



THE CONCRETE INITIATIVE

solutions for Europe's future

WHY THE “CONCRETE INITIATIVE”?

- Pro-active (and successful) positioning of other construction materials in the political, regulatory and normative debates;
- Relevant and impacting regulatory initiatives at both EU and national levels;
- Remaining silent is not an option;
- The need to redefine our positioning became an evidence and a priority.

BUILDING BLOCKS

- **Aim:** to promote concrete as the backbone of sustainable and position the sector at the centre of the debate with a simple and forward-looking message
- **Target audience:** EU policymakers and stakeholders
- **Conditions:** 1. Complementarity to national campaigns and 2. One voice
- **Philosophy:** pro-active, on our own ground (not defensive) and solution-driven

CONCRETE PARTNERSHIP

- A focus on **concrete** enables to link our product to the market and the policy debate
- One united voice: CEMBUREAU, BIBM, ERMCO, UEPG
- Enlarge the debate with other stakeholders: architects and urbanists, firefighters, insurers, financial sector, policy makers, ...

CONCRETE MESSAGES

- A few core principles
 - Focus on sustainable construction & infrastructure
 - Centred on the European agenda
 - Core messages with EU-wide resonance
 - Across the three pillars of sustainable construction
 - Simple and understandable messages
 - “on our own turf” and not defensive
 - In full coherence with existing campaigns

CONCRETE MESSAGES

Across the **three pillars**

- Responding to Europe's **social needs**: flexible, resilient, safe, affordable and responsible
- An engine for **economic growth**: local, integrated in the economy, multiplier effect, innovation
- Working for a **sustainable environment**: whole-life performance, energy/thermal efficiency, circular economy, biodiversity

PROGRESS SO FAR

- Launch in May 2014

Work programme each year comprising:

- Events in Brussels (spreading our message)
- Studies (contributing to the body of knowledge and supporting our messages)
- Position papers, policy input and fact sheets

TOOLS

- Publication /manifesto
- Website (www.theconcreteinitiative.eu)
- Video
- Fact sheets
- Studies



FIRE SAFETY with concrete

The concrete sector, which is at the heart of construction, must address citizens' concerns regarding the safety of their homes and other buildings. Together with architects, firefighter associations, and insurance entities, we have a responsibility to address the growing issue of safety and to identify solutions to tackle the concerns of European citizens. Every year more than 4 000 people die in fires in Europe, 80% of which start in their own homes¹. In the drive towards ever more energy efficient buildings, fire safety needs to be kept in mind in order to avoid increasing fire loads in buildings. Otherwise, we will continue to see an increased risk of fires occurring, more and more often with devastating consequences.

ACTIVE REVISION concrete

Concrete's high thermal mass helps to reduce the rise in temperature during a fire, which releases this heat, leading to energy savings and reduced CO₂ emissions. In buildings, "thermally active" pipes embedded in concrete, "thermally active" mass furthermore, thanks to the high thermal mass of buildings is greatly improved across the entire building. This is achieved as concrete, raw materials, and improve the energy efficiency of the building. This paper outlines the guidelines for the revision of the Concrete Initiative.

The concrete case

Concrete does not burn and concrete elements retain their strength at high temperatures, so concrete structures can withstand the effects of a fire without requiring any other form of active or passive protection. This safety comes at no additional cost and will always be there, even if the building changes over time (due to refurbishment or accidents). This means that concrete has much more to offer than other structural materials when it comes to safety.

Concrete is....
Non-combustible

Protecting people

Firstly, concrete acts as a shield, preventing a fire from spreading from one room to another. This can slow the progress of the fire and give building occupants more time to escape. Furthermore, it acts as a shield for fire-fighters which allows them to tackle and control the fire, whilst minimising the risk to themselves. Secondly, it maintains the robustness and stability of the building or infrastructure. This means that the risk of a concrete building collapsing in the event of a fire is minimal. Finally, concrete does not emit toxic gases, which is important for the health and safety of occupants and fire-fighters alike.

