

# PLATFORM MEETING

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



## Production of quartz powders with reduced crystalline silica toxicity

*Giuliana Bonvicini – Centro Ceramico*

*SILIFE - LIFE14 ENV/ES/000238*



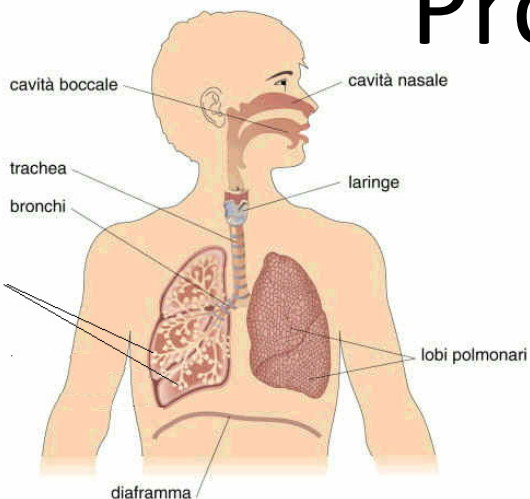
**LIFE14 ENV/ES/000238**

# Silife



Sassuolo – 11 aprile 2017

# Project background



2015-2019

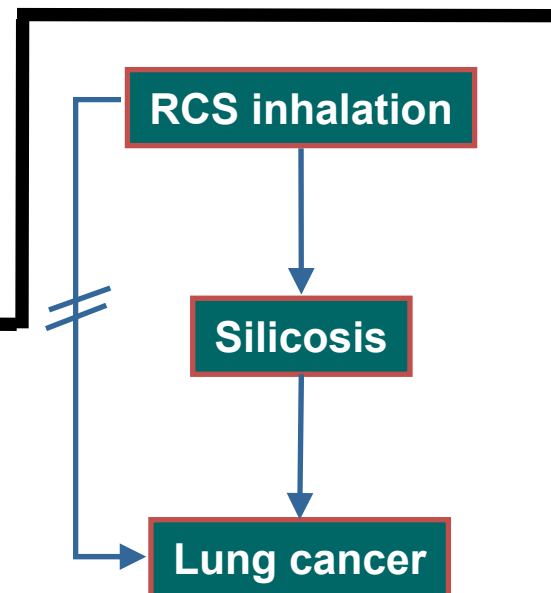
2011-2014

VII FP "SME-2011-2:  
Research for SME  
Associations



2005-2008

VI FP  
Horizontal Research  
Activities Involving SMEs



**PROJECT LOCATION: Germany, Italy and Spain (coord.)**

**Total amount: 1,666,059 €**

**% EC Co-funding: 60%**

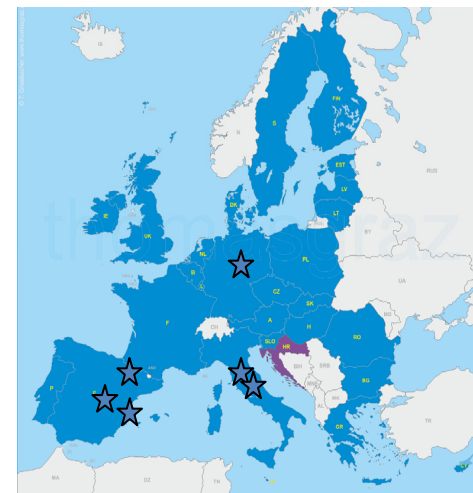
**DURATION: Start: 07/09/2015 - End: 27/09/2019**

## **CONSORTIUM**

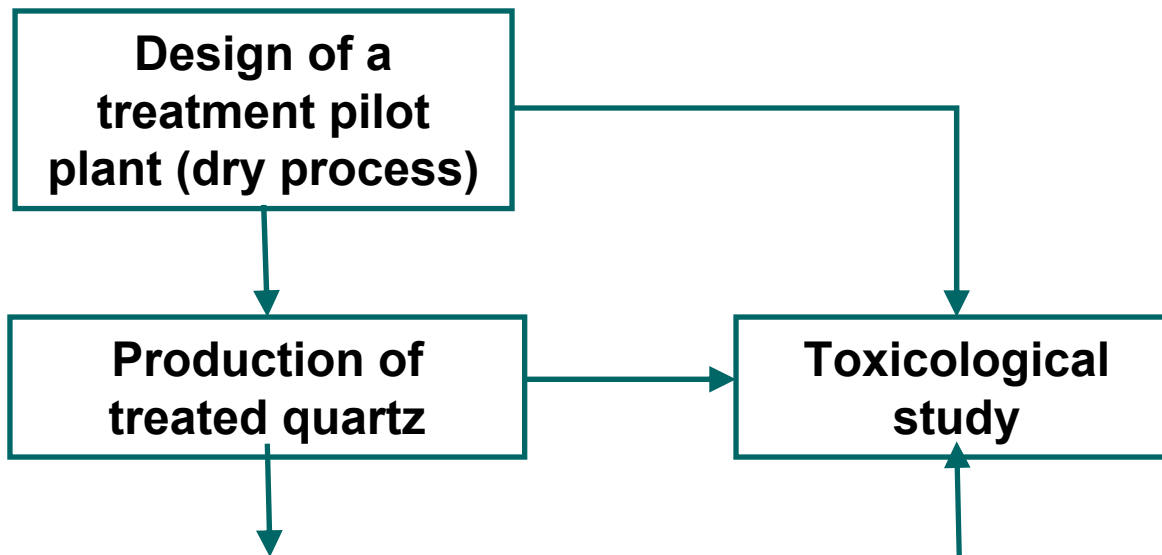
**Coordinating Beneficiary: Universitat Jaume I**

