



**Shining the Light on
Buildings at COP21
- 4th November 2015**

#BetterBuildGreen - #COP21

Agenda

1. Welcome – Prof. J. Owen Lewis, IGBC Chair
2. An Introduction to COP21 – Ciara Kirrane, Friends of the Earth Ireland
3. COP21: Expectations & Challenges - Stephane Aymard, PhD
4. Developing an Ambitious National Renovation Strategy for Ireland – Pat Barry, Executive Director, IGBC
5. Panel discussion

Sean Armstrong, Advisor-Building Standards,
Department of Environment, Community and Local
Government

Susan Macgarry, Environmental Manager, Ecocem

Aidan Burke, Hertz Europe Service Centre Ltd

Fintan Smyth, Building Physics Manager, Saint-Gobain
Ireland

COP21

Irish Green Buildings Council
4th November

Ciara Kirrane

Friends of the Earth



**Friends of
the Earth**

What is COP21?

- 21st meeting of the Conference of Parties (COP) to international treaty called United Nations Framework Convention on Climate Change (UNFCCC)
- Representatives of the 196 signatories to UNFCCC will attend COP21 to agree how to reduce global greenhouse gas emissions and keep global warming below 2 degrees
- 40,000 people expected in Paris between 30 November – 11 December (officials, civil society, media)



**Friends of
the Earth**

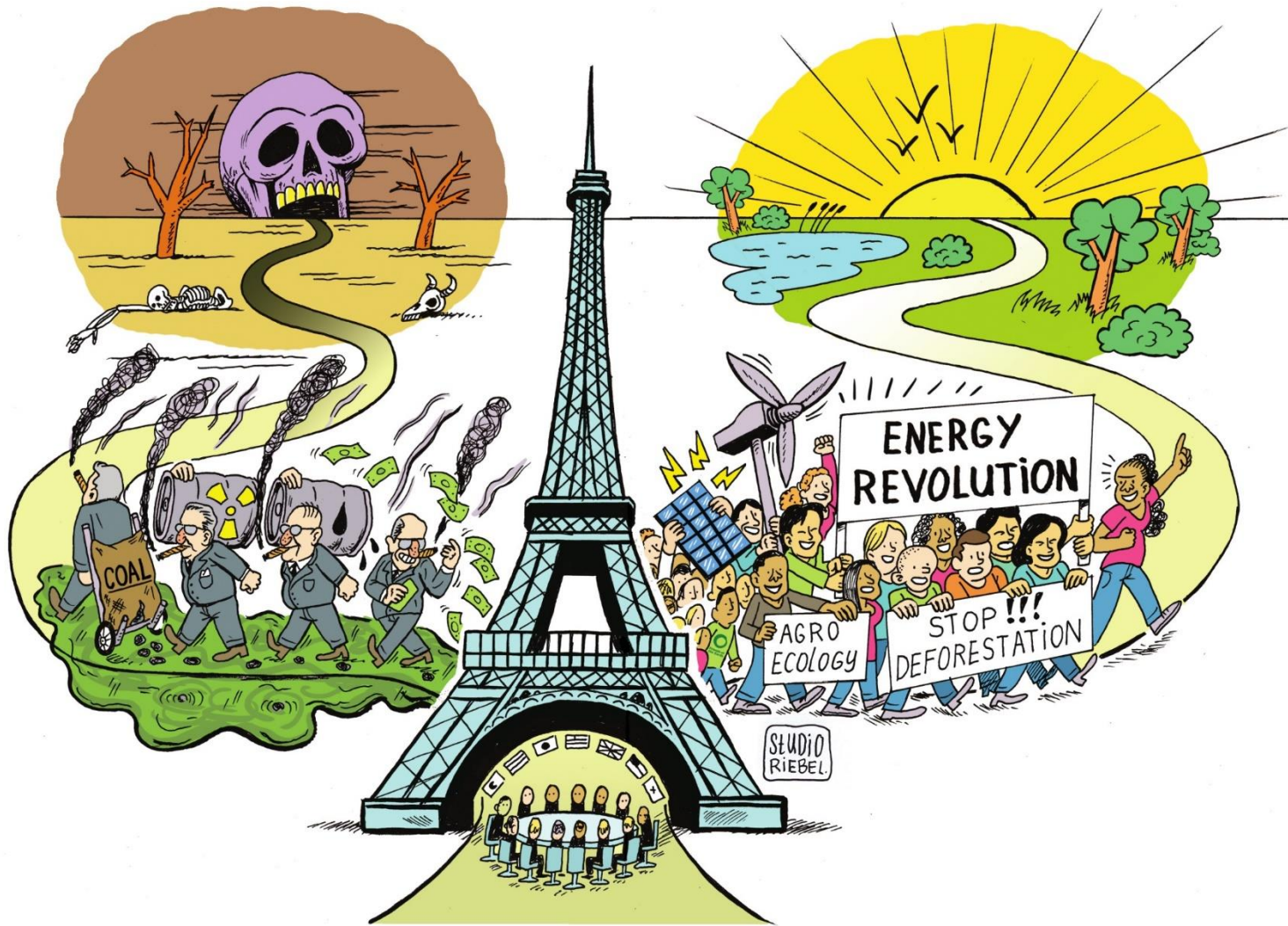


What's at stake?

- Currently on track for 4-5 degrees of warming by end of century
- 'Safe levels' of warming 2 degrees; those on the frontline say 1.5 or less
- This requires nothing less than systemic transformation of our societies, our economies, and our world
- The Paris COP must:
 - Catalyze immediate, urgent and drastic emission reductions, in line with what science and equity require.
 - Provide adequate support for transformation, especially in vulnerable and poor countries.
 - Deliver justice for impacted people, and make a firm commitment to secure workers' livelihoods and jobs through a Just Transition.
 - Focus on transformational action, such as renewable energy and energy savings, rather than false solutions.



**Friends of
the Earth**



**Friends
of the Earth**

People power

The energy revolution is underway - citizens have the solutions to the climate crisis and are already leading the energy transition

COP21 is one important political moment on the road to social and climate justice: whatever happens at the COP people will continue to show the way to a climate-safe world

People's March on 29th November – Dublin calling for Climate Justice, Community Energy and a Carbon Free Future

We want Ireland to:

- Reduce climate pollution from all sectors
- Realise the huge jobs potential of climate action
- Support and protect vulnerable countries in the developing world
- Start phasing out fossil fuels now
- Enable community ownership of renewable energy
- Secure decent work for all in the transition to a carbon free future
- Stop TTIP undermining climate action
- Plan for sustainable, liveable, smart cities

D12: Paris – mass mobilisation; activists travelling from all over the world including group from Ireland



**Friends of
the Earth**



PARIS2015
COP21-CMP11

BUSINESS ENGAGEMENT WITH THE COP21 AND THE ACTION AGENDA

September 2015

INTRODUCTION

The contribution of the private sector is essential to the success of the Paris climate negotiations (COP21) this December. Businesses have the responsibility to adapt their business models to help meet the challenge of keeping global temperature rises to no more than 1.5-2°C.

We are working to engage more and more businesses in the climate action movement in the run up to Paris in order to forge a pathway towards a low carbon and resilient world.

The easiest way to support this work is by committing to mitigation or adaptation actions or signing up to a 'transformational initiative' that will be featured at the negotiations.

This year, business has the potential to inspire governments to greater ambition.



THE PARIS CLIMATE ALLIANCE

The Paris climate negotiations will not only comprise the universal agreement to be signed by governments. To fulfill the objective of a 1.5-2 °C world, a new **'Paris Climate Alliance'** will have to be concluded, made up of 4 complementary pillars, each of which has an essential role to play.

T H E P A R I S A L L I A N C E

1

New universal agreement

The legal agreement that will be signed by governments will come into force in 2020 and will be applicable to all.

2

Country contributions

As well as signing the universal agreement, countries are submitting their own individual contributions, in advance of Paris, to demonstrate commitment to a common objective.

3

Mobilization of Finance

In order to fund the transition to low carbon and resilient activities, finance has to be mobilized from public and private sources.

4

The Action Agenda

The Action Agenda showcases climate actions and commitments from business and other non-state actors and supports an agreement in Paris



THE ACTION AGENDA

The Action Agenda is being steered by the **Lima-Paris Action Agenda (LPAA)**, which is composed of four partners:



**French COP 21
Presidency**



**Peruvian COP 20
Presidency**



**Office of the UN
Secretary-General**



**UN Climate Change
Secretariat**

The COP21 will be geared to concrete action and cooperation between **governments and non-state actors**: this is the role of the Lima-Paris Action agenda, which must allow us to "do more, faster, now", by **increasing the ambition over the period 2015-2020 and beyond**, through the involvement of everyone in climate change action.

It includes **dozens of initiatives in key sectors for mitigation** (energy, technologies, transports, etc.), **adaptation and resilience**, and has been designed to trigger growing engagement from business by helping them to build and demonstrate concrete, ambitious and lasting actions on climate change.



ACTIONS THAT BUSINESS CAN TAKE

There are three principal ways in which **business can engage with the Action Agenda**:

1

Cooperative Action

This includes joining partnerships or cooperative initiatives. Several major organizations and coalitions are working to structure and promote large multi-stakeholder initiatives aimed at augmenting and encouraging climate action. Several of them are directly targeted to businesses. The LPAA partners strongly encourage these initiatives, which will be showcased at the COP. Cooperative action can be:

- Action-oriented
- Industry-orientated
- Technology-oriented

2

Individual Action

This involves setting individual targets. Large-scale transformation will only happen if businesses systematically integrate climate action into strategy-building and investment decision-making processes. In order to create an upward spiral of ambition, these objectives must be publicly announced and attached to quantified and time-bound reporting process. Key areas are:

- **Mitigation:** reduce emissions, improve efficiency, shift to renewable energies...
- **Resilience:** adaptation measures, risk assessment...
- **Finance:** ESG and climate risks integration, carbon accounting...

