PLATFORM MEETING

L'esperienza dei Progetti LIFE per la sostenibilità ambientale dell'industria Ceramica e dei Laterizi

Sinergie tra rifiuti per la produzione di piastrelle in ceramica innovative

Elisa Rambaldi – Centro Ceramico

WINCER (ECO/13/630426)

Sassuolo – 11 aprile 2017

FEDERAZIONE CONFINDUSTRIA CERAMICA E LATERIZI

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

CENTRO CERAMICO Bologna

Project details

Waste synergy in the production of INnovative CERamic tiles

WIN CER

Contract number ECO/13/630426

Project Coordinator
Elisa Rambaldi
Centro Ceramico

Duration
01/01/2015 - 31/12/2017

Budget
€ 1.489.312
(EU contribution: 50%)

1	3	3	2015	1489312	744656
EU state	Partners	Duration years	Start project	Total cost	EU contribution

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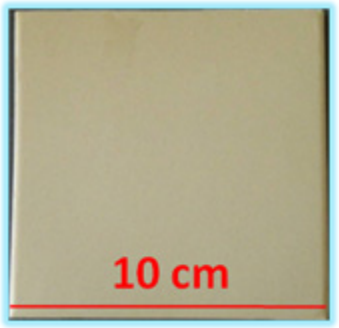
Project background



From laboratory

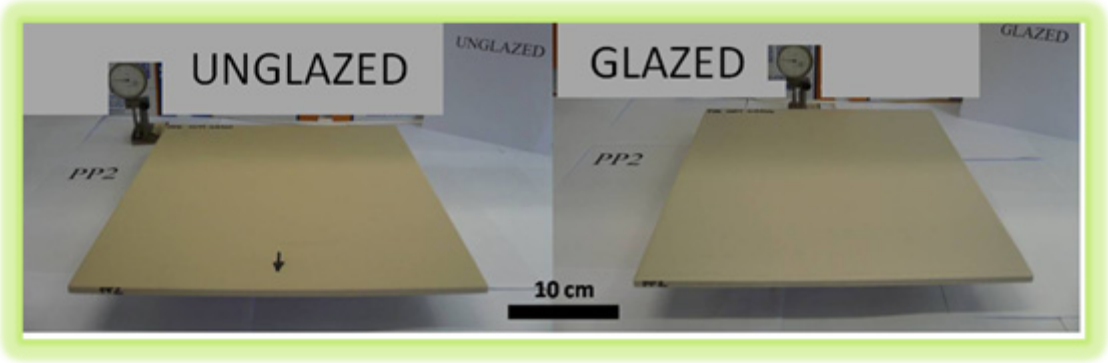
to industrialization

New concept of traditional ceramic tile mix

PLASTICIZER, FLUXING AND TEMPERING agents

- natural clays, feldspars and sands -

are **pre and post consumer waste**



The combination different waste enables the production of innovative ceramic tiles with similar or improved mechanical properties respect to the traditional ones and the maximum sintering temperature can be reduced.

