



# QCITY - Quiet City Transport

EU-project: research, technological  
development and implementation  
of innovative concepts for quieter cities  
**Overview presentation**

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## Project details

- ✓ FP6 – Integrated project
- ✓ 01/02/2005 – 30/01/2009 (4 year)
- ✓ Turn on: 13.5 million Euros
- ✓ 27 Partners from 10 countries
- ✓ [www.qcity.org](http://www.qcity.org) and [www.qcity.eu](http://www.qcity.eu)





## Partners

- ✓ 27 partners from 10 nations
- ✓ Private enterprises
- ✓ Municipal organisations
- ✓ Research institutes
- ✓ Government authorities

1	Acoustic Control	SE
2	Accon	DE
3	Akron	BE
4	Amec Spie Rail	FR
5	Alfa Products & Technologies	BE
6	Banverket	SE
7	Composite Damping Material	BE
8	Havenbedrijf Oostende	BE
9	Frateur de Pourcq	BE
10	Goodyear	LU
11	Head Acoustics	DE
12	Heijmans Infra	BE
13	Royal Institute of Technology	SE
14	Vlaamse Vervoersmaatschappij DE LIJN	BE
15	Lucchini	IT
16	NCC Roads	SE
18	Stockholm Environmental & Health Administration	SE
20	Société des Transports Intercommunaux de Bruxelles	BE
21	Netherlands Organisation for Applied Scientific Research	NL
23	Trafikkontoret Göteborg	SE
24	Tram SA	GR
25	TT&E Consultants	GR
27	University of Cambridge	UK
28	University of Thessaly	GR
29	Voestalpine Schienen	AU
30	Zbloc Norden	SE
31	Union of European Railway Industries	BE





## The aim of QCITY

### Support the European policy

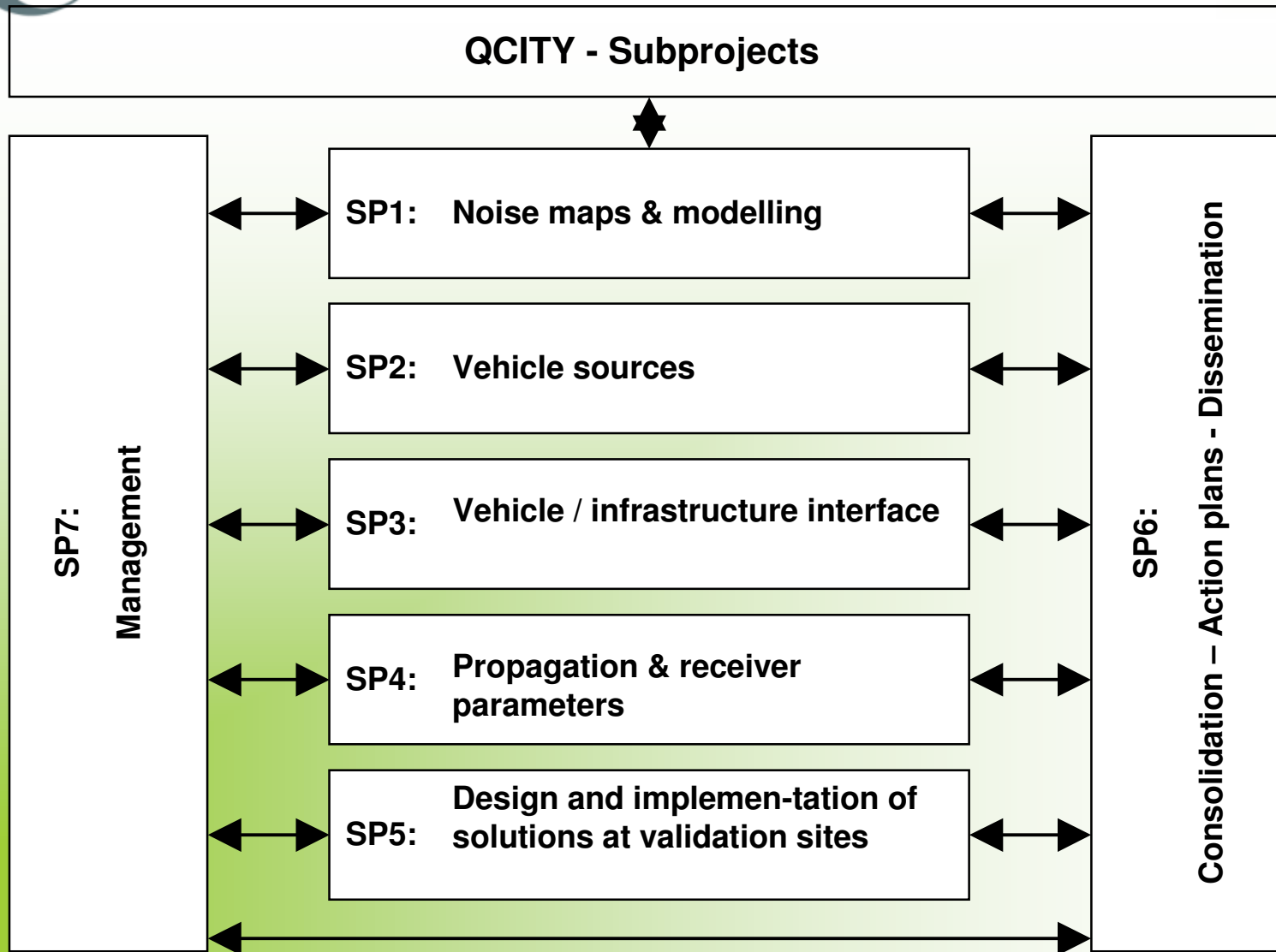
- ✓ identifying and eliminating harmful effects of noise exposure to residents near transport noise sources
- ✓ decrease transport noise, in urban areas both at the source and by enhancing transmission attenuation.
- ✓ develop solutions that will ensure compliance with the legislative limits