3

Public Policy Action

To encourage governments to increase their commitments and make ambitious decisions in Paris, it is essential that businesses actively advocate to the governments of the countries in which they are operating to develop public policies which encourage emissions reductions, notably **policies related to carbon pricing**



JOIN COOPERATIVE ACTIONS

In the months before Paris, **we strongly encourage businesses to join cooperative actions** in order to build momentum.

Out of 150+ cooperative initiatives that have been proposed by project leaders to the LPAA partners so far, several of them have already been identified by the 4 LPAA partners as leading practices, based on the following criteria:

Cooperative, inclusive, open, with **regional balance**

Able to directly **deliver and implement** commitments

Science-based : address concrete mitigation and adaptation stakes

Ready to **demonstrate and report** on commitment

Ambitious: transformative actions guided by a 1.5-2°C and resilient pathway.

More initiatives will be added on the road to Paris.

>> Full list of cooperative initiatives and details, including “how to join” and contact info available on the dedicated LPAA website <http://unfccc.int/lpaa>, to be launched mid-September <<



JOIN COOPERATIVE ACTION

Businesses can take part in 8 thematic areas, complemented by 4 transversal, actors-oriented action areas

Agriculture	Forets
Cities & Subnationals	Private Finance
Transport	Renewable Energy
Business	Innovation
Energy Access & Efficiency	Resilience
Building	Short Term Pollutants

Example of LPAA initiatives with private sector implication

>> see LPAA website for full list and additions

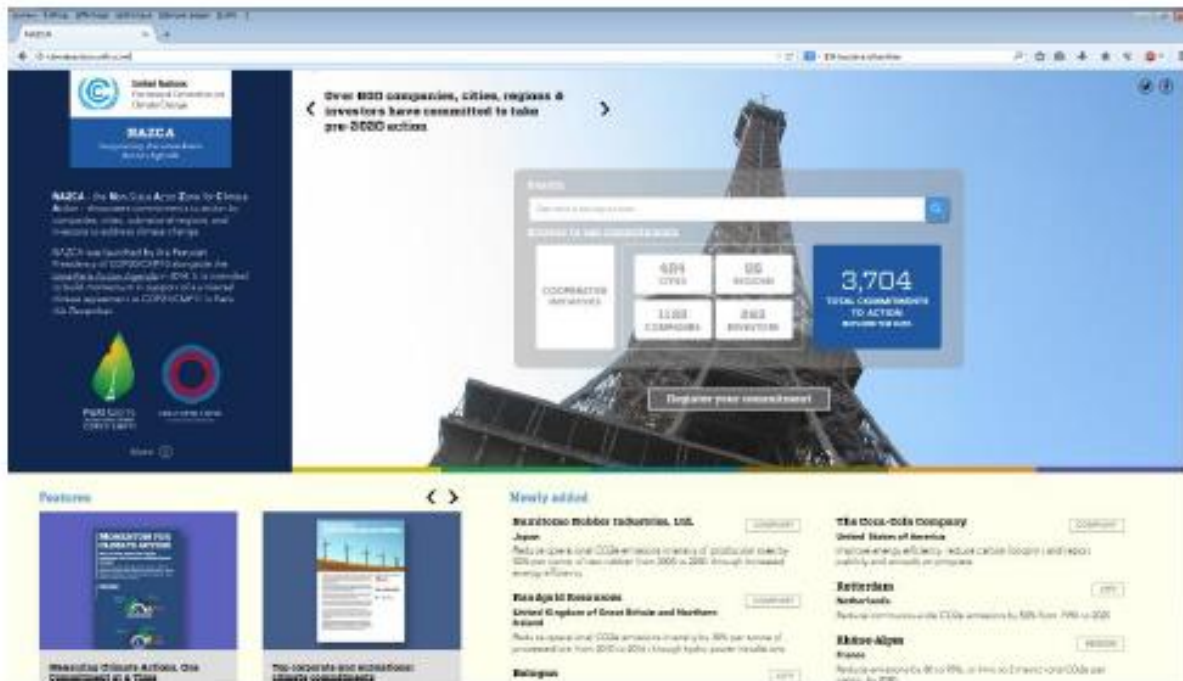


TAKE INDIVIDUAL ACTIONS

Businesses willing to take part in the climate action movement and let it know to the wider public can register directly their commitments on the UN climate action portal, NAZCA

<http://climateaction.unfccc.int/>

EXAMPLE:
IKEA

Over 600 companies, cities, regions & investors have committed to take pre-2020 actions

SEARCH

RESULTS FOR SEARCHED WORDS

604 COMPANIES	65 REGIONS	3,704 TOTAL CLIMATE ACTIONS TO ACTION across the world
1,088 COOPERATIVES	283 INVESTORS	

Register your commitment

Features

- MANAGEMENT FOR CLIMATE ACTION
- THE CLIMATE ACTION MOVEMENT

Newly added

- Marathon Rubber Industries, Ltd.** (Japan) - Reduces CO2 emissions intensity of production electricity per tonne of rubber latex from 2005 to 2014 through increased energy efficiency.
- Tea Age 10 Tea Solutions** (United Kingdom of Great Britain and Northern Ireland) - Reduces overall CO2 emissions intensity by 8% per tonne of processed tea from 2010 to 2014 through higher power results care.
- Belgium**
- TEA (Tea) - Ocha Company** (United States of America) - Improves energy efficiency, reduces carbon footprint and reduces utility and overall air emissions.
- Artis (Iran)** (Netherlands) - Reduces greenhouse gas CO2 emissions by 55% from 1990 to 2010.
- Elkare-Alpen** (France) - Reduces emissions by 8% to 19% in 2014 to 2015 through CO2 savings by 2010.

Already **600+** companies and **3700+** commitments registered and highlighted on NAZCA (09/15/2015)

THE ACTION AGENDA IN PARIS

At COP21, concrete climate action will be showcased during a **high level meeting, the Action Day, and a series of thematic half-days**, inside the UN negotiations zone.

This is a first in COP history.


During this sequence, LPAA actors will:

Announce progresses
of existing initiatives

Present new coalitions
& showcase individual
commitments

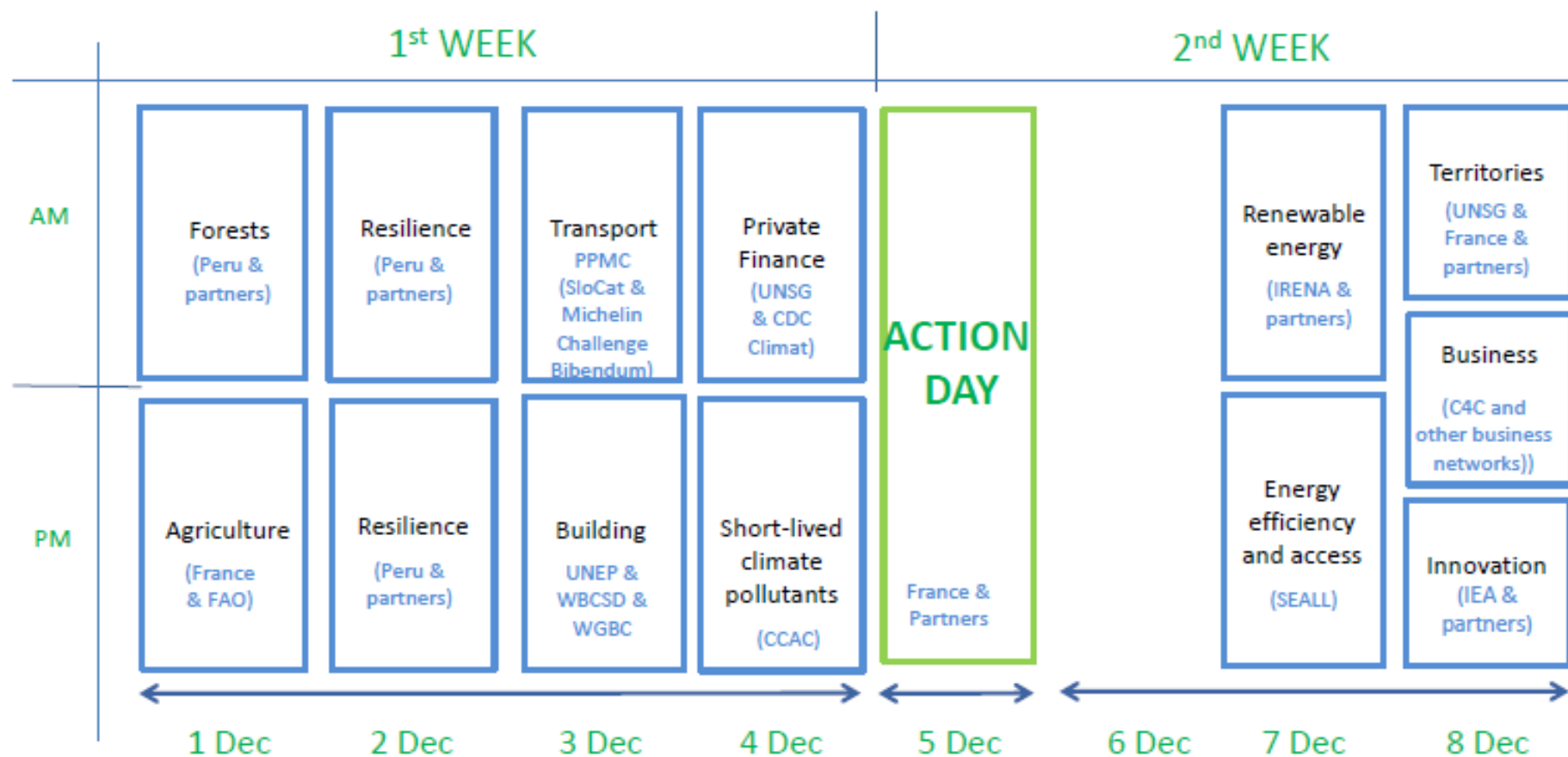
Show the way forward
and solutions pathways
to accelerate action

CEOs who have demonstrated the most ambitious commitments with the Action Agenda may get a chance to hop on stage, together with high-level officials and civil society leaders, to make game-changing announcements, showcase their involvements in cooperative initiatives, and demonstrate to the world that climate action is ongoing.