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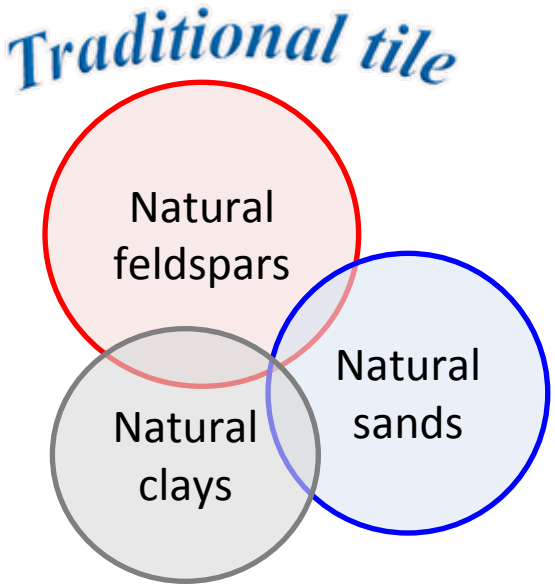
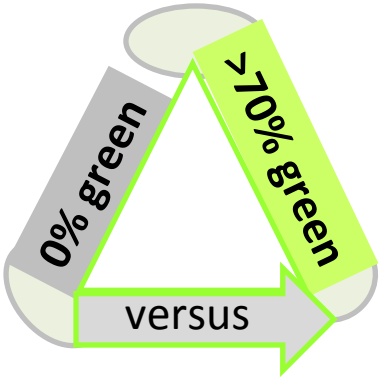
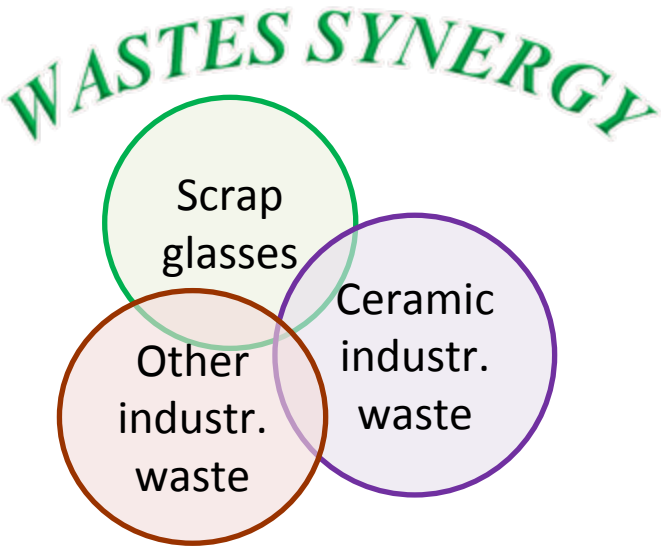
Project aim