### Develop tools for NOISE ACTION PLANS

- ✓ According to the Directive 2002/49/EC Noise Action Plans shall be elaborated.
- ✓ Providing to city administrations with validated analysis tools and technical noise control solutions for efficient production of Noise Actions Plans.
- ✓ QCITY will deal mainly with measures at the infrastructure level, by applying the solutions to specific hot-spot problems found in each specific city.



# QCITY project Structure





## QCITY Subprojects

<b>SP1</b> -Noise Maps & Modelling	Analysis of hot spots in city noise-maps. Detailed analysis and measurements targeting at perceived total inconvenience of residents
<b>SP2</b> – Human perception of vehicle noise sources Traffic planning	Classification of vehicle types incl. handling with respect to their subjective perception characteristics. Studies of low noise vehicles, traffic control, interchange between different transportation systems etc.
<b>SP3</b> – Vehicle /infrastructure interface noise	Reduction of rolling noise at the source. New rail and railway wheel types incl. retrofit measures. New low-noise road surfaces and and low-noise tyre designs.





## QCITY Subprojects

<b>SP4</b> – Propagation & receiver parameters	Development and validation of new methods for enhancing propagation attenuation such as new screen solutions, town planning concepts, landscape effects etc.
<b>SP5</b> - Design and implementation at validation sites	Final detailed design of all selected solutions Implementation and validation of solutions in cities concerned. Selection of validation sites for dissemination and promotion purposes.
<b>SP6</b> – Consolidation – Action plans - Dissemination	As a final result the developed tools for establishing Noise Action Plans will be described and presented to the European cities.





## QCITY achievements

- ✓ A new computerized method for identifying “hot-spots” on noise maps
- ✓ A new method for separation of sub-source contribution to total noise from a vehicle
- ✓ Low noise road surface aiming at 8-12 dB(A) less noise
- ✓ Low noise tyre designs aiming at 4-6 dB(A) less noise
- ✓ A new trailer for tyre/road noise measurements
- ✓ New screen top element (3-5 dB(A))
- ✓ Sound absorbing facades
- ✓ Low screens for trains and trams (7-11 dB(A))





## QCITY achievements

- ✓ Noise reduction potential of truck restriction within agglomerations
- ✓ Noise reduction potential of town planning measures within agglomerations





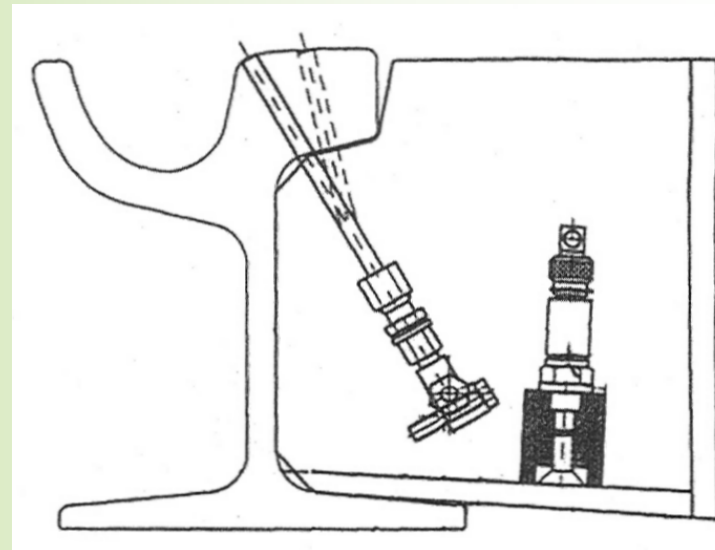


## Some QCITY results

- ✓ Damped tram wheel and freight wheel prototype



- ✓ Low squeal noise by friction management prototype





## Some QCITY results

**... and many, many further results on [www.qcity.org](http://www.qcity.org)!**

**Thank you for your attention**