ACTION AGENDA PARIS SCHEDULE



OTHER USEFUL INFORMATION FOR BUSINESSES

Attend the COP as observers

Business leaders have 2 ways to be accredited as observers and get access to the negotiation zone: through their country's national delegation or through accredited business organizations, which they should contact directly (Full final list here: <http://maindb.unfccc.int/public/ngo.pl>). Note that this entire process is fully managed by the UNFCCC secretariat. Additionally, a number of specific badges will be reserved to CEOs of companies engaged in the LPAA sequence, so that they can attend the specific sessions they are involved with.

Organize side-events in the civil society village, the "Climate Generations Areas"

The size and immediate proximity of the climate Generations areas to the conference center make them a first in the history of the COP. Open for free to both the general public and officially accredited persons, these areas provide a huge space for debates, knowledge sharing, discussions and conviviality. In these areas, businesses and civil society stakeholders will organize side-events and conferences, set out their projects, initiatives and solutions: <http://www.cop21.gouv.fr/en/civil-society/take-part-climate-generations-areas>

Promote technological solutions: the "Gallery"

From December 2 to 9, the "Gallery", located right next to the COP itself, will offer 10.000 m² of private exhibition space to innovative companies to present their actual solutions as concrete evidence of possible climate action. <http://www.world-efficiency.com/GB/La-Galerie/Why-take-part-in-La-Galerie.htm>

Supporting the organization of the COP

Several companies have chosen to contribute as sponsors to the organization of COP21 through either financial or in-kind contributions. More businesses can support the organization of the COP21 : <http://www.cop21.gouv.fr/en/partners/business-and-sponsors>

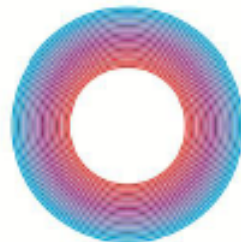
MORE INFO

LCAA website [official launch mid-September]: <http://unfccc.int/lcaa>

NAZCA: <http://climateaction.unfccc.int/>

COP21 website: <http://www.cop21.gouv.fr/en>

UNFCCC website: <http://unfccc.int>



LIMA COP20/ CMP10
BY CLIMATE CHANGE CONFERENCE 2014



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21- CMP11





Presentation – Introduction

Google

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

SAINT-GOBAIN

SDCL

BUILDERS SISK CONTRACTORS Established 1859



electric Ireland

Kingspan

MERCURY

Schneider Electric

AHK

An Taisce

ARUP

BDP.

bre

bucholzmcveyARCHITECTS

CBRE

CMI

CLANCY Built on Partnership

cluid housing association

Colliers INTERNATIONAL



dublinchamber of commerce

Comhairle Cathrach Brata Acha Clath Dublin City Council



éASCA

ECOCEM

eco logical BUILDING SYSTEMS LTD

Elliott

ENGINEERS IRELAND

entropic

entrust planning for renewables

ethos ENGINEERING

Comhairle Contae Fhine Gall Fingal County Council

Flynn

forbo FLOORING SYSTEMS

GANNON Office Solutions

HJL ARCHITECTS

House 2Home

Interface

IN2

IRISH PLANNING INSTITUTE

JLL

Joseph Little Architects Building Life Consultancy

KORE



möla | architecture

MULROY

MUNSTER JOINERY

NICER Tri

MAHONY PIKE

orbisoi

PASSIVE HOUSE

PEFC

PHILIP LEE SOLID TORS

PM GROUP

RIAI

jit Tallon Walker Architects

sirus Building Energy Solutions

ROYAL INSTITUTE OF CHARTERED SURVEYORS IRELAND

Stewart

STRUCTURETONE

sustneo

SWISS FACADES

Townlink



UNIVERSITY of LIMERICK

Varming Consulting Engineers

27,000
members

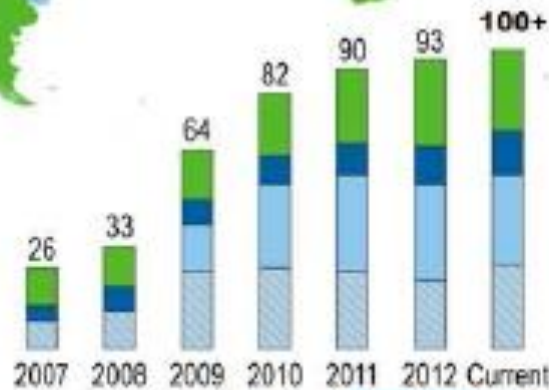
A Global Network

WORLD GREEN BUILDING COUNCIL

- Established GBCs
- Emerging GBCs
- Prospective GBCs
- Associated Groups



WORLD GREEN BUILDING COUNCIL



Over 1.1 billion
m² green
building area
registered



IMAGINE...

A built environment that ensures a high quality of life for all



We all belong to communities: our local communities, our families, work places, sports clubs and many more. Central to our communities are the places where we come together. The buildings in which we live, work, learn and play are fundamental to our quality of life, and the strength of our communities.

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

BUILD UPON aims to build a community: a place for us to come together. Our mission is to work with you to co-create ambitious national renovation strategies to improve Europe's existing buildings; your community spaces. Our specific interest is lowering the amount of energy used by our buildings, to make them perform better environmentally and cost less to run. However, we realise that this is just part of a much bigger story – one in which we all have a role.

Energy Efficiency Directive – Article 4

Member States shall establish a long-term strategy for mobilising investment in the renovation of the national stock of residential and commercial buildings, public and private.

Encompassing;

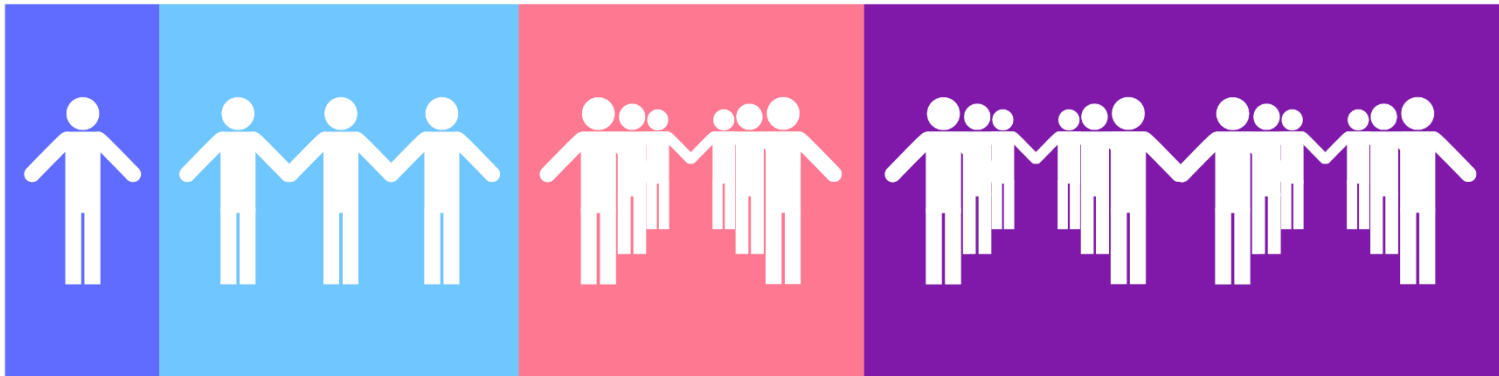
- (a) Overview of the national building stock;
 - (b) Identification of cost-effective approaches to renovations;
 - (c) Policies and measures **to stimulate cost-effective deep renovations of buildings;**
- Strategy shall be published by 30 April 2014