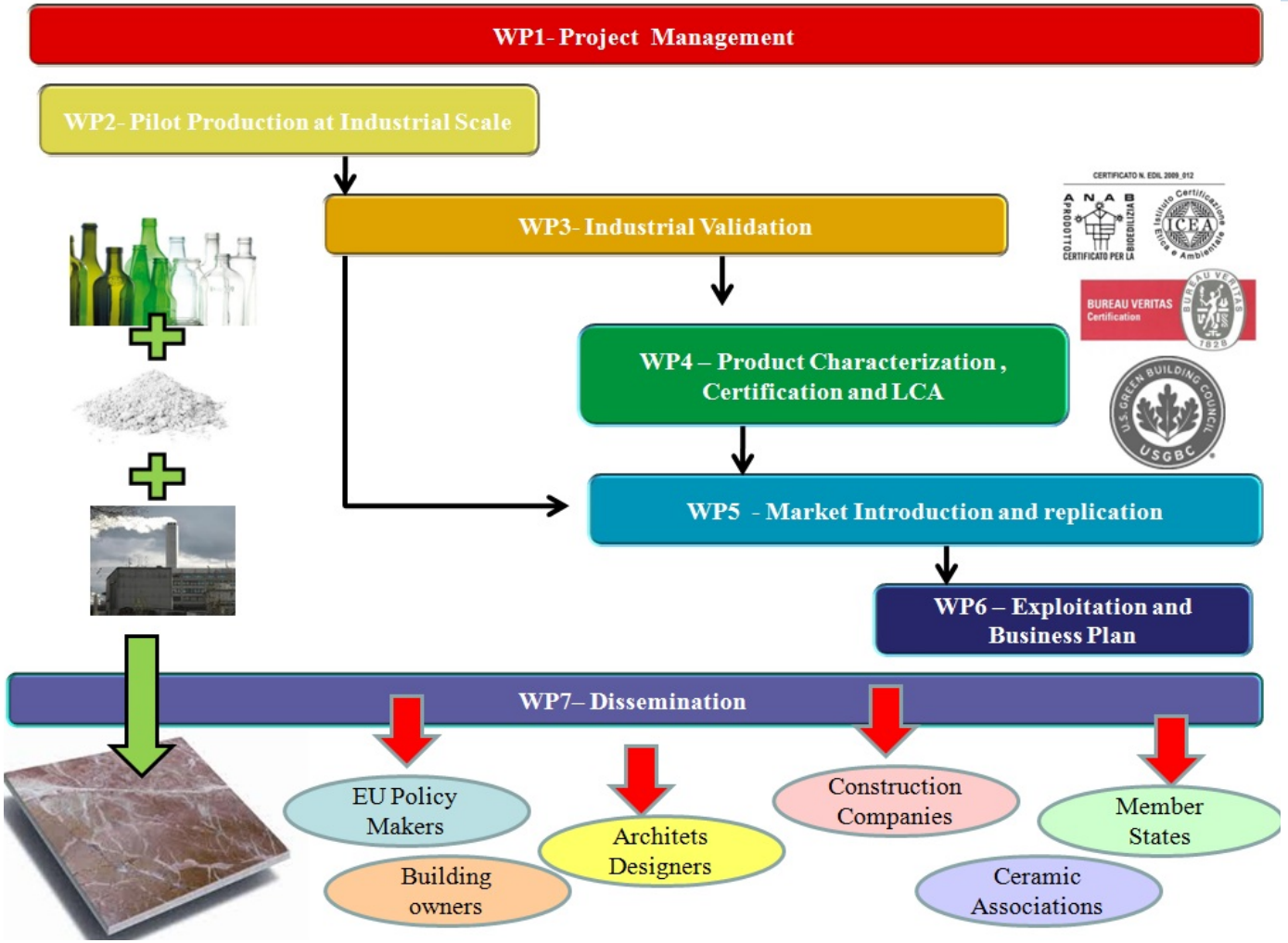






- Contribution to sustainable waste management
- Reduction of the use of natural resources
- Improvement of the environmental performances of the ceramic tiles sector by reducing:
  - CO_2 emissions
  - energy consumption
  - methane use

Project overview



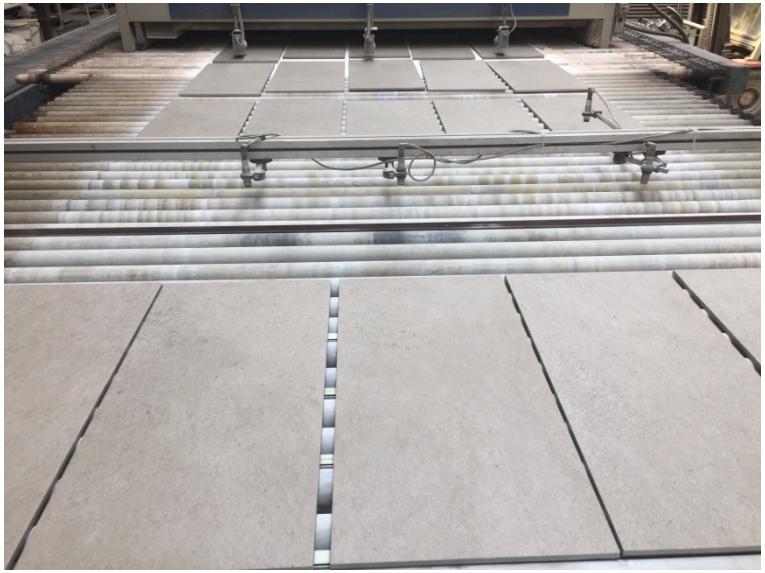
Achieved results

- **At M18** FINCIBEC's industrial production of WINCER tiles (250x250 mm) containing 96% of secondary raw materials.

These products fulfill the standard requirements, in particular EN 14411 (“Ceramic tiles: Definitions, classification, characteristics, evaluation of conformity and marking”) and belongs to class BIIb (water absorption $6 < E \leq 10\%$).

Achieved results

- **At M24** MARAZZI's industrial production of WINCER tiles (300x600 mm) containing 85% of secondary raw materials fired at 1025°C

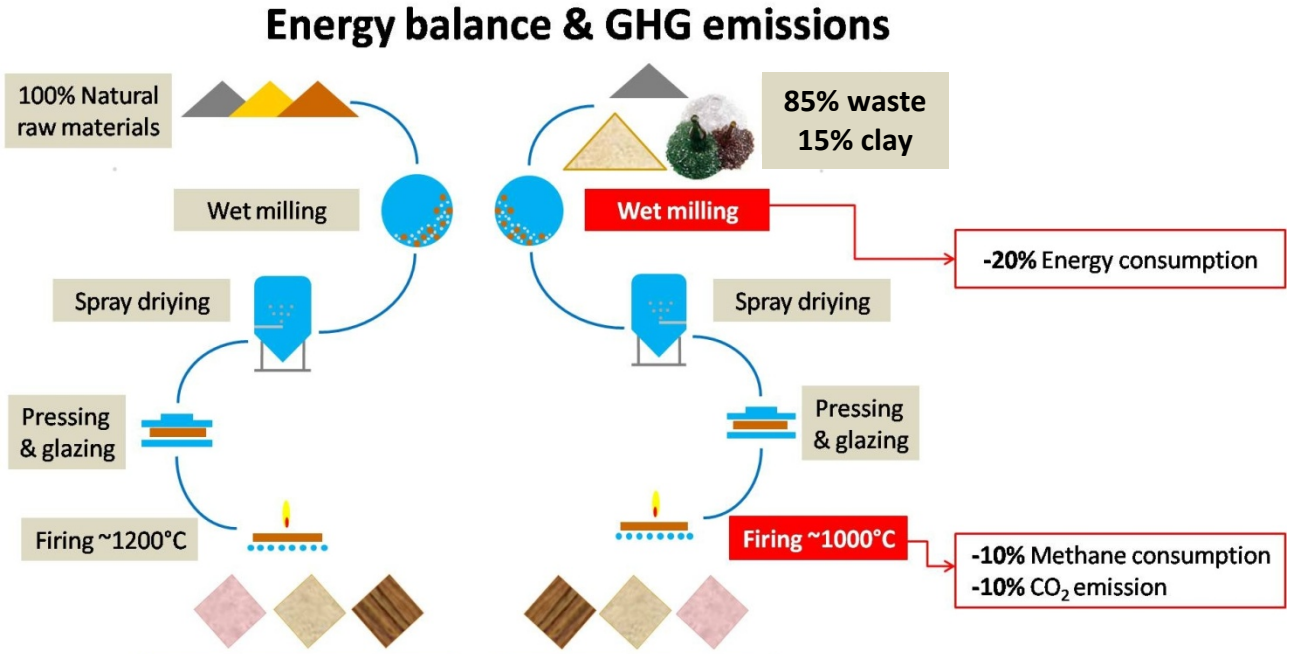


These products fulfill the standard requirements, in particular EN 14411 (“Ceramic tiles: Definitions, classification, characteristics, evaluation of conformity and marking”) and belongs to class BIa (water absorption E ≤ 0.5%)

Expected results

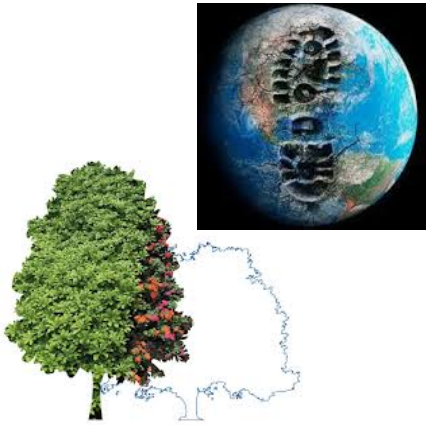
- Improvement of the European ceramic industry through the acquisition of the world leadership in waste-based ceramic materials
- Widening of the ceramic products spectrum by including more sustainable ones in substitution to other materials
- Reduction of energy consumption of the milling and firing processes

Conclusions



Traditional porcelain stoneware

85% GREEN ceramic stoneware



➢**Reduced amount of crystalline silica**

➢**Lower environmental impact**:
- Lower CO_2 emission
- Lower methane consumption
- Lower energy consumption
- Lower natural resources consumption

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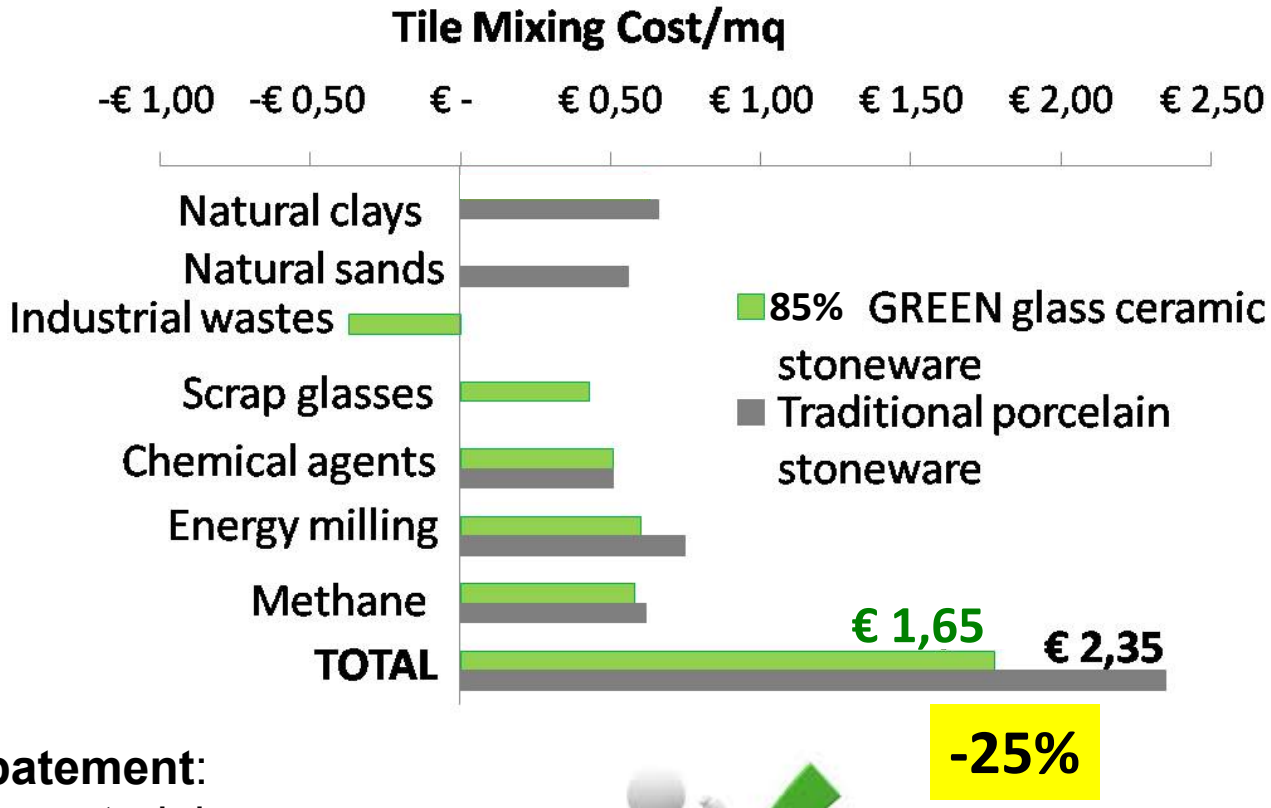
Conclusions



- **Industrial fixed costs abatement**:
  - Lower expense for raw materials
  - 0% landfill confinement
  - Recovery of industrial wastes
  - Lower energy and methane consumption

GRAZIE PER L'ATTENZIONE

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