

**Transport Information Days
Brussels, 18 and 19 July 2012
Brokerage Event**



Spanish Industry (SME)

www.cemosa.es

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-COMPANY PRESENTATION

-INTERESTS IN TOPICS:

-SST.2013.1-1 “Railway noise reduction”

-SST.2013.5-3 “Greener Roads”

Basic Company Information

- Spanish Industry (SME)
- Consultancy and quality control company in the field of construction including transport engineering and building
- Multidisciplinary team:
 - Engineers: civil, mechanics, control, electronics, electrical, etc.
 - Geologist
 - Chemist
 - Others
- 40 years of experience
- 15 offices (12 in Spain, Brazil, Panama, Bolivia)



Organisation:
CEMOSA

Contact person:
Mr. Sergio Escriba Marín

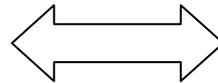
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Railway Engineering expertise

☐ Experience in new high speed and conventional lines

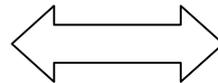
- Design
- Work Direction
- Geotechnical engineering
- Construction quality control



- Track support
- Structures (bridges, tunnels)
- Underground railway stations
- Level crossing removal

☐ Instrumentation and analysis of existent infrastructures

- Non-destructive tests
- Instrumentation of structures
- Geotechnical auscultation



- Analysis of pathologies
- Bridge load testing
- Reinforcement designs

☐ ICT tools for optimization and management



High-speed line
Bobadilla-Granada



High-speed line Valencia-Castellón. Stretch: Moncófar-Villareal



Malaga Airport Underground Railway Station

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Road Engineering expertise

- Experience in design and construction supervision of roads both from the civil and geotechnical engineering and from the quality control laboratory point of view
- Experience in structures (bridges, tunnels and others) including
 - Design
 - Technical Project Management
 - Analysis of pathologies
- Instrumentation and monitoring of infrastructures
- ICT tools for optimization and management



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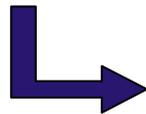
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Experience in European R&D Projects



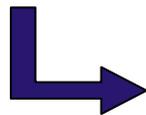
Automatic and Cost Effective railway infrastructure Maintenance
FP7.SST.2010 Call. Status: On going. Coordinator: CEMOSA.



Technologies for railway inspection, optimization of planning tasks, asset management and monitoring of execution tasks



Self-learning Energy Efficient buildings and open Spaces
FP7.EeB.2011 Call. Status: On going. Coordinator: CEMOSA.

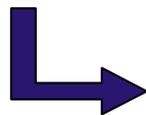


Development of a network of wireless sensors and actuators, control systems, energy optimization, self-learning and optimization techniques

SMARTCOMP

Fibre Optic Sensors for the Monitoring of Composite Strengthened Structures

FP5. Status: Finished (2003). Coordinator: CEMOSA.



Reinforcement and monitoring of concrete structures using composites and fibre optic sensors

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SST.2013.1-1 Railway infrastructure optimisation and monitoring for further noise reduction

Main goals

- 🔄 Standardisation of monitoring system for track based on Technical Specifications of Interoperability (TSI) parameters: Acoustic roughness and Track Decay Rates.
- 🔄 Innovative track designs for a reduction of noise emission.
- 🔄 Models of maintenance of track that consider the whole life-cycle in relation to noise emission.
- 🔄 Test procedures for in-situ characterization of Noise Reduction Devices (NRD) Insertion Loss.

SST.2013.1-1 Railway infrastructure optimisation and monitoring for further noise reduction

Main tasks

- 🔄 Analyze the track contribution in the total pass-by noise.
- 🔄 Harmonization of monitoring of track and wheel roughness.
- 🔄 Monitoring track dynamic properties regarding noise emission.
- 🔄 Minimization of track vibration and noise radiation
 - By combining of existent solutions developed separately
 - By radical new design (including slab track)
- 🔄 Analysis of influence of track characteristics, ground geometry and infrastructure maintenance on noise emission and propagation.
- 🔄 Development of noise management tools and test methods for characterization of NRD Insertion Loss

SST.2013.1-1 Railway infrastructure optimisation and monitoring for further noise reduction