 - **2nd version to be submitted by 30th April 2017**



Long term Renovation strategy

- Making the places we live, work, learn and play better for all of us
- Helping owners and occupiers to ensure every renovation project is about improving quality of life
- Creating a consensus and a community for renovation



www.buildupon.eu

Bulgaria



🐦 in f 8+

Croatia



🐦 in f 8+

Czech Republic



🐦 in f 8+

EU



🐦 in f 8+

Finland



🐦 in f 8+

Ireland



🐦 in f 8+

Italy



🐦 in f 8+

Latvia



🐦 in f 8+

Romania



🐦 in f 8+

Slovakia



🐦 in f 8+

Slovenia



Spain



Sweden



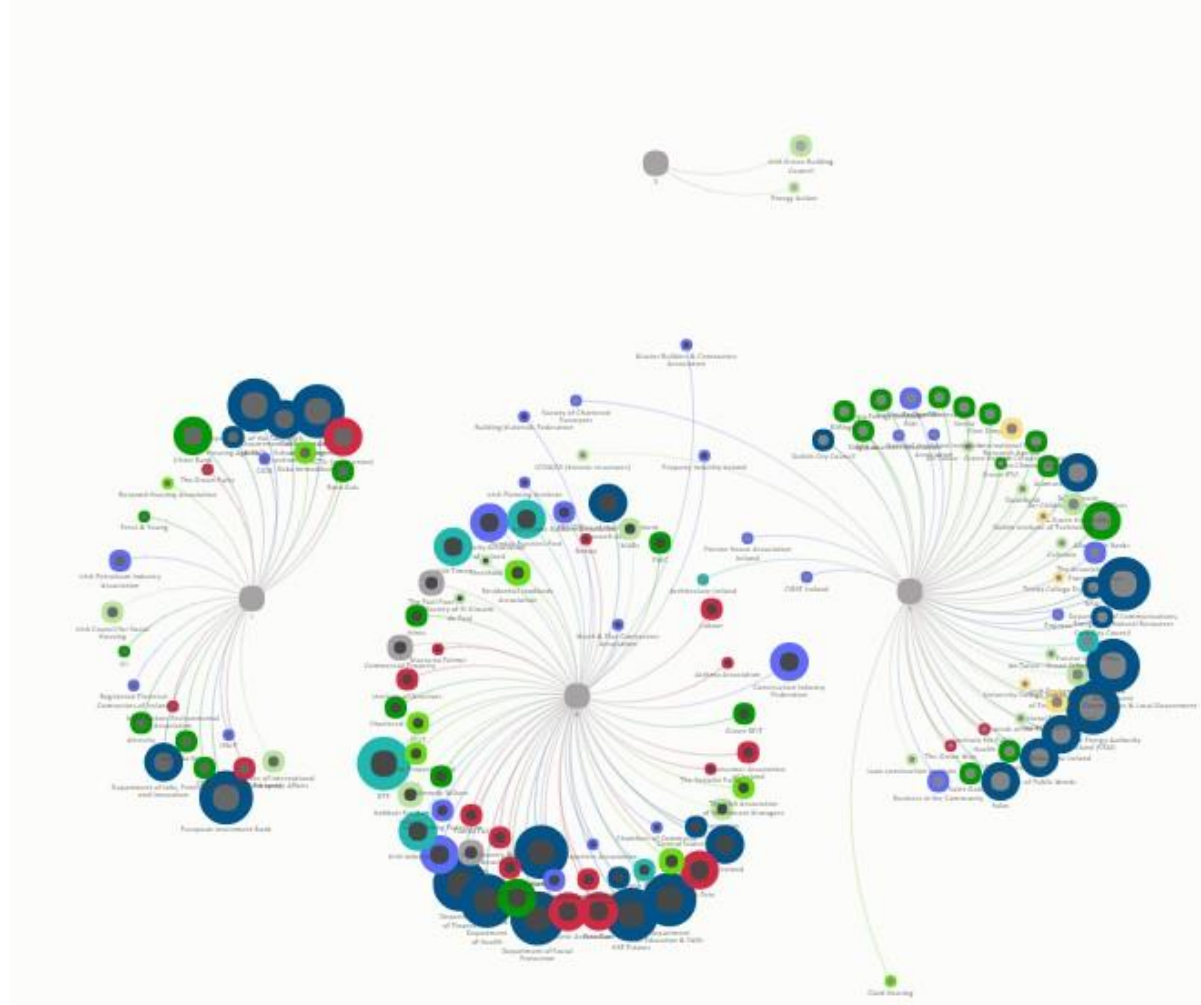
Turkey



ALIGNMENT

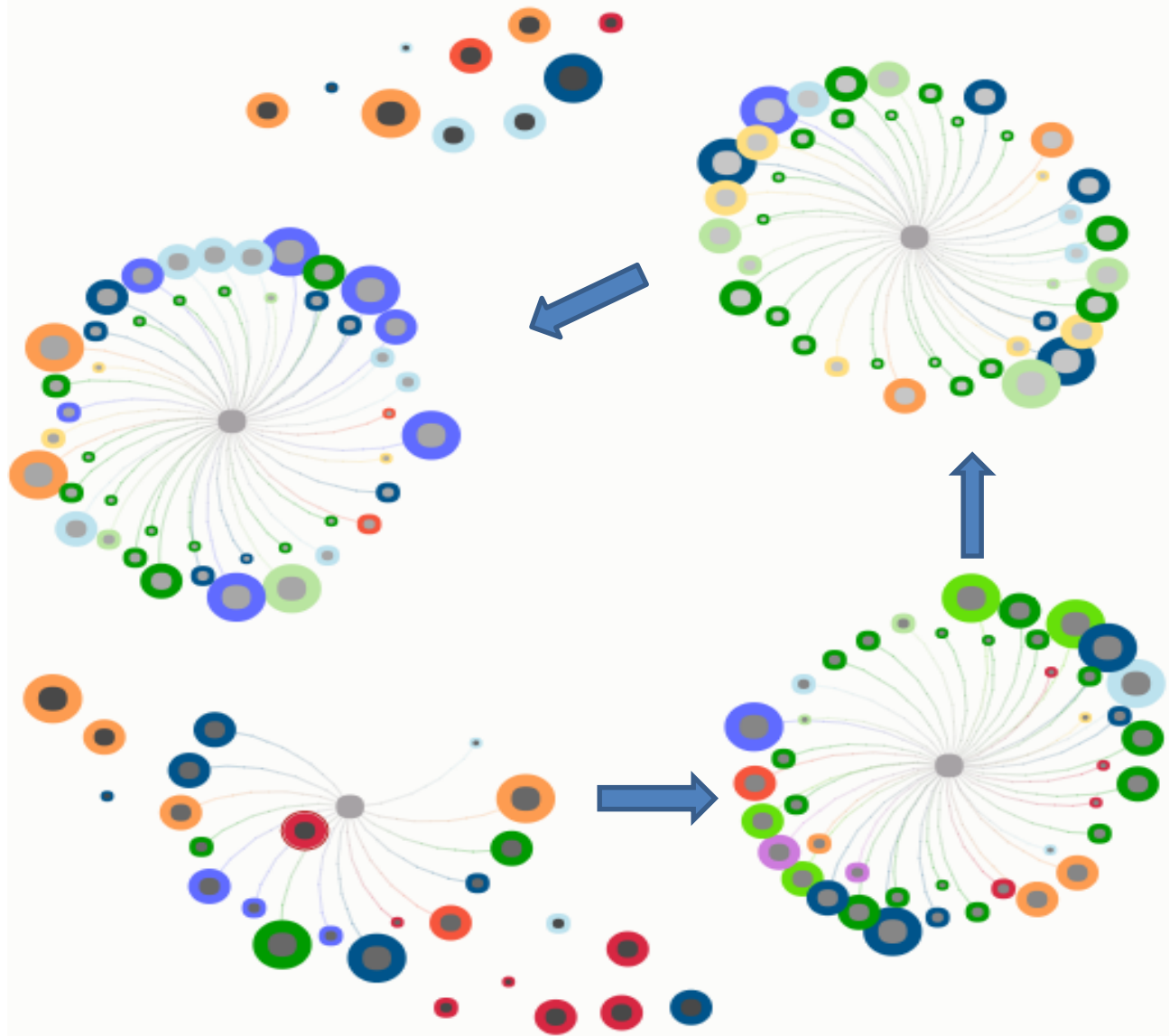
0 = least
3 = most

The 'Unusual Suspects' hold part of the key?



TRACKING
SYSTEM
CHANGE
OVER TIME

ARE WE
CREATING
THE IMPACT
WE NEED TO
SHIFT THE
SYSTEM?



WELCOME TO THE RENOWIKI

It's a collaborative tool for the national renovation strategy community - to map and manage all the important energy efficiency initiatives out there. Just add and edit - simple! Our hope is that over time the initiatives on each national page will evolve into coordinated, high-impact national renovation strategies. On that journey we'll use the RenoWiki as a tool for dialogue at our many events, to explore how individual initiatives are defining and tracking their impact, and understand what our 'collective impact' could look like if we work closer together.

COUNTRY

CATEGORY



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649727.



CHANGE COUNTRY ▾

Filter by

Building Types ▾

Locations ▾

Deep Renovation ▾

APPLY FILTERS

Search



Initiative Categories

Awareness Raising (15)

Skills & Capacity Building (6)

Financial & Economic (14)

Policy & Regulation (9)

Organisational & Administrative (1)

+ ADD NEW INITIATIVE

HOW TO USE RENOWIKI

OUR SPONSORS AND PARTNERS

REPORT AN ISSUE



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649727. Disclaimer: The sole responsibility for the content of this material lies with the authors. It does not necessarily represent the views of the European Union, and neither EASME nor the European Commission are responsible for any use of this material.

EXPAND ALL | COLLAPSE ALL

Exploring our Energy



IMPACT

✔ No data available/collected

START DATE January 2015

Free interactive whiteboard resources and photocopyable masters/worksheets on energy and energy efficiency developed by SEAI for primary school teachers.

