

**Call for Ideas – Mediterranean Region**

- ▶ Problematic and Topic introduction  
*Reshaping the Energy Industry: Action for Transition*
- ▶ Objectives
- ▶ Findings
- ▶ Technical novelty
- ▶ Conclusion & Recommendations

**VALORIZATION OF HOUSEHOLD WASTE FOR BIO-BRICKS PRODUCTION**

**Presented by:**  
**Pr Zhor EL Hallaoui,**  
**PhD, Eng,**  
**EuroMed University of Fez,**  
**Morocco**

Established by:



Camera di Commercio  
Ravenna

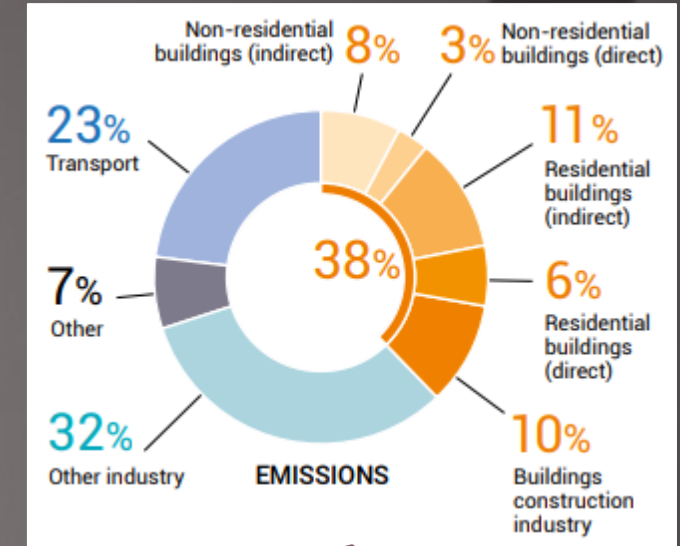
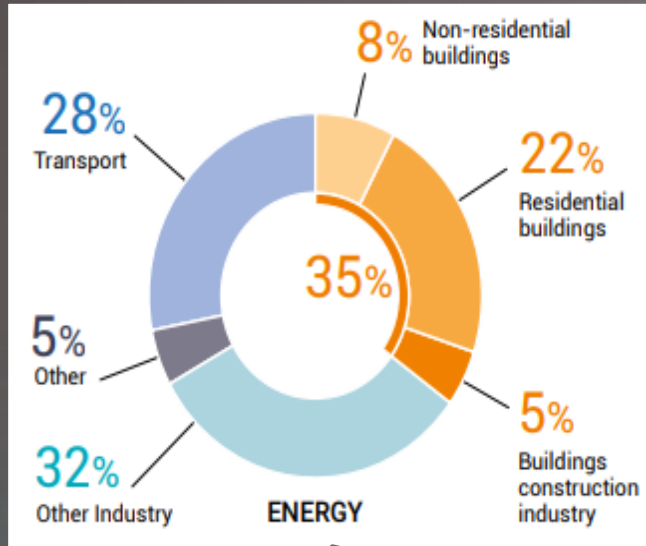


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# Problematic and Topic introduction