Safety comes as standard with concrete. It does not require special coatings or sealers. Concrete elements have unsurpassed and proven fire resistance properties. Concrete elements do not burn or melt and retain their structural stability at high temperatures.

Minimising the economic impact

Fires can have a significant economic impact on citizens and business. Given the robustness of concrete, not only is it not damaged by the water used when putting out a fire, it is also easy to repair. This lowers the costs of reconstruction and helps economic activities to recover sooner, reducing negative impacts on workers and businesses. Concrete's excellent fire safety properties are valued by property insurers: concrete buildings benefit from reduced fire insurance premiums.

Concrete is....
Fire resistant

of Buildings Directive Europe's ambitions with buildings. The Concrete Initiative for the revision of the Directive as part of buildings at the renovation, heating and cooling, however, the effective use of a building, which release heat gains, is capacity but also by therefore considering the relevant factors: the relevant

that is unique to concrete when it is hot any unwanted building from released in the fire. Thanks to its thermal mass, it remains stable for years, and as a result to heat or cool

initial uses for concrete aggregates in order to fulfil the requirements of the Directive. This should be carefully use of recycled concrete or in unbound concrete, both "opening" should be considered. The clear perspective in

requirements on even the variable on CADW, it is old be beneficial at wish to see a concrete building. The concrete building



EU INITIATIVES AND HOW THE SECTOR RESPONDS

EU INITIATIVES

- Circular economy
- Energy performance of buildings
- Finance

CIRCULAR ECONOMY

EU initiatives:

- Circular economy package
 - **Waste Framework Directive**
- Protocol for C&D waste management

CIRCULAR ECONOMY

Concrete sector's response

- Overall goal
 - Ensure full understanding/recognition of our CDW position
- Sector initiatives
 - Input to policy-makers
 - Thematic lunch C&DW 2014
 - Fact sheets
 - Study “Closing the loop: what kind of concrete re-use is the most sustainable option?”

CIRCULAR ECONOMY

Concrete sector

- Overall goals
 - Ensure a strong position
- Sector goals
 - Input
 - The
 - Facilitate
 - Study “Circular Concrete” is the most





STUDY – BY ECRA

CLOSING THE LOOP – WHAT TYPE OF CONCRETE RE-USE IS THE MOST SUSTAINABLE OPTION?

STUDY – BY ECRA

- LCA (life-cycle analysis) used to evaluate the impact of producing concrete with primary raw materials or recycled concrete aggregates, or using the waste concrete in road construction.
- See presentation by Jochen Reiners (ECRA) later in the programme

DEMOLITION, DECONTAMINATION, RECYCLING EXPO

- 14-16 June 2017, Brussels
- Concrete workshop, 14 June
- Panel in plenary, 15 June

ENERGY PERFORMANCE OF BUILDINGS

- EU initiatives:
 - Energy Performance of Buildings Directive – being revised now

ENERGY PERFORMANCE OF BUILDINGS

Concrete sector's response

- Overall goal:
 - Understanding & recognition of concrete's contribution to:
 - Energy efficiency
 - Energy flexibility

ENERGY PERFORMANCE OF BUILDINGS

- Sector initiatives:
 - Study by 3E
 - Input to EPBD revision to increase understanding of concrete's role in offering storage for demand response, as part of the proposed Directive's "smart readiness indicator"