[Read More](#)

RESPONSIBLE ORGANISATION(S)

Sustainable Energy Authority of Ireland (SEAI)

CONTACT AN EXPERT

[in](#) [Cliona Murphy](#)

Exemplar Projects



IMPACT

✔ 21 organisations are currently progressing energy projects while testing the Framework process. [Exemplar Projects](#)

START DATE June 2013

Demonstration projects (EPC and EPRP) that are prepared to utilise, test and provide feedback on the approach, tools and structures are accepted by SEAI as Exemplar projects. This is an important aspect of demonstrating that the Framework is robust and has the capacity to deliver at scale. Exemplars receive additional supports in the form of training, networking and access to a panel of EPC legal and technical experts to review and comment at key stages of the projects. In return participating organisations must commit to actively engage in the provision of feedback on utilisation of the Framework.

[Read More](#)

RESPONSIBLE ORGANISATION(S)

Sustainable Energy Authority of Ireland

CONTACT AN EXPERT

[in](#) [Alan Ryan](#)

SPIRIT Project

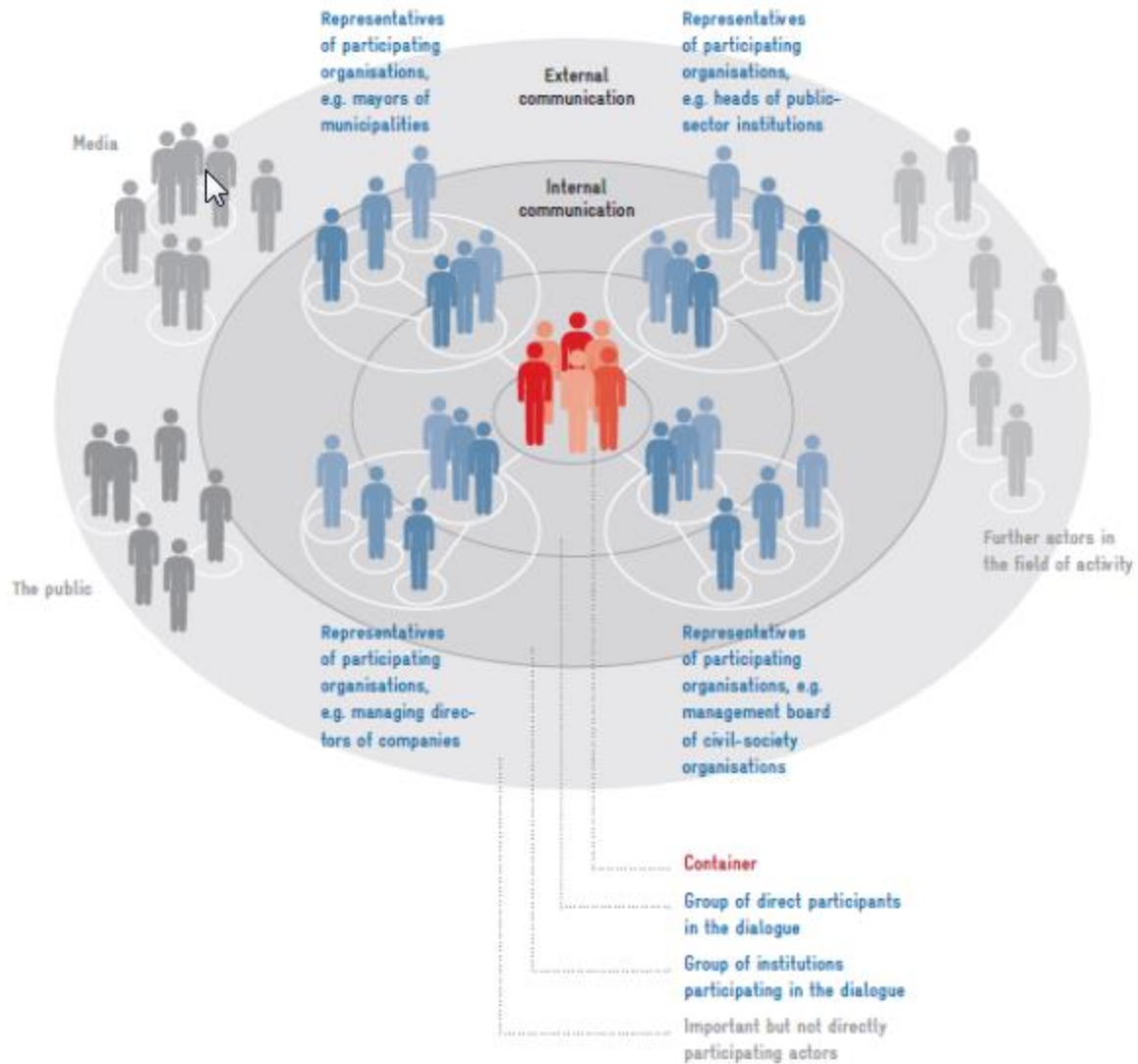


IMPACT

✔ Target: 1,100 demonstration domestic energy assessments and advice sessions in the homes of

START DATE January 2013

SPIRIT project aims at delivering effective energy saving programmes to promote energy efficient behaviour and energy saving activities in homes. The partners work in partnership with faith based organisation to develop an energy efficiency programme that will follow a sequence of domestic energy audits, advice sessions. Crucially, the project supports faith



E - The Community process



- a total of 88 project stakeholder workshops / conferences at national and European level.
- reporting from these events will feed directly into the v2.0 national renovation strategy process and will track how effectively the stakeholder system is collaborating.

F -Creating an Innovation incubator



Develop on-going work at national level, to create project concepts in the four following fields

1. financial innovation;
2. business model innovation;
3. public sector innovation;
4. behavioural innovation.



A way to measure and market sustainability in new housing



This is an excellent project with an extremely high potential for improving sustainability in the residential housing sector...

If successful and if adopted widely by the industry players and home buying public, it could be in widespread use in new housing developments within a few users with substantial environmental economic and occupier benefits....

The results of this project are transferrable to the large stock of existing houses much of which is inadequate in terms of energy and environmental criteria...

EPA evaluation of Home Performance Index project

The verified positive impacts of the development can be communicated in simple language to the home buyer.



Costs

- ✓ Annual heating costs per year €250 - €400
- ✓ Can be easily extended if needed
- ✓ Smart metering of energy to allow easy control of costs
- ✓ Very low flood risk
- ✓ Low transport costs



Wellbeing

- ✓ Designed for enhanced daylight levels
- ✓ Better than standard sound proofing between dwellings
- ✓ Designed for excellent indoor air quality
- ✓ Uses healthy materials
- ✓ Location ensures walkable distance to amenities for active lifestyles



Our Planet

- ✓ A2 BER rating ensures lower carbon emissions
- ✓ Reduced impact from construction materials used
- ✓ Designed for 40% less water consumption per occupant than average Irish home
- ✓ Development helps reduce flood risk in the locality
- ✓ The development improves the local ecology

Sean Armstrong

Advisor-Building Standards,
Department of Environment,
Community and Local
Government

IGBC Shining the Light on Buildings #COP21

Speaker: Susan McGarry
Environmental Manager & LEED Green Associate
Ecocem Ireland

Ecocem working to fight Global Climate Change



Who we are

- Irish manufacturer based in Dublin Port
- Market leaders in production of Ground Granulated Blastfurnace Slag (GGBS)
- Founding members of the IGBC
- Ecocem developed GGBS market share from 0% to 12%
- Capacity to double this to 20%
- From 2016 -1.5 million tonnes of CO₂ will be saved per year across the group



Ecocem GGBS – What is it?

■ Ground Granulated Blastfurnace Slag

■ Best Available Technology for:

