



**Italcementi Group**

A world class local business



## New Materials combinations for Building and Housing

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# Cement

Cement is widely used for construction activity, so it is tightly linked to the global economy. It is the primary ingredient in concrete, the second most consumed substance on Earth after water.



# Natural capital

Cement is an energy and emissions intensive industry because of the extreme heat required to produce it. Moreover the primary component of cement are limestone and clay which are non renewable materials.

## Energy

### Energy

**88%** of thermal energy demand still comes from fossil sources.

**70%** comes from coal or petcoke, fuels with sourcing and/or handling creating high environmental (and social) concerns.

**89%** of power demand (including offset) on fossil sources.

## Raw materials

### Raw materials

**94%** of raw materials used to produce cement and almost **98%** of raw materials used to produce concrete are quarried. Almost **50%** of active quarries lays in high biodiversity areas.

## Water

### Water

**50%** of Group water withdrawal are in water stress, scarcity or extreme scarcity areas.

## Air Emissions

### Environmental performance

~ **65%** of Italcementi Group assets are in countries with limited environmental regulations

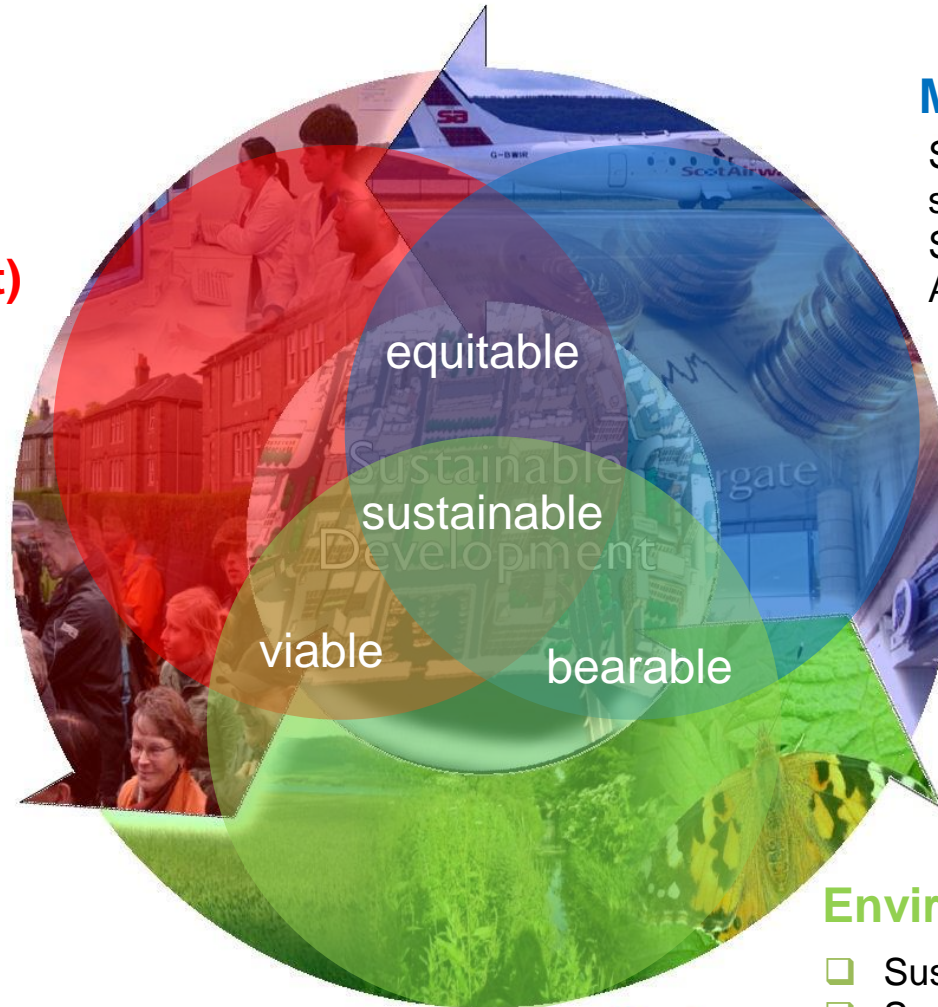
# When environmental constraints meet business opportunities: a win/win/win situation

## Industry (profit)

A cost-effective substitution of natural resources improving the competitiveness of the industry

## Market (people)

Sustainable construction solutions guaranteeing Sustainability, Safety, Quality, Aesthetic values, Durability