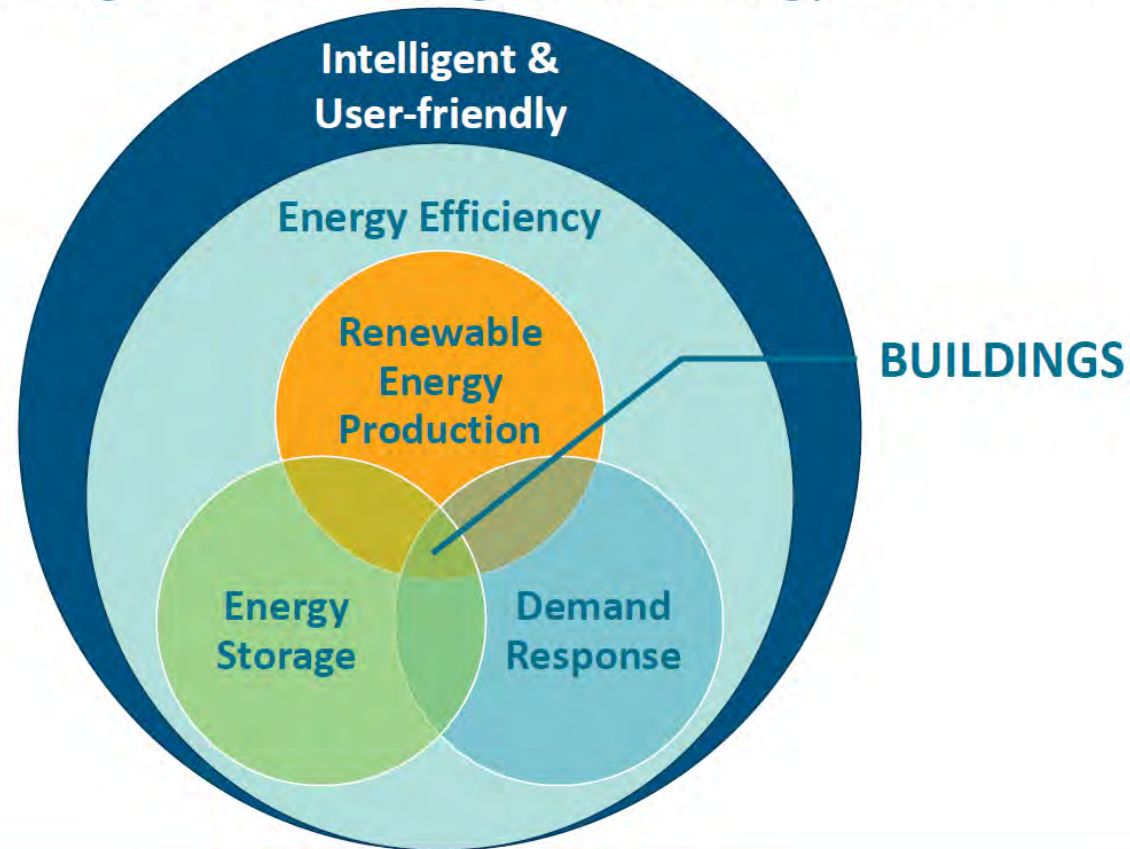


STUDY – BY 3E

**STRUCTURAL THERMAL ENERGY STORAGE IN HEAVY
WEIGHT BUILDINGS – ANALYSIS AND RECOMMENDATIONS
TO PROVIDE FLEXIBILITY TO THE ELECTRICITY GRID**