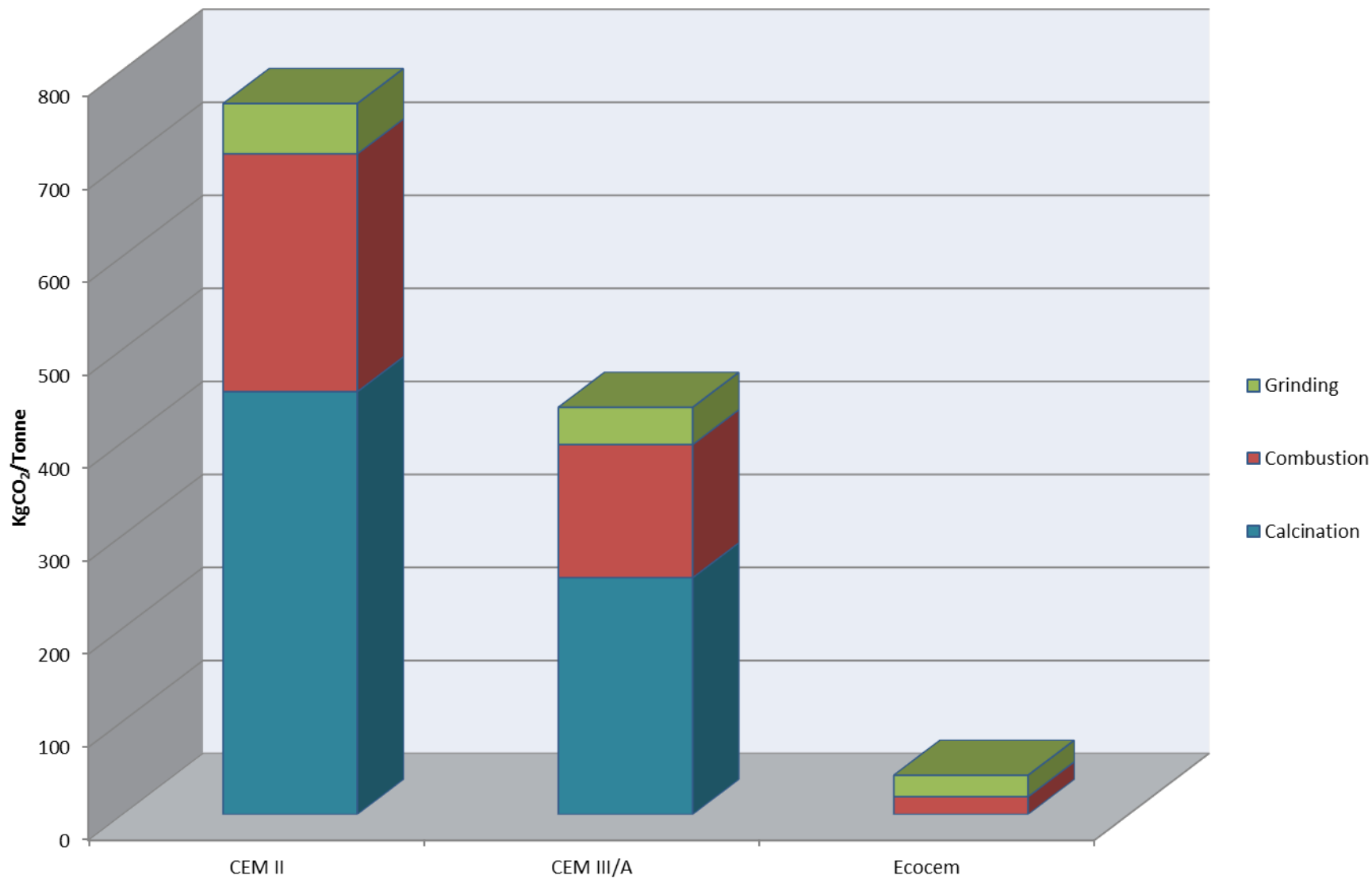
- Increasing performance
- Reducing embodied carbon of concrete



Apple Campus 2 Cupertino

Ecocem –V- OPC

CO₂ emissions for Ecocem and cement production



Environmental Advantages

- Improved Durability
- Reduction in Heat Island Effect
- Lower lighting requirements
- No additional quarrying



Ecocem Initiatives

- Research and Development into low carbon cements
- Education and Training
- Green Building Rating Systems
- Environmental Product Declaration's



Ecocem Climate Pledge COP 21

MAKE YOUR PLEDGE!



As Ireland's first independent building materials manufacturer to attain a third party verified Environmental Product Declaration (EPD), Ecocem will provide knowledge and expertise to their concrete customers, contractors, architects and engineers on low carbon cement and the obtainment and use of EPDs.

Thank you!

For any Queries:
smcgarry@ecocem.ie
www.ecocem.ie

HOW HERTZ IS REDUCING ITS CARBON FOOTPRINT

Presentation to IGBC
Dublin

4 November, 2015

Aidan Burke,
Director, EHS - International

CONTENTS

- INTRODUCTION
- PROJECT TRACKING (ENERGY CALCULATORS/ SUSTAINABILITY ELEMENTS)
- IMPLEMENTATION OF THE EED
 - KEY FEATURES FOR HERTZ
 - Overview & Specific Measures
 - HOW DOES IT IMPACT HERTZ?
 - Energy Usage Statistics
 - Transport Energy Usage Data.
 - TIMELINES/SCHEDULE
- ISO 14001 & Tyre RECYCLING
- CONCLUSION

A World of Brands, a World of Solutions

Hertz[®]

DOLLAR

Thrifty

Firefly
CAR RENTAL

ace
rental cars



Hertz
Local Edition

Hertz
Car Sales[®]

Hertz Rent2Buy[®]

DONLEN
A Hertz Company

CCL Accident Support
A **Hertz** COMPANY

Global Footprint

The Hertz multi-brand portfolio delivers quality, performance and consistency across 5 continents around the globe.

Hertz, Dollar, Thrifty and Firefly operate approximately

11,500+ Locations

in North America, Europe, Latin America, Asia, Australia, Africa, the Middle East and New Zealand.

Dollar and Thrifty have approximately

1,400+ Corporate and Franchisee Locations

in approximately 75 countries.

Hertz, Dollar, Thrifty, Firefly and Donlen combined currently employ

41,000+ People

(full and part time) worldwide.



Hertz is the largest worldwide airport general use car rental brand, with approx. 8,300 locations in 150 countries and the

Largest Airport Market Share.

Donlen Corporation, based in IL, has

160,000+ Vehicles

under lease and management.

INTERNATIONAL DIVERSITY

Diverse
Multicultural
Complex



5
continents



17
corporate
countries



13
languages



laws & regulations



300+
OEM contracts



small airports

CARBON REDUCTION

- ENERGY SUPPLY/ENERGY DEMAND
- PROJECTS ENERGY/ PROJECTS SUSTAINABILITY ELEMENTS
- CARBON DISCLOSURE PROJECT
- COMMUNICATIONS



Fenie Energía y la **CNMC** (Comisión Nacional de los Mercados y la Competencia) certifican que **Hertz España S.L.**, utiliza en sus instalaciones energía con origen 100% renovable*, destacando su compromiso con el medio ambiente.

Fecha: febrero- diciembre 2014

Consumo Energía 100% Renewable: 539,67 MWh

CO2 Evitado: 133,83 T

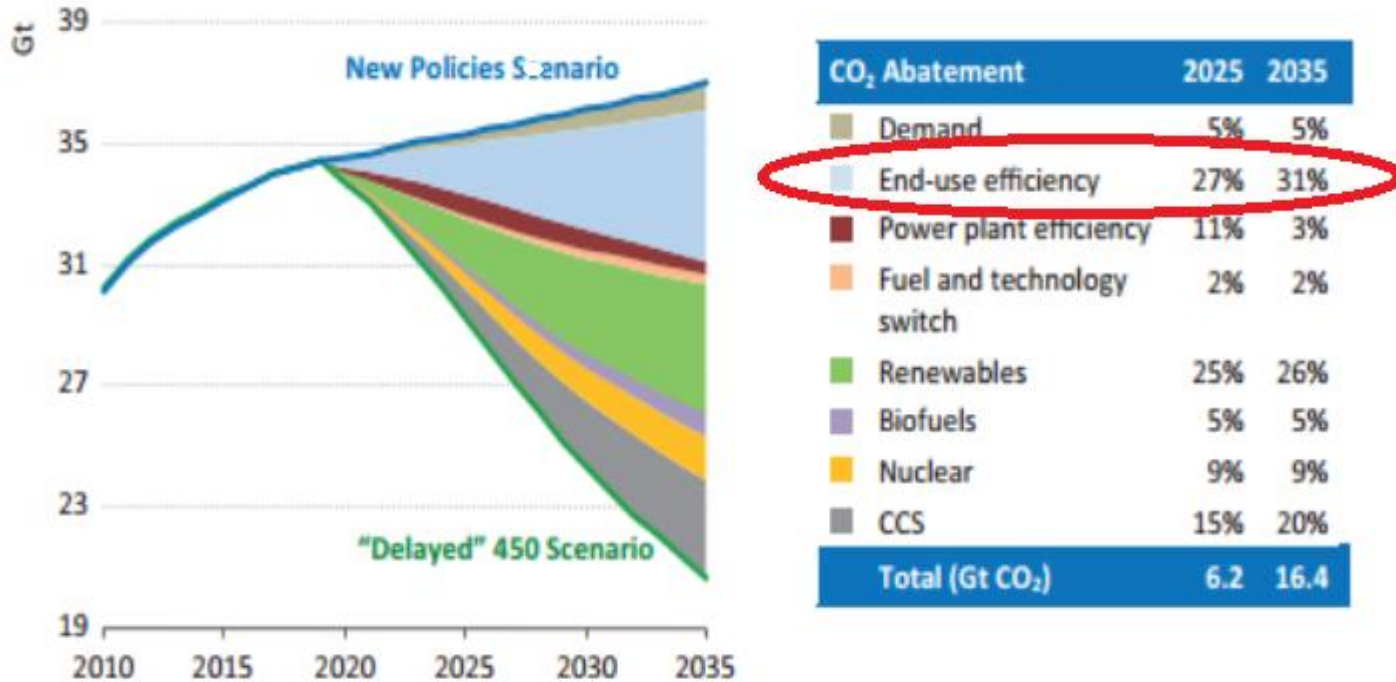
Directora General
D. Isabel Reija



*Se entenderá por energía 100% renovable la proveniente de fuentes renovables, cogeneración o residuos.

