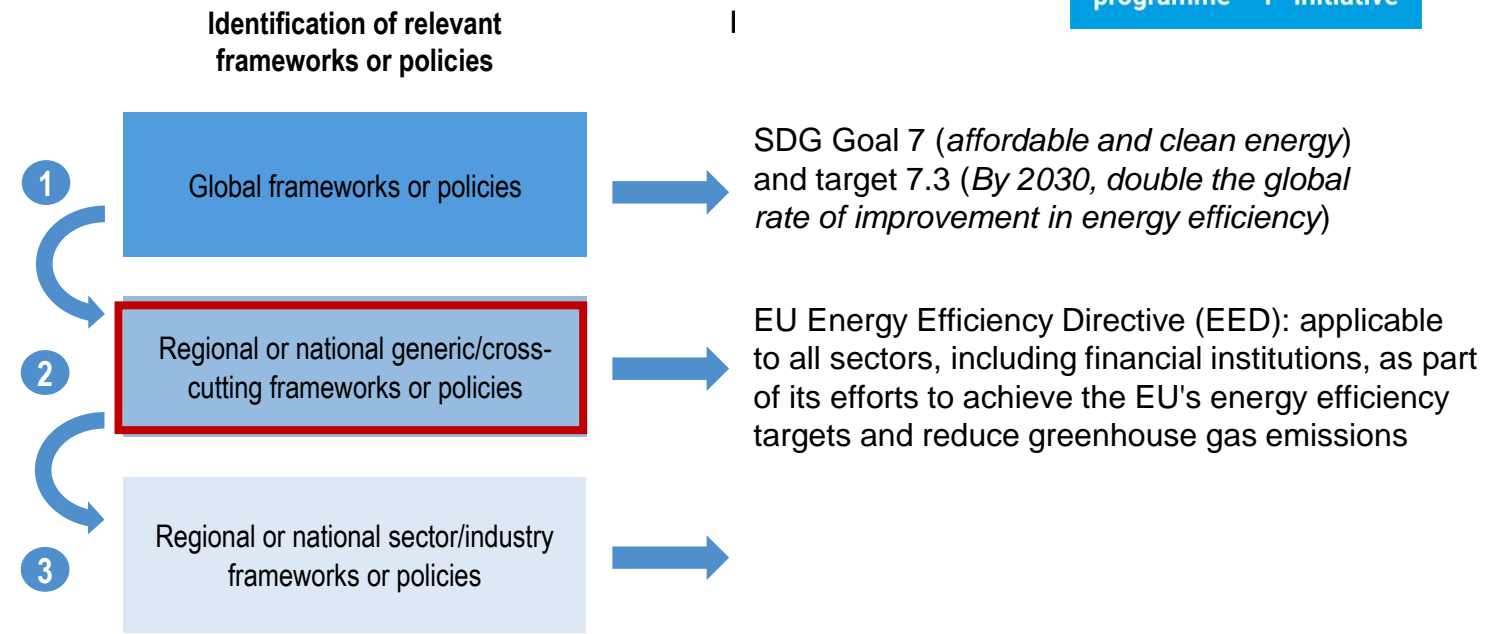
Sectors (ISIC Industry Classification)	My sectors	Type of impact association (positive/negative)	% of portfolio (general purpose)	% of portfolio (dedicated)	Priority sectors as per PRB Guidance on Resource Efficiency and Circular Economy target-setting	Validation
27 Manufacture of electrical equipment		Dark Orange	33,33%		X	yes
41 Construction of buildings		Dark Orange	23,33%		X	yes
42 Civil engineering		Dark Orange	16,67%		X	yes
45 Wholesale and retail trade and repair of motor vehicles and motorcycles		Light Orange	1,33%			no
46 Wholesale trade, except of motor vehicles and motorcycles		Light Orange	1,33%			no
47 Retail trade, except of motor vehicles and motorcycles		Light Orange	1,33%			no
51 Air transport		Dark Orange	6,67%			yes

Among the sectors in its portfolio, Bank X prioritized sectors that are key (dark colors), have relevant proportion (%) and those identified as priority sectors in the 'PRB Resource Efficiency and Circular Economy target setting guidance' (X)

## Worked example

Identify relevant frameworks to align with

Bank X then looked into relevant framework to align with. It identified the relevant SDG as well as a European framework applicable to all sectors. The bank didn't find any national framework so decided to start by applying the regional one, as suggested by the guidance



### c. Alignment choices

This section enables you to determine your alignment choices based on previously identified needs and priorities as well as any additional research if/as needed. Please define which international, regional or r