CONCRETE BUILDINGS OFFERING FLEXIBILITY TO GRID

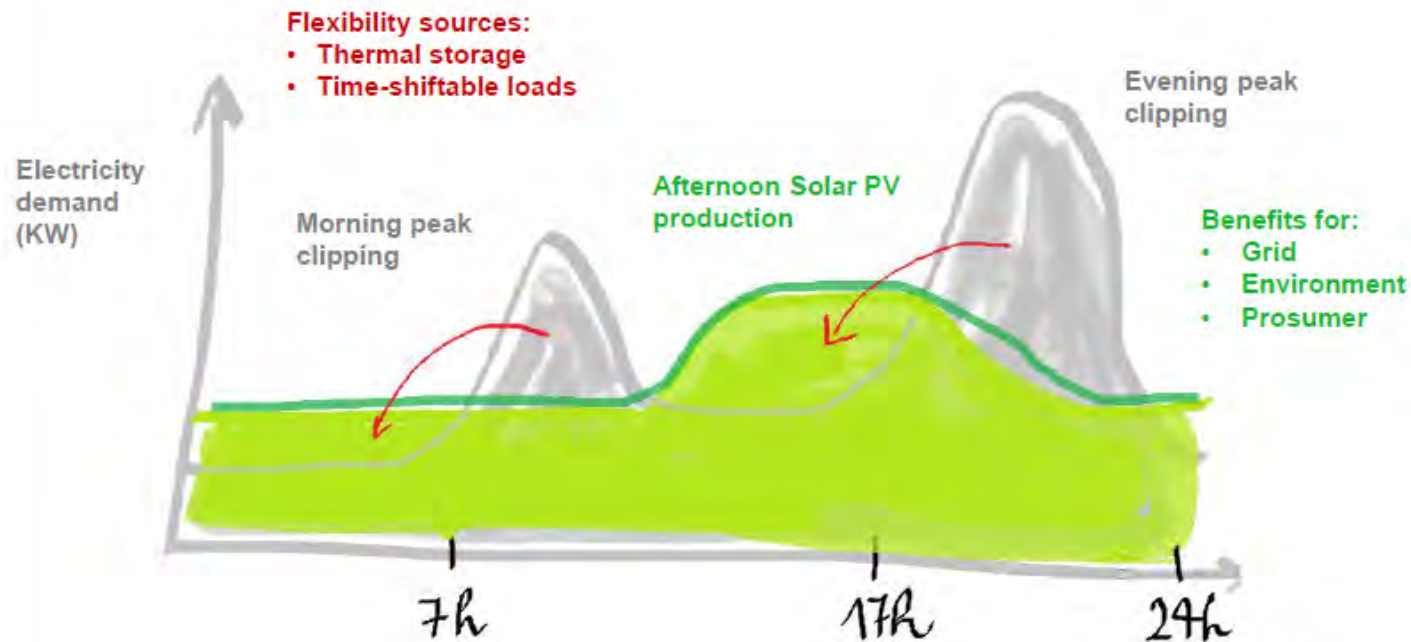
Buildings are becoming micro-energy hubs