DRIVERS-WORLD VIEW OF ENERGY EFFICIENCY

Figure 3.15 ▷ World energy-related CO₂ emissions abatement in a "delayed" 450 Scenario relative to the New Policies Scenario



EED - OVERVIEW & SPECIFIC MEASURES

- Energy Sales Companies must achieve 1.5% efficiency /year
- Public sector in EU countries must purchase energy efficient buildings
- EU governments to carry out energy efficient renovations on 3% of buildings they own
- Empower Energy consumers to better manage their energy
- Large companies will make audits of their energy consumption to help them identify ways to reduce it



Europe – Implementation of Energy Efficiency Directive

COUNTRY

FRANCE

UK

GERMANY

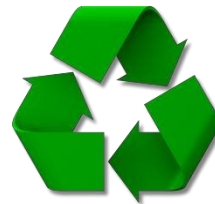
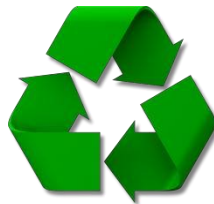
ITALY

SPAIN

BENELUX

HESC

Hertz has engaged with Energy Service providers to carry out audits in all European Countries where it has corporate locations



KEY FEATURES FOR HERTZ

- Defined Criteria
- Energy Audits Requirements driven by National Legislation
- Supervision of Audits by Independent National Authorities
 - Independent National Authorities
- Deadline - 5 December, 2015
- 4 Year cycle
- Penalties for Non-Compliance

INDEPENDENT AUTHORITIES

- **FRANCE** Ministere de L'Ecologie, Du
Developpement Durable et de L'Energie
- **UK** Environment Agency
- **GERMANY** Federal Office of Economics & Export
Control. (Das Bundesamt fur Wirtschaft
und Ausfuhrkontrolle)
- **ITALY** ENEA
- **SPAIN** Ministerio de Industria, Energia y
Turismo
- **IRELAND** Sustainable Energy Authority Ireland
- **BENELUX** N/A

Energy Use

- **Building Energy**

- Request for proposals
- Energy Audits by Specialists

- **Transport Energy(Non Revenue)**

- By Country
- Type of Vehicle
- Activity for which the vehicle is used
- How transport usage is accounted for

STRATEGY FOR IMPLEMENTATION

- Identify Landlord v Hertz responsibility
- Collate Building & Transportation Data
- Procure Energy Service Suppliers
- Scope the Audits
- Sign Off & Report Audits

Company	Hertz
Current Date	05/05/2015
Title	EED5.5.15
Project Start	05/05/2015 08:00:00
Project Finish	05/12/2015 17:00:00

ID	Task Name	Duration	Start	Finish	May	June	July	August	September	October	November	December	January	February	
1	PHASE 1 HESC/UK/ FRANCE	89 days?	Tue 05/05/15	Fri 04/09/15	[Gantt bar spanning May to September]										
2	Landlord v HERTZ responsibility?	1 day?	Tue 05/05/15	Tue 05/05/15	[Task bar]										
3	Gather Statistical Data	11 days?	Tue 05/05/15	Tue 19/05/15	[Task bar]										
4	Procure Service Provider	19 days?	Tue 05/05/15	Fri 29/05/15	[Task bar]										
5	Carry Out Audits	86 days?	Mon 01/06/15	Mon 31/08/15		[Task bar]									
6	Report Audits to Country National Authority	1 day?	Fri 04/09/15	Fri 04/09/15					[Task bar]						
7															
8	PHASE2 GERMANY/SPAIN/ITALY/BENELUX	136 days?	Fri 29/05/15	Sat 05/12/15	[Gantt bar spanning June to December]										
9	Landlord v HERTZ responsibility?	1 day?	Fri 29/05/15	Fri 29/05/15		[Task bar]									
10	Gather Statistical Data	11 days?	Mon 01/06/15	Mon 15/06/15		[Task bar]									
11	Procure Service Provider	11 days?	Tue 16/06/15	Tue 30/06/15		[Task bar]									
12	Carry Out Audits	86 days?	Wed 01/07/15	Wed 30/09/15			[Task bar]								
13	Report Audits to Country National Authority	1 day?	Wed 14/10/15	Wed 14/10/15						[Task bar]					
14															
15	DEADLINE	1 day?	Fri 04/12/15	Sat 05/12/15								[Task bar]			



ISO14001 & OSHAS 18001

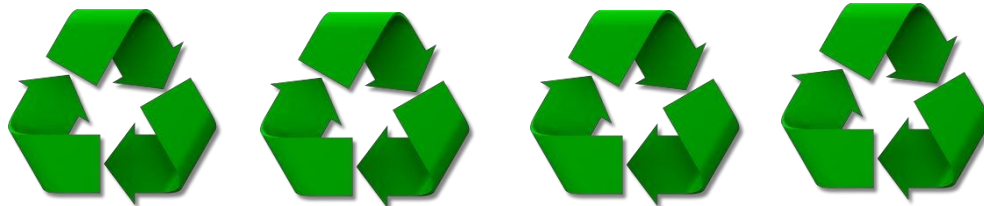


ISO14001 is the International Environmental Management Standard

OSHAS 18001 is the International Occupational Health & Safety Management Standard

HESC Certified with both standards since 2010

Heathrow Airport certified with ISO14001 since 2013



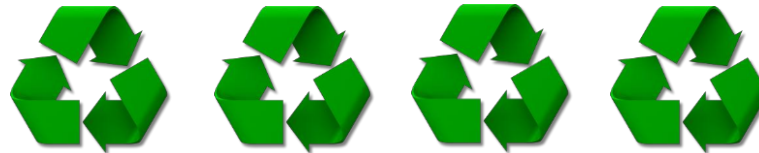


Europe – Tyre Recycling Facts

COUNTRY	Number of Tyres Recycled in 2012	Number of Tyres Recycled in 2013	Number of Tyres Recycled in 2014
UK	25,368	20,000	19,000
FRANCE	15,000	20,000	18,500
GERMANY	13,216	15,000	5,500
ITALY	7,189	15,000	5,000
SPAIN	16,000	11,688	10,000
BENELUX	1,100	5,000	5,000

All tyres purchased in Hertz are;

- recycled,
- reused and/or
- rethreaded



CONCLUSION

CHALLENGES

- Time
- Co-ordination

OPPORTUNITIES

- Hertz position in terms of Energy Efficiency & Effectiveness in Sector and by Country
- Reduce Hertz costs – mid to long term

SAINT-GOBAIN

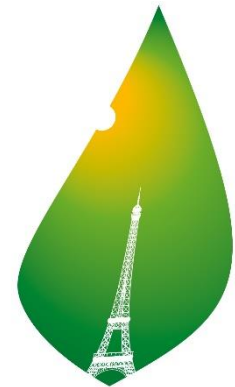
350



4th November, 2015

Shining the Light on Buildings

Fintan M. Smyth
Building Physics Manager
Saint-Gobain



COP21 • CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE

SAINT-GOBAIN

The construction industry has a huge contribution to our environmental footprint



25-40%
OF ALL ENERGY USE



30-40%
OF SOLID WASTE
GENERATION



30-40%
OF GREENHOUSE
GAS EMISSIONS



20%
OF ALL WATER
CONSUMPTION



A CULTURE OF COMMITMENT

- ▶ Saint-Gobain's commitment is based on values that form the foundation of the Group's culture and guide its day-to-day activities

5

Principles of conduct:

- Professional commitment
- Respect for others
- Integrity
- Loyalty
- Solidarity

4

Principles of action:

- Respect for the law
- Caring for the environment
- Worker health and safety
- Employee rights



A COMMITTED COMPANY



International commitments

- Signatory to the UN Global Compact
 - Caring for Climate platform
 - CEO Water Mandate, an initiative by the leaders of leading global corporations
- Support for the UN Declaration of Human Rights
- Participation in the Business & Climate Summit, Paris 2015
- Support for COP 21 (Conference of Parties), Paris 2015
- Participation in World Sustainability Conference 2014



Dialogue with stakeholders* at all levels in the organization

Local actions

- Technical Design for Better Energy Financing
- Steering committee for Qualibuild, Spirit programme

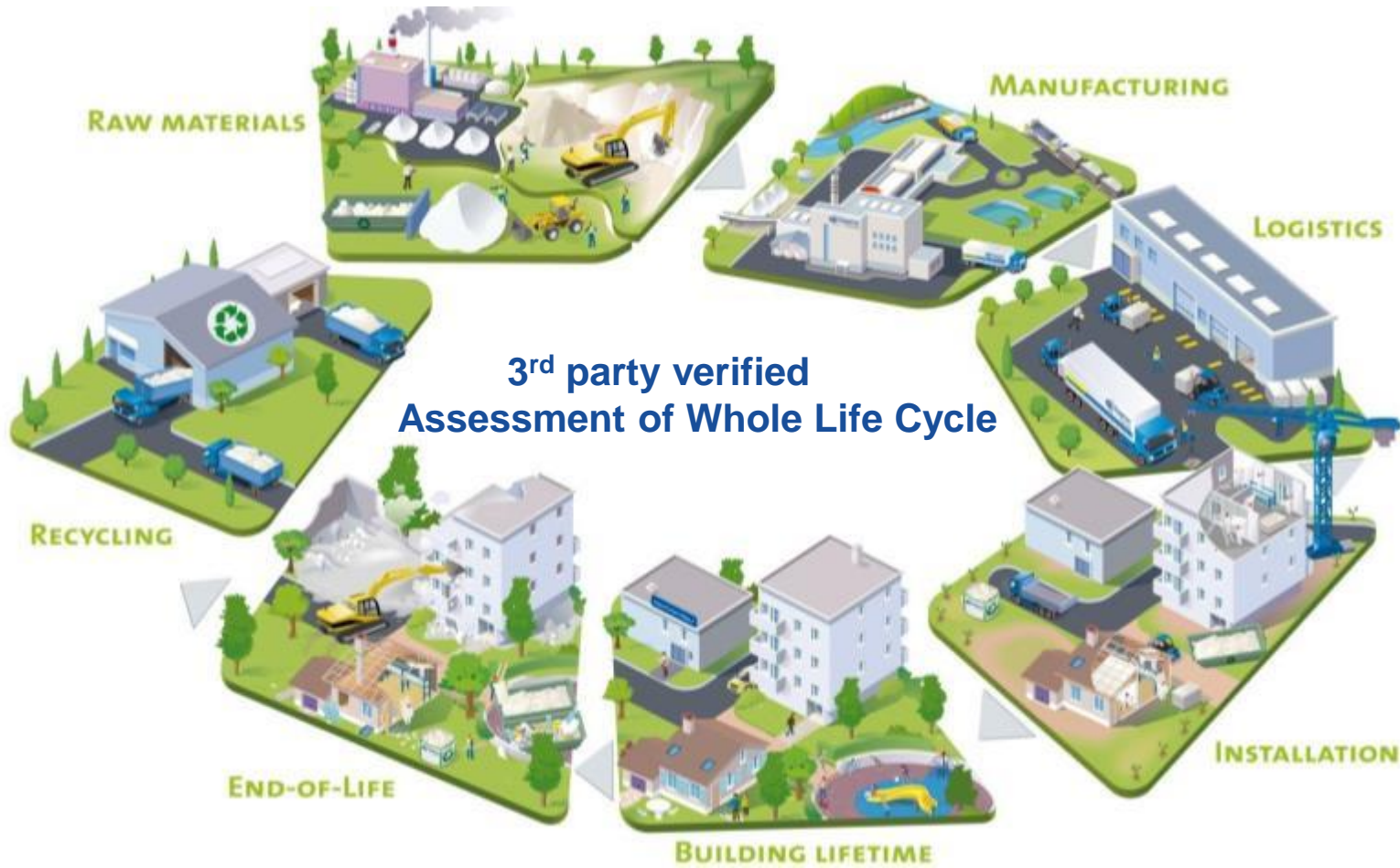
*The term stakeholders refers to individuals or groups of individuals who have an impact on a company or organization's business, products and services.