**Associated Beneficiaries:**

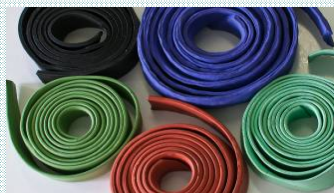
- **Private companies (7): ABCR Laboratorios S.L.; Bulk Cargo Logistics S.A.; Elastomers Union S.r.l.; Esmalglass S.A.U.; Fundiciones Fumbarri-Durango S.A.; Itaca S.A.U.; Mapei S.P.A.**
- **RTD (2) and non-profit organisation (1): Centro Cerámico; ITEM-Fraunhofer; PESI**



# Project overview



## Industrial trials by end users



Elastomers



Adhesives



Frits

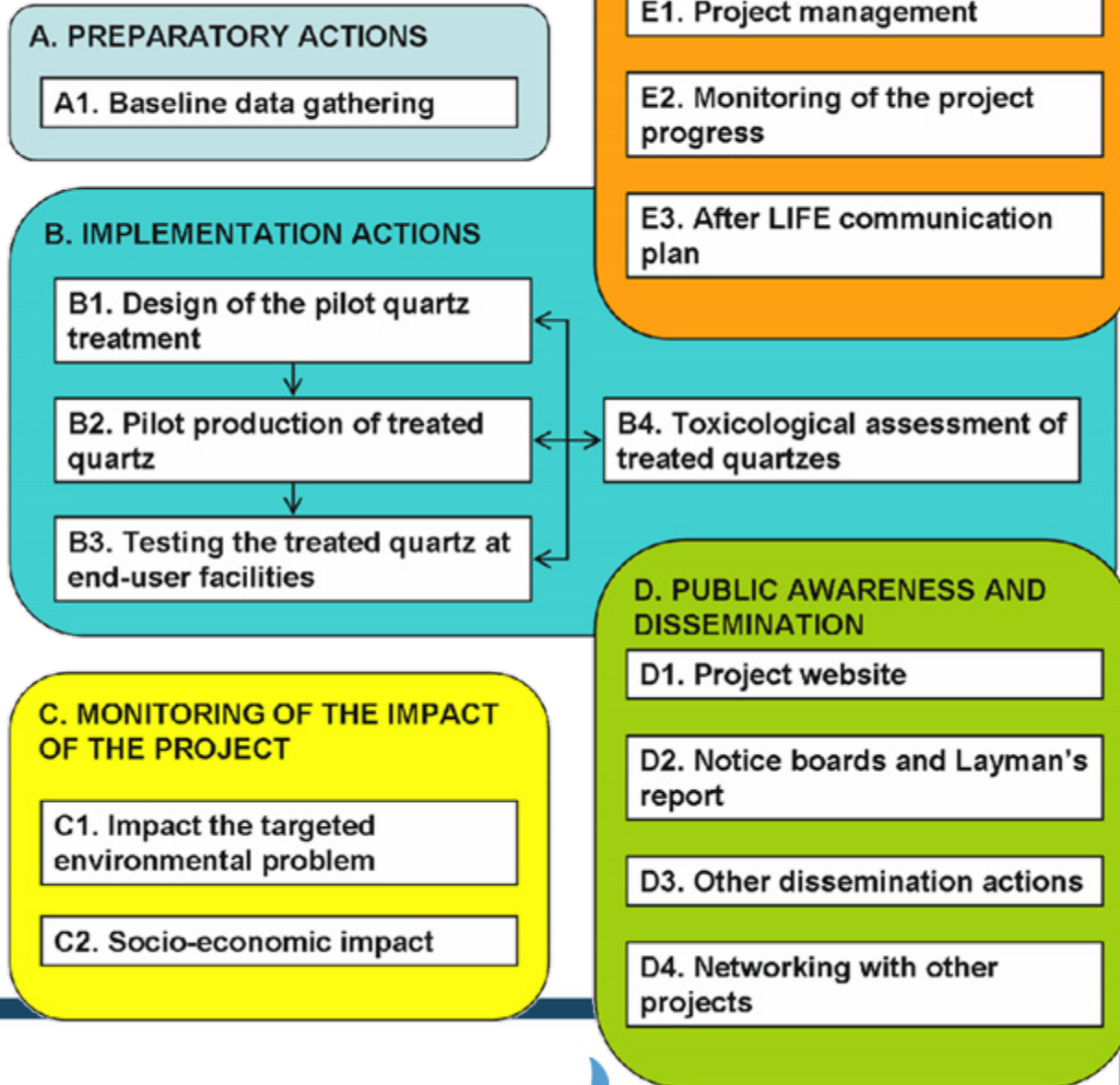


Foundry



Colorants

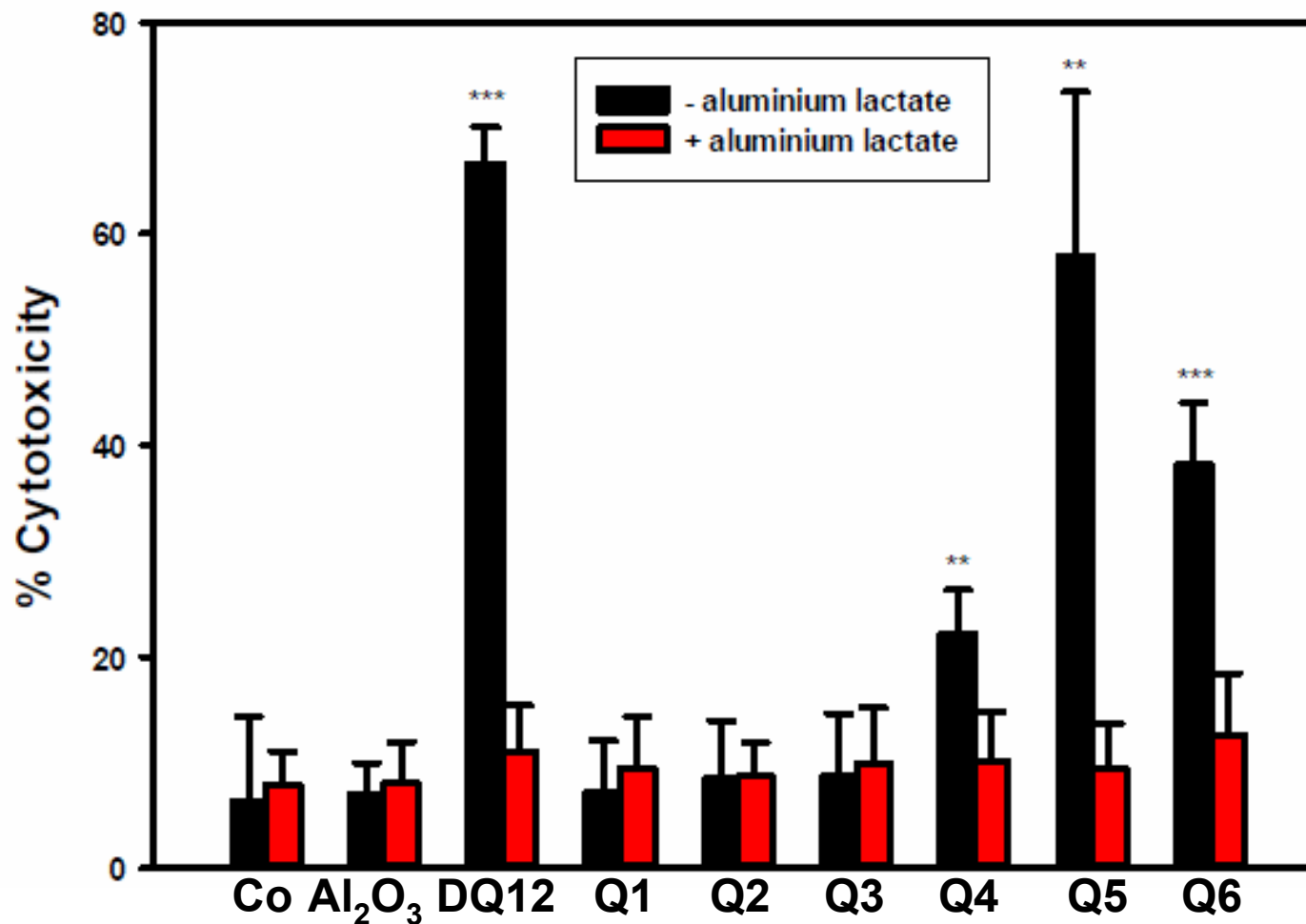
# Project overview



# Project aims

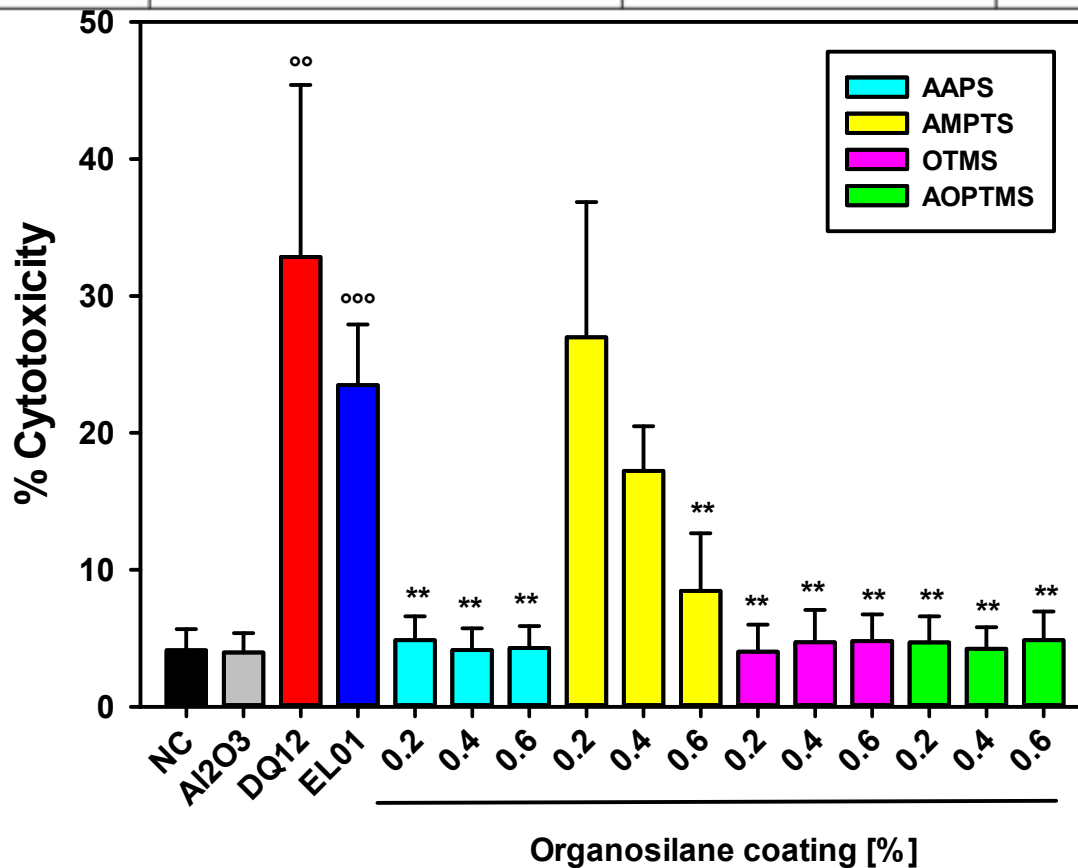
- Produce commercial quartz powders that have very little or zero RCS toxicity.
- Design a pilot plant for the treatment of commercial quartz powders (capacity: 500,000 kg of quartz per year)
- Demonstrate that the treated powders exhibit much less toxicity than the untreated quartz
- Test the treated quartzes in the manufacturing processes of five quartz end-users belonging to other sectors than ceramics

# Project results



# Project results

	Silane	Dosage (%)	Reaction time (h)
Hydrophilic	Silane B	0.2, 0.4 & 0.6	0.5
	Silane C		3
Hydrophobic	Silane D		3
	Silane E		0.5





# Next steps



Pilot production of treated quartz



# Expected results



- Identification of at least two treatments, whose associated costs amount to less than € 0.025/kg
- Production of around 10 000 kg of treated quartzes for the end-users to test in their manufacturing processes
- 75% reduction RCS toxicity of quartz treated in the pilot plant
- Improvement of the knowledge and exploitation with stakeholders (producers, users, institution, legislative and standard committees)



# GRAZIE PER L'ATTENZIONE

Per ulteriori informazioni:



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<http://www.silife-project.eu/>