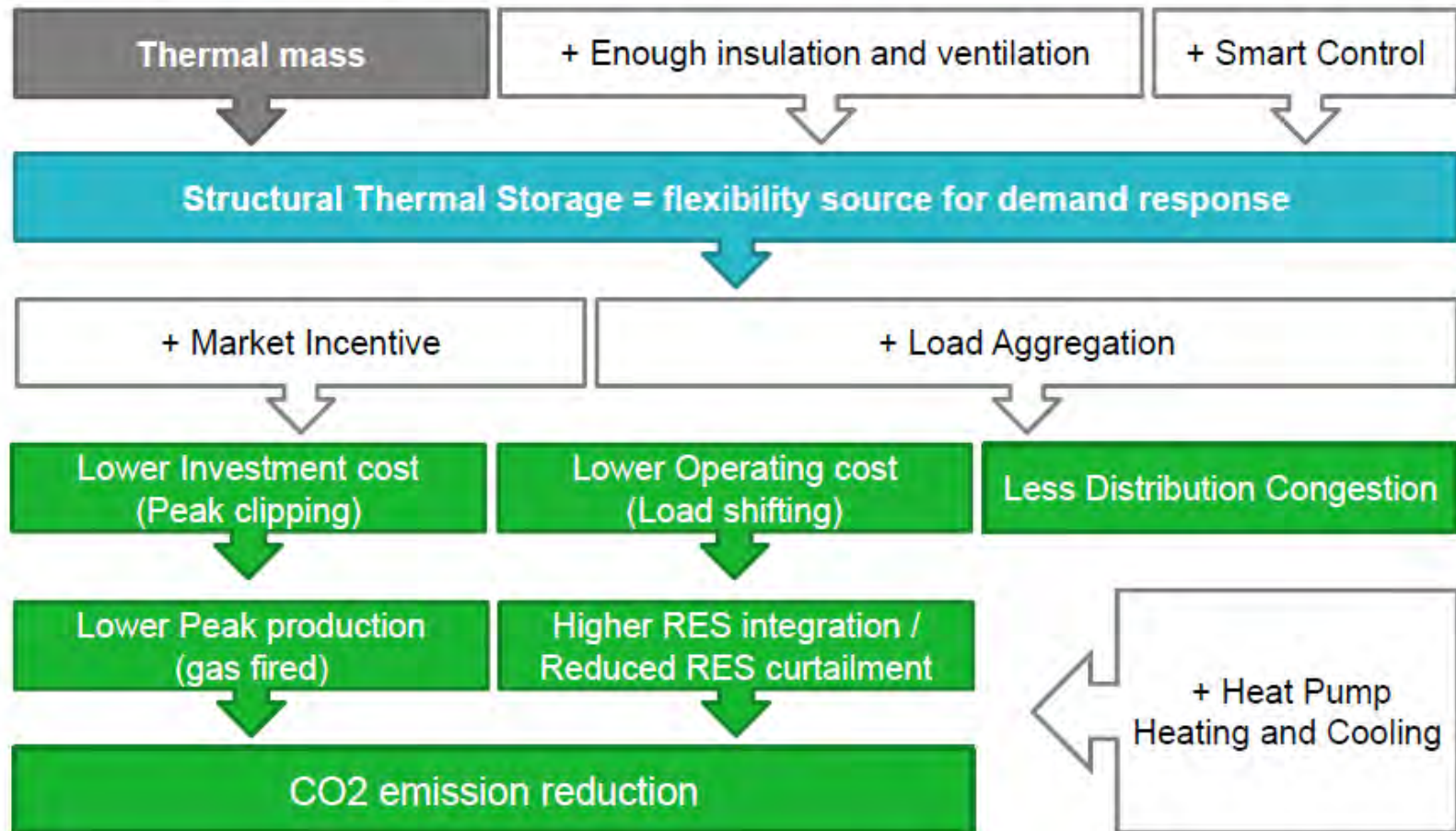
Source: BPIE

CONCRETE BUILDINGS OFFERING FLEXIBILITY TO GRID

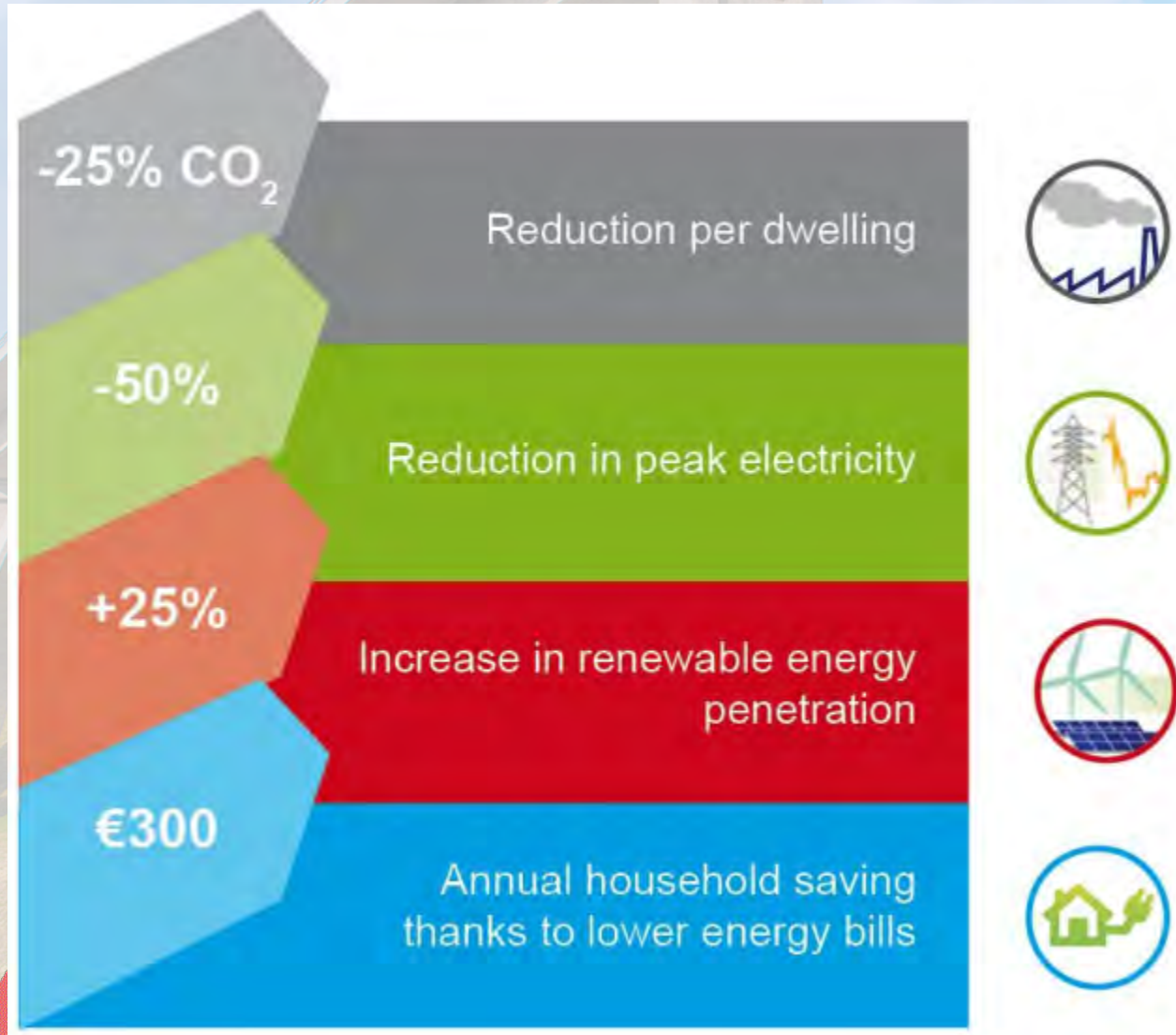
Flexibility general concept



Benefits overview (+ requirements)



POTENTIAL SAVINGS



FINANCE

- EU Initiatives:
 - Smart finance for smart buildings

FINANCE

Concrete sector response

- Overall goal:
 - Raise awareness about value of concrete when investing in sustainable construction
 - Gain better vision of financing opportunities
- Sector initiative:
 - Event with ING on finance & sustainable construction – October 2017

The background of the slide is a photograph of a large concrete bridge or viaduct. The bridge has multiple spans supported by tall, rectangular concrete pillars. The sky is blue with some white clouds. In the foreground, there is a green, grassy hillside. A semi-transparent teal rectangle is overlaid on the lower half of the image, containing the text 'WORK PLAN 2017' in white.

WORK PLAN 2017

WORK PLAN 2017

- Five key areas identified during 2016 Concrete Dialogue
 - Recycling
 - Energy Efficiency
 - Finance
 - Flexible Housing
 - Local initiatives

CONCRETE DIALOGUE 2017

- 21 November, Brussels
- Theme:
 - Connecting people, with a focus on infrastructure (transport, energy, telecommunications...) and concrete's essential contribution to the economy.