## Environment (planet)

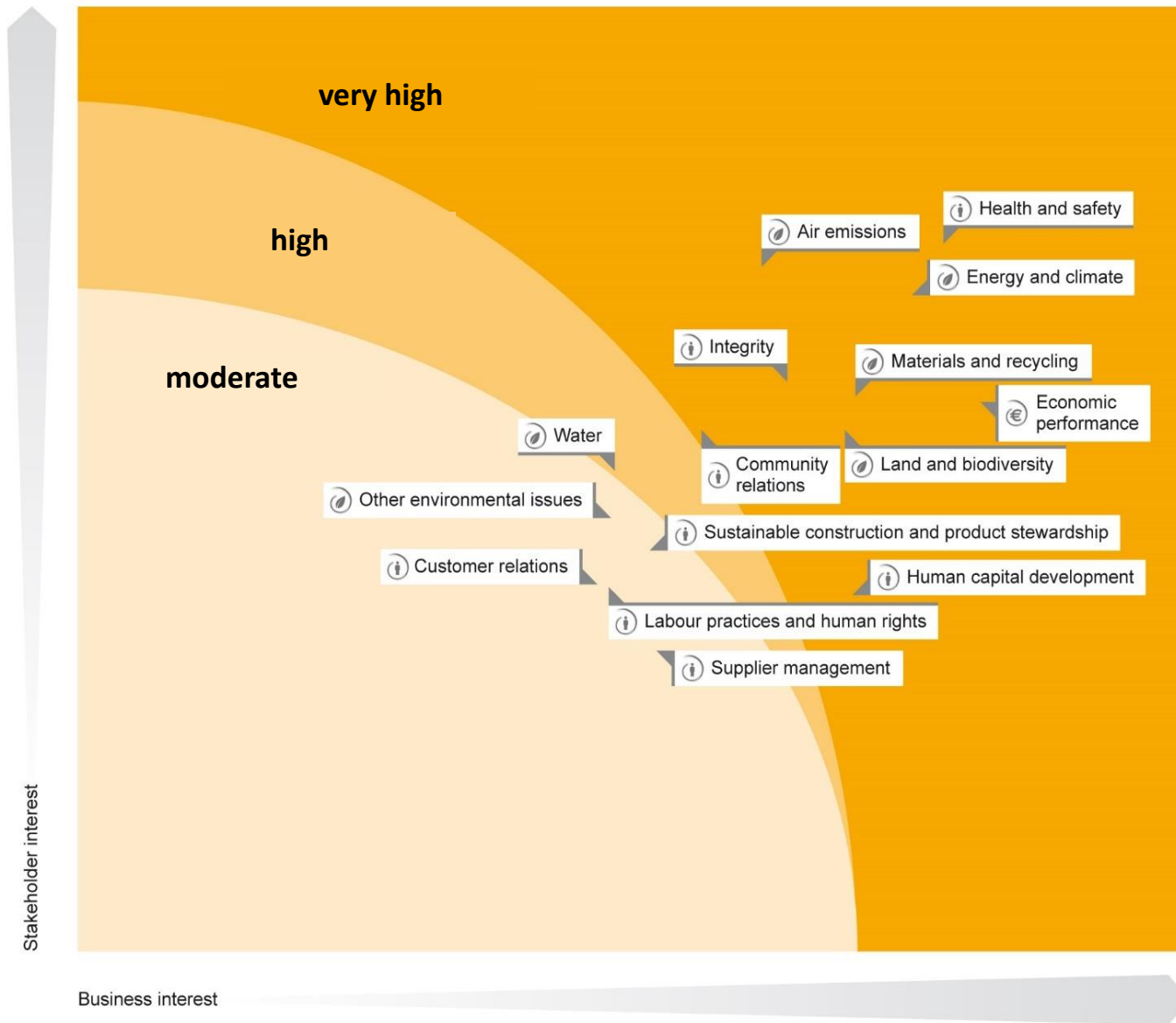
- ❑ Sustainable waste management
- ❑ Saving of natural resources
- ❑ Decrease in CO<sub>2</sub> emissions

# ITC Actions ...



- ❑ Reduction of CO2 emissions and of clinker/cement ratio
- ❑ Recycled materials in cementitious products and concrete
- ❑ Use of alternative fuels and raw materials
- ❑ Evolution of admixtures
- ❑ Control of undesired substances in products
- ❑ Industrialization process
- ❑ Reliable, actionable and verified information on products and services
- ❑ Sustainable product portfolio
- ❑ Standards requirements

# ...through priorities based on materiality



# Sustainability as the basis of ITC Group strategic development



**Industry**



**Innovation**



**Development**



**Sustainability**

# Industrial strategy: Innovation facts and figures

2015 innovation rate: **7.9%**

(increase of approx 20% from 2014)

Annual sales thanks to innovative products: about **337** million Euro

Investments in R&D:

**0.3%** of the turnover

**70** researchers - engineers, chemists, physicists, geologists

**over 100** patent families filed since 1992





# i.lab, the heart of innovation

- ❑ **7500 m<sup>2</sup>** dedicated to laboratories designed by **Richard Meier**
- ❑ **geothermal** energy system - **photovoltaic** panels - **solar** panels  
(provide 65% of annual energy requirements)
- ❑ **2 LEED** certifications