PROVIDING SUSTAINABLE SOLUTIONS



LCA / EPD: measuring, benchmarking and communicating the environmental impacts of our products and solutions



PROVIDING SUSTAINABLE SOLUTIONS



LCA / EPD: measuring, benchmarking and communicating the environmental impacts of our products and solutions

bre

Environmental Product Declaration
 BREG EN EPD No.: 000064 Issue 01
 ECD EPD Ref. No.: 00000171

This is to certify that this verified Environmental Product Declaration provided by:
Saint-Gobain Isover UK

Is in accordance with the requirements of:
 EN 15804:2012+A1:2013

This declaration is for:
 Spacesaver and Spacesaver Ready - Cut Product Families

Company Address
 Saint - Gobain Isover UK
 Whitehouse Industrial Estate
 Runcorn
 Cheshire
 WA7 3DP
 United Kingdom



ISOVER
 SAINT-GOBAIN

Signed for BRE Global Ltd: **Derek Hughes** 20 April 2015
 Operator Date of this Issue

20 April 2015 19 April 2020
 Date of First Issue Expiry Date

EPD ERIFIED

The verified Environmental Product Declaration is issued subject to terms and conditions. For details visit www.greenbookline.com/terms. To check the validity of this EPD please visit www.greenbookline.com/check or contact us.
 BRE Global Ltd., Gunton, Worfield W025 10XK
 T: +44 (0)1203 321 9811 F: +44 (0)1923 664003 E: enquiries@reglobal.com

EPD
 IN USE SINCE 2007

IF13331/CPMS Rev 0.1 Page 1 of 19 © BRE Global Ltd, 2015



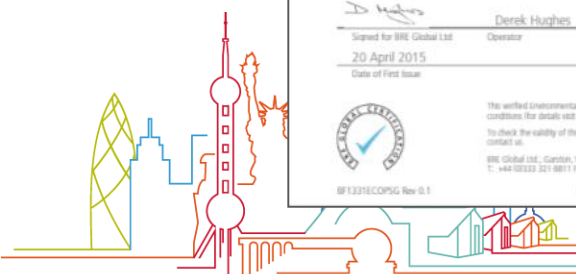
ENVIRONMENTAL PRODUCT DECLARATION
In accordance with EN 15804 and ISO 14025

12.5mm Gyproc WallBoard
 Date: May 2014
 Version : 1



EPD ERIFIED

The environmental impacts of this product have been assessed over its whole life cycle. Its Environmental Product Declaration has been verified by an independent third party.



PROVIDING SUSTAINABLE SOLUTIONS



LCA / EPD: measuring, benchmarking and communicating the environmental impacts of our products and solutions



Eco-Innovation: developing and distributing new products, with increased added value and reduced environmental impacts



Construction & Demolition waste management: boosting the implementation of solutions to collect, sort & treat waste



Product transparency : informing on the ingredients in and releases from our products over their whole life cycle



Education & training: delivering the right messaging & knowledge on sustainable construction & sustainable solutions to our customers



TECHNICAL ACADEMY - KINGSCOURT & DUBLIN



- Opened in May 2010
- Care:4 certified (1st in Ireland)
- Purpose built facilities
 - Classroom
 - Product/Systems display room
 - Practical demonstration areas

■ Industry support

- Contractors
- Merchants
- Architects
- Students

■ Training initiatives

- Practical & Product focus

■ External focus

- Mobile Academy
- Exhibitions & Conferences



TECHNICAL ACADEMY - KINGSCOURT & DUBLIN



- Opened in May 2010
- Care:4 certified (1st in Ireland)
- Purpose built facilities
 - Classroom
 - Product/Systems display room
 - Practical demonstration areas

- Opened November 5th 2014
- Greater accessibility
 - Extended catchment
 - Specification hub
- Increased course portfolio
 - Standards & Regulations
 - Energy / Sound / Fire
 - Renovation solutions



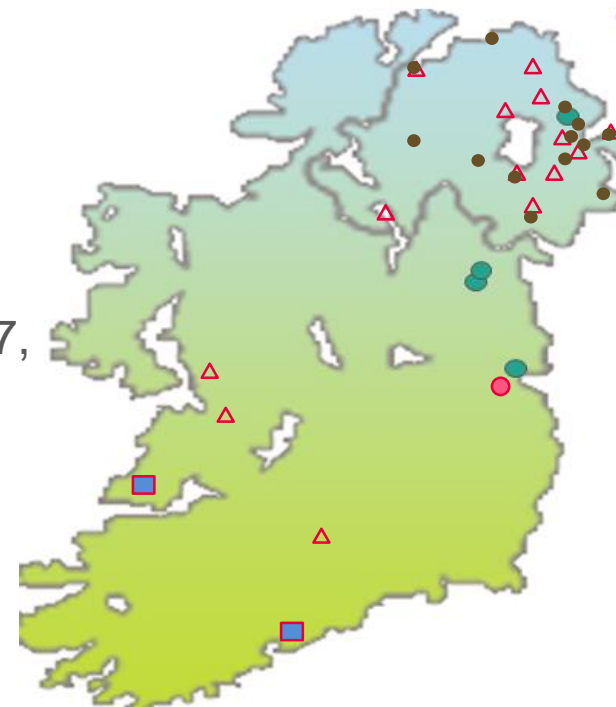
- Winner RIAI Arch Expo 2015
- Commended SEAI 2014

Climate Pledge Wall

- We intend to have trained 10,000 people through our Technical Academies in Ireland by 2020.
- We intend that all our businesses attain ISO 50001 by 2017.
- Saint-Gobain Ireland and UK are aiming to meet 20% of our electricity demand through onsite generation by 2017, and that renewable energy providers contribute at least 30% of our electricity demand by 2017.

Mid-term objectives across our UK& Ireland businesses :
By 2025 : 20% reduction in CO₂ emissions and 15%
reduction in energy consumption

baseline 2010 and considering the same production output.



Invent : MULTI-COMFORT HOUSE

- Design
- Light & comfort
- Peace & Quiet
- Thermal comfort
- Easy to use & maintain
- Sustainability
- Availability
- Energy efficiency
- Profitability





TECHNICAL ACADEMY



SaintGobainIE

www.Saint-Gobain.ie



GLOBAL COMPACT – CARING FOR CLIMATE

Recognise that

1. Urgent
2. Poses risks

Commit to:

3. Take practical action
(voluntary targets)
4. Build significant understanding & strategy
5. Engage with government
6. Collaborate with value chain & take joint initiatives
7. Become active champions

Expect from Government

8. Creation of effective long-term frameworks
9. Recognition that major public investments are required
10. Vigorous international cooperation and support for nations in need

And Will:

11. Collaborate on joint initiatives
12. Invite UN / UNEP to disclose actions of signatories



BUSINESS & CLIMATE SUMMIT

“This Summit is a first step to a large alliance of all actors that business needs and wants to build.

We must continue to work together for this transition to a low carbon society, to allow vulnerable populations to live in sustainable habitat and cities and to allow poorest countries to reach a low-carbon development.”

Pierre-André de Chalendar, May 2015

Chief Executive and Chairman of Saint-Gobain & Chairman of
Entreprises pour l'Environnement-EPE



BUSINESS & CLIMATE SUMMIT

1. Effective carbon pricing
2. Alliance between business and governments leading to the integration of climate policies into the mainstream economy
3. Leverage (trillions) of public funds and private sector finance, and to de-risk investment towards low-carbon assets, especially in developing countries





**Shining the Light on
Buildings at COP21
- 4th November 2015**

#BetterBuildGreen - #COP21