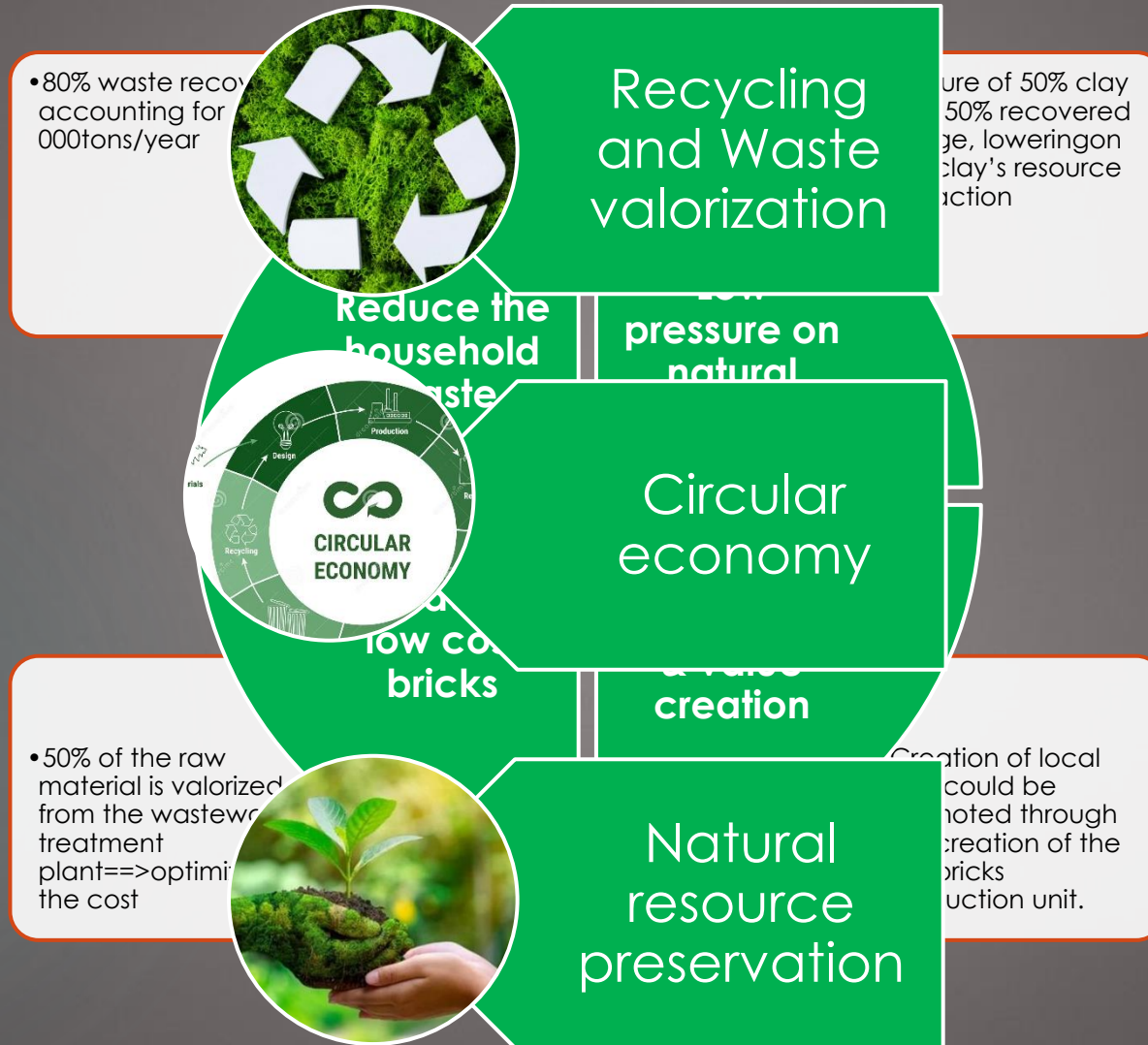


**Urgent need for the emergence of alternative eco-friendly construction materials**



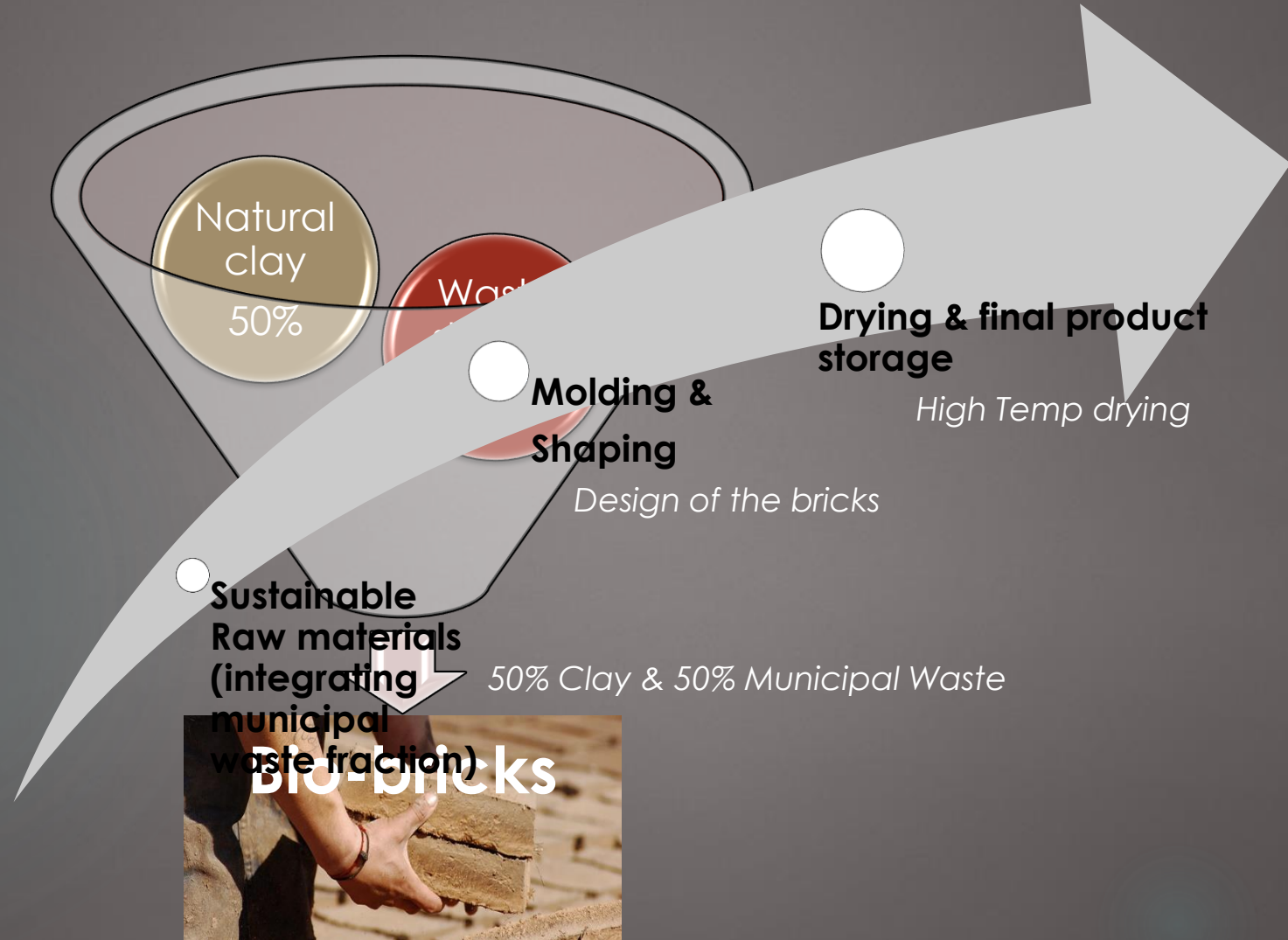
***Bio-bricks development: the sustainable innovative solution***

# Objectives



# Findings: Technical aspect

## Bio-bricks manufacturing process



# Findings: Financial aspect

Based on a 50% balanced mixture of natural clay and municipal waste, and considering a 6 years time horizon, the financial evaluation of the project leads to:

Year	2025	2026	2027	2028	2029	2030	2031
Recovered waste for bricks production (ton/year)	57932	60736	63539	66342	69145	71948	74752
Required Quantity of clay (ton)	28966	30368	31769,5	33171	34572,5	35974	37376
Quantity of generated mixture (ton)	57932	60736	63539	66342	69145	71948	74752
Quantity of bio-bricks produced (units)	18103750	18980000	19855275	20731875	21607912,5	22483950	23360000
Revenue of bio-bricks (Euros)	3620750	3796000	3971187,5	4146375	4321562,5	4496750	4672000
<b>bio bricks Gross Profit (Euros)</b>	<b>3041430</b>	<b>3188640</b>	<b>3335797,5</b>	<b>3482955</b>	<b>3630112,5</b>	<b>3777270</b>	<b>3924480</b>
100% clay bricks cost (euros)	1158640	1214720	1270780	1326840	1382900	1438960	1495040
100% clay bricks Revenue (euros)	3620750	3796000	3971187,5	4146375	4321562,5	4496750	4672000
<b>100% clay bricks profit (euros)</b>	<b>2462110</b>	<b>2581280</b>	<b>2700407,5</b>	<b>2819535</b>	<b>2938662,5</b>	<b>3057790</b>	<b>3176960</b>
Generated profit (euros/year)	579320	607360	635390	663420	691450	719480	747520

Hypothese  
Average Gross Profit (Euros)  
Variation

100% clay brick  
2819535  
+ 23,5%

Bio bricks  
3482955

- 80% recovered of the global waste;
- average purchase cost of 20 euros/clay ton;
- 3,2kg/bio-bricks unit.

**Thank you for your attention**

**Any questions**