Policy Framework	Geographic scope	Comments	Topics	Indicators/Metrics	Objectives	Comments
<i>Please list the policy framework/s your bank will be seeking alignment with</i>	<i>Please select the geographic scope of the frameworks listed</i>	<i>Please capture here any explanations regarding the choice of framework/s</i>	<i>Please capture here the specific topic/s</i>	<i>Please capture here the indicators/metrics (e.g. GHG</i>	<i>Please spell out the overall objective pursued in the</i>	<i>Please capture here any</i>
EU Energy Efficiency Directive (EED)	regional	The EU's energy efficiency framework applies to all sectors, including financial institutions, as part of its efforts to achieve the EU's energy efficiency targets and reduce greenhouse gas emissions	Energy efficiency	Energy savings (energy efficiency measures such as insulation, efficient appliances and improved industrial processes)	EU energy efficiency target for 2030 of at least 32.5%	



# Worked example

## Determine practice baseline and set practice targets

### 2. BASELINES AND TARGETS (PRACTICE & IMPACT)

#### b. Practice

##### i. Portfolio composition & financial flows

Baseline and targets

Sectors	Proportion of portfolio (default indicator)

##### ii) Client engagement

Baseline and targets

Sectors	Data collection			
ISIC Industry Classification	Indicator	Baseline	Baseline year	Target

##### iii. Internal policies & processes :

Baseline and targets

Sector/theme policies			
Indicator	Baseline	Baseline year	Target
			Use this column to indicate your target

##### iv) Advocacy & partnerships :

Baseline and targets

Proactive advocacy efforts			
Indicator	Baseline	Baseline year	Target
Use this column to capture relevant indicators (examples from frameworks and standards are available in the Indicator Library)	Use this column to capture your current (i.e. baseline) data. This can be qualitative or quantitative, depending on the indicator.	Please specify the year of the data captured in the previous columns	Use this column to indicate your target value (if the indicator is quantitative, situation (if the indicator is qualitative)

Bank X then determined its practice baseline, following the 4 categories of actions presented in the guidance. This consisted in identifying relevant indicators and then assessing its current practice. The bank focused on assessing the first 2 actions. Once completed the assessment, the bank set relevant practice targets.

#### Portfolio composition & financial flows (indicators):

- Key clients with circular activities (i.e. screened positively) (Nb or % of clients)
- Percentage of portfolio that meets a set of energy efficiency criteria (e.g. green mortgages, defined based on the EU or other taxonomy)

#### Client engagement (indicators):

- Key clients in chosen portfolio from which relevant data is collected (Nb or % of clients)
- Number/percentage of clients engaged to collect data (energy consumption, EPC ratings etc) and identify energy efficiency (circular) opportunities.
- Key clients with identified circular opportunities engaged/supported (Nb or % of clients)
- Increase in number of clients for tools or services enabling circular economy strategies
- Increase of financing to key clients with circular opportunities (bln/mn USD or local currency, and/or % increase)

# Worked example

Determine impact baseline and set impact targets

Bank X then determined its impact baseline. This consisted in identifying relevant indicators and then assessing the current performance. Once completed the assessment, the bank set impact targets.

c. Impact  
Baseline and targets

SECTORS	Baseline						
	Indicator <i>(e.g. GHG emissions )</i>	Metric <i>(e.g. metric tonnes )</i>	Measurement methodology <i>(e.g. FACTA)</i>	Year under analysis: <i>(please specify → )</i>		2023	P
Performance value in 2023				Sector coverage	Value chain coverage		
<i>This column shows the sectors under analysis, as validated in the 'my parameters' worksheet. Each sector has a jump link to the overview table of section 'a' where more information can be found.</i>	<i>Use this column to capture relevant indicators (examples from existing frameworks and standards are available in the Indicator Library.)</i>	<i>If applicable, use this column to specify the metrics used to measure the selected indicators (examples from existing frameworks and standards are available in the Indicator Library.)</i>	<i>If applicable, use this column to capture the measurement methodology used</i>	<i>Use this column to capture your current (i.e. baseline) data. This can be qualitative or quantitative, depending on the indicator.</i>	<i>Please indicate % of sector for which performance value has been measured (if applicable)</i>	<i>Please specify the extent of the value change covered (e.g. 2020-2023)</i>	<i>Use data q.</i>
<b>Cross-cutting</b>	Increase of annual income derived through tools and services enabling circular economy (USD or %)	USD		1000000	100%		
<a href="#">27.Manufacture of electrical equipment</a>	Reduction/reversal in the depletion of the stock of renewable resources (t p.a. or %)	%		8%	90%		

- Impact (indicators):**
- Increase of annual income derived through tools and services enabling circular economy (USD or %)
  - Reduction/reversal in the depletion of the stock of renewable resources (t p.a. or %)
  - Increase in renewable energy (Power installed MWp, Energy production GWh/y and % increase)
  - Increase of energy efficiency (USD/GWh)
  - Reduction of non-renewable resources (t p.a. or %) / increase in % renewable and regeneratively/sustainably sourced or secondary resources (% of total)
  - Increase in number of borrowers of retrofit loans benefitting from alleviation of energy poverty (#)

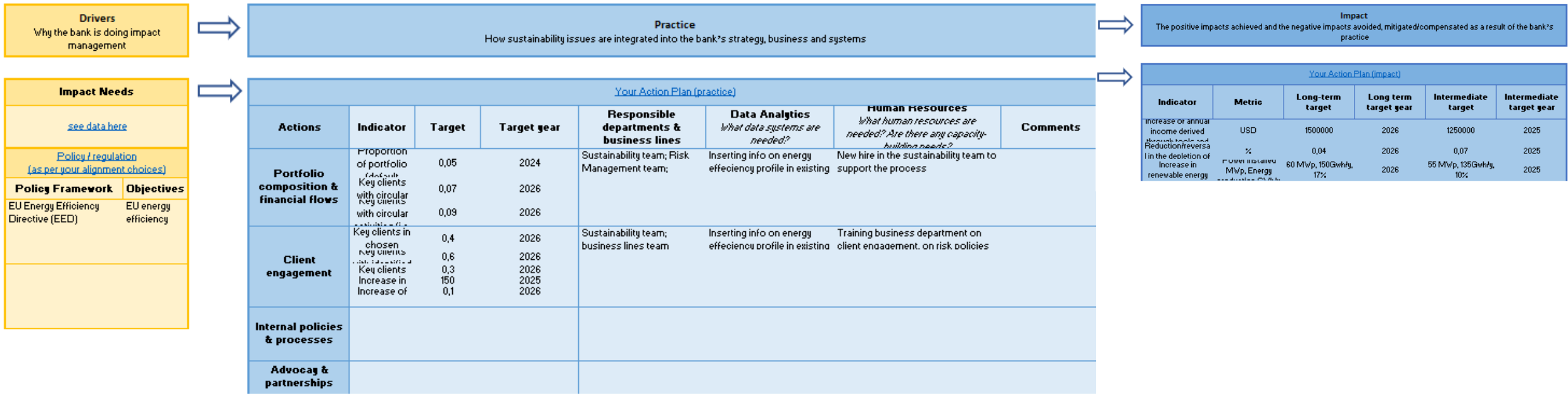
# Worked example

## Implementation of the targets

Bank X finally defined an action plan to implement the targets, identifying the responsible departments and business lines as well as data systems and human resources needed

### 2. Impact pathway per impact/area topic and geography

Resource intensity | Italy  
(significant impact area/topic)



## How to access the Tool

- You can download the Portfolio Impact Analysis Tool for banks and associated user guides [here](#)
- You can download the Indicator Library [here](#)
- The worked example for energy efficiency (Excel file) will be circulated after the workshop
- Are you interested in a technical session on the Tool? Please raise your hand!



For any questions, please contact [costanza.ghera@un.org](mailto:costanza.ghera@un.org) and [alexander.stopp@un.org](mailto:alexander.stopp@un.org)

# PRB : Available support

## Website Members' area

- [Members Area – United Nations Environment – Finance Initiative \(unepfi.org\)](https://unepfi.org/members-area)
- [PRB Academy and Capacity Building – United Nations Environment – Finance Initiative \(unepfi.org\)](https://unepfi.org/prb-academy)
- [Capacity Building Activities – United Nations Environment – Finance Initiative \(unepfi.org\)](https://unepfi.org/capacity-building)

## Workshops & trainings

- On-boarding /Impact analysis workshops
- Target-setting workshops
- [Calendar available on the website](#)
- Contact: [gabor.gyura@un.org](mailto:gabor.gyura@un.org); [flora.petrucci@un.org](mailto:flora.petrucci@un.org)

## Impact analysis implementation support

- By business community
- By geographic region
- Email-based support
- One-on-one meetings
- Contact: [costanza.ghera@un.org](mailto:costanza.ghera@un.org); [alexander.stopp@un.org](mailto:alexander.stopp@un.org)

## Individual Review/ Reporting

- Contact: [prbreporting@unepfi.org](mailto:prbreporting@unepfi.org)

## UNEP FI Regional Coordinators

- Africa & Middle East – Nuran Atef: [nuran.atef@un.org](mailto:nuran.atef@un.org)
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- Latin America & Caribbean – Maria Sosa Taborda: [maria.sosataborda@un.org](mailto:maria.sosataborda@un.org)
- North America – Johan Lopez: [johan.lopez@un.org](mailto:johan.lopez@un.org)

**Thank you for your  
attention!**

**Slides + evaluation form will be shortly  
shared in email.**

