









The opinions expressed in the studies are those of the consultant and do not necessarily represent the position of the Commission.

## REVEAL

### Remote Measurement of Vehicle Emissions at Low Cost

Project details	
Domain	Vehicle Technology: Vehicle Emissions
Duration	from 01/04/2000 until 01/06/2003
Website	
Other sources	<a href="#">Transport Research &amp; Innovation Portal</a>  <a href="#">Final technical report</a> (2,71 MB)  <a href="#">Performance Statement</a> (437 kB)  <a href="#">Work Plan and Protocols for Instrument Trials</a> (1 MB)  <a href="#">Local Dispersion Model</a> (494 kB)  <a href="#">Vehicle Emissions Datasets</a> (1,47 MB)  <a href="#">Recommendations for use in Europe of Remote Sensing