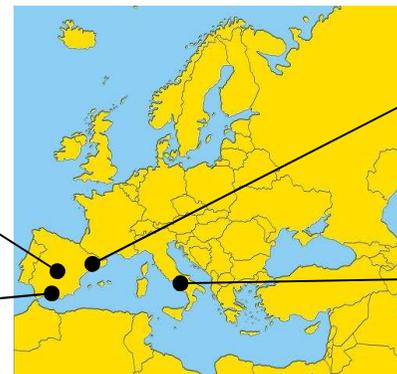
We are looking for:

- Railway infrastructure managers / operators
- Standardization and certification companies
- Track suppliers (rails, fastenings, sleepers, rail pads...)
- Solutions for noise mitigation in railway infrastructure
- Monitoring of noise and vibrations

Partners confirmed:



(Project coordinator)



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SST.2013.5-3 Innovative, cost-effective construction and maintenance for safer, greener and climate resilient roads

Main goals

- Development and demonstration of products and services that bring about considerable cost-reductions for road authorities, including new construction, renewal and maintenance work.
- Contribution to the objectives of the EU Transport White Paper: a greener, smarter, healthier and more resilient European Transport Network.

Level 1 – Activities will cover one of the following subjects:

- 1) Measurement systems (partially covered by our proposal)*
- 2) Design, construction, maintenance and management (full covered)*

SST.2013.5-3 Innovative, cost-effective construction and maintenance for safer, greener and climate resilient roads

Main tasks

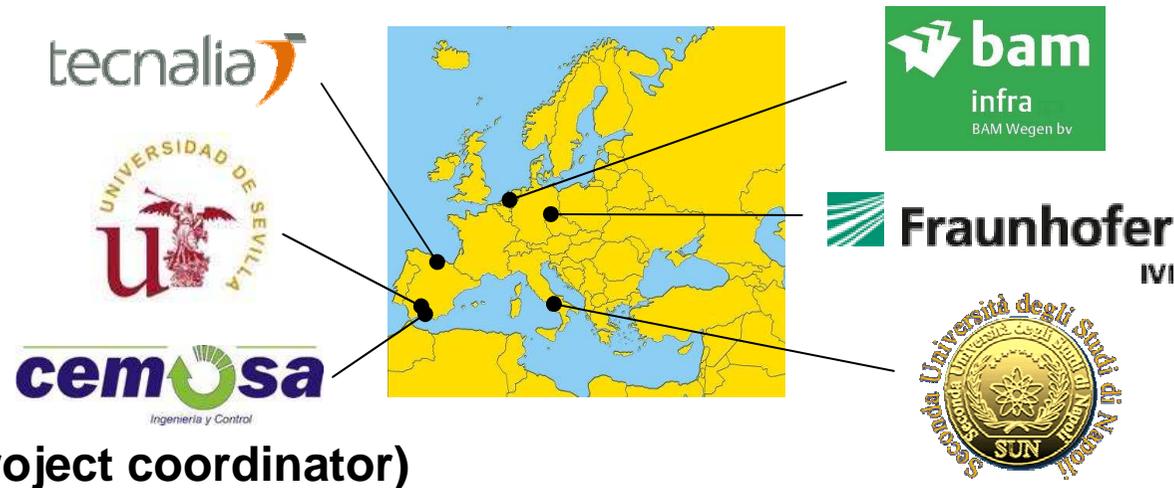
- 🔄 Innovative monitoring system of road condition
- 🔄 Tools and techniques for road asset management and renewal
- 🔄 Development and demonstration of products, services and guidelines for cost-effective construction and maintenance of infrastructure.
- 🔄 Road infrastructure eco-innovation: LCA, recycling, waste management, and eco-labels for road products and infrastructures.

SST.2013.5-3 Innovative, cost-effective construction and maintenance for safer, greener and climate resilient roads

We are looking for:

- Road owners / Road construction companies
- Data transfer and storage specialists
- Monitoring systems for structural and functional road condition

Partners confirmed:



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Other topics of interest

- ❑ CEMOSA also has interest in other topics from SST.
- ❑ We offer to actively collaborate in the drafting of the proposal.
- ❑ We offer as a Partner in the following topics:
 - **SST.2013.3-1** Managing integrated multimodal urban transport network
 - **GC.SST-2013-1** Feasibility analysis and technological development of on-road charging for long term electric vehicle range extension
 - **GC.SST-2013-5** Configurable and adaptable truck

Thank you!

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Ingeniería y Control