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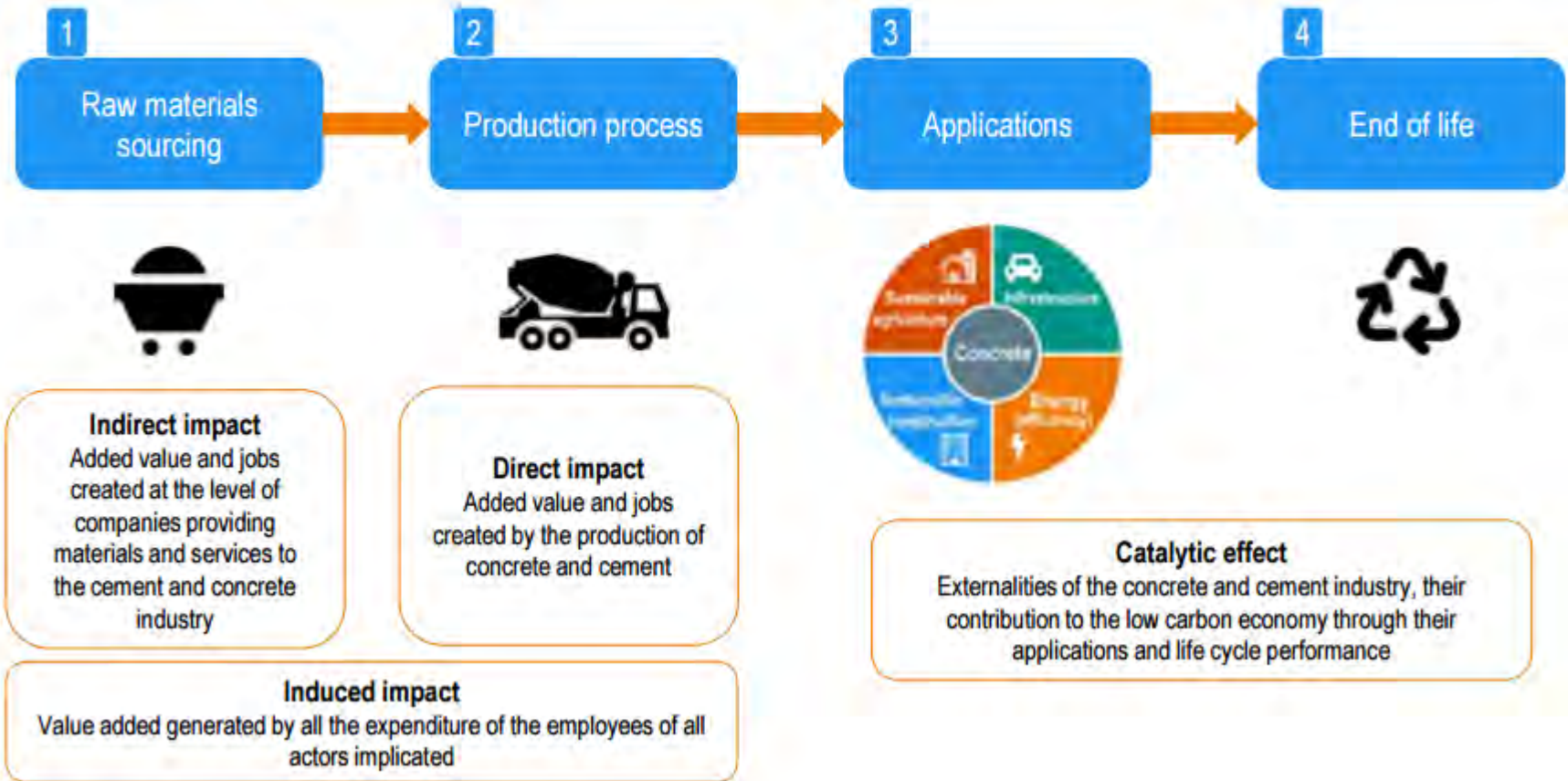


STUDY – LE BIPE / EUROCONSTRUCT

**CEMENT AND CONCRETE INDUSTRY: MULTIPLIER
EFFECT ON THE ECONOMY AND THEIR
CONTRIBUTION TO A LOW CARBON ECONOMY**

CONTRIBUTION OF SECTOR TO ECONOMY

$$\text{Multiplier Effect} = \frac{\text{Direct} + \text{Indirect} + \text{Induced Impacts}}{\text{Direct impact}}$$



CONTRIBUTION OF SECTOR TO ECONOMY



20
bn€

Direct
impact

45
bn€

Direct and
Indirect impact

56
bn€

Direct, Indirect
and Induced
impact

x 2.8

Multiplier effect of the concrete and cement industry in the EU28.

For each euro of value added generated in the concrete industry, 2.8 euros of value added are generated in the economy as a whole of the EU28 countries.



Jobs

384
Thousand

848
Thousand

1.08
Million