# Industrial strategy: Innovation for sustainable solutions

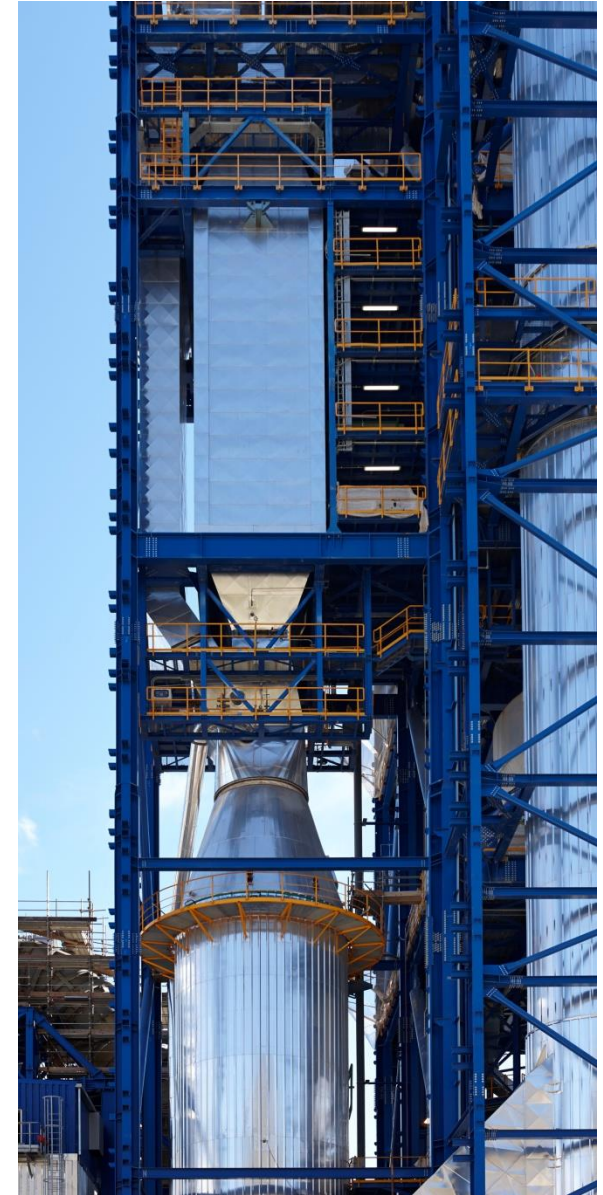
Technology improvement  
for  
environmental performance



# Rezzato new cement plant

## Environmental benefits:

- ❑ - **75%** overall emissions reduction
- ❑ - **20%** reduction in energy consumption
- ❑ - **8%** reduction in use of raw materials
- ❑ **90,000 m<sup>2</sup>** surface area, coated with photocatalytic products to eliminate pollutants (the world largest surface for a production facility)



# Industrial strategy: Innovation for sustainable solutions

**High-performance materials**  
for  
sustainable, safe,  
highly aesthetic constructions



# i.nova

An interface representing the innovative approach of Italcementi and transferring it to all markets worldwide in all sectors of activity.

A codified system, universal and intuitive organized around the concept of

# performance

The customer is the centre of a strategy focused on the capacity of offering solutions meeting specific needs.

Not selling just cement but selling a performance,  
not selling the product but selling the result.

# Product (and material) Stewardship at Italcementi Group

*Product Stewardship means understanding, controlling, and communicating products technical performance, environmental, health and safety related effects throughout their life cycle, from production to final disposal or reuse*

**Group criteria for classification of products as sustainable are:**

Product performance in use

- Photocatalytic
- Durable
- Insulating
- Draining effect....



Embedded properties\*

- CO<sub>2</sub> content
- Recycled content



RECYCLED

# An example of i.active cement application

*Dives in Misericordia Church, Rome*

WORLD  
MATERIALS  
FORUM



# An example of i.light cement application

*Italian Pavilion @ Expo 2010, Shanghai*

WORLD  
MATERIALS  
FORUM





# An example of i.active Biodynamic cement application

*Palazzo Italia @ Expo 2015, Milan*



# An example of i.active Biodynamic cement application

*Dior's new flagship store in Miami*

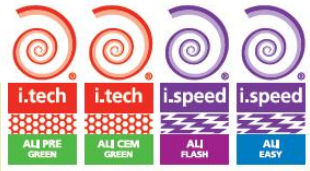


# high-tech, rapid and green Cement

**ALI** is Italcementi Group product line based on **calcium sulfoaluminate technology**. **ALI** products are based on a **low environmental impact** production process.



Gamma ALI  
Prodotti solfoalluminosi



- very low **CO<sub>2</sub> footprint**
- very high use of **recycled materials**

## i.tech ALI PRE

Global warming potential	738 kg CO <sub>2</sub> eq/ton
Use of recycled materials	603 kg/ton

## i.Tech ALI CEM

Global warming potential	665 kg CO <sub>2</sub> eq/ton
Use of recycled materials	506 kg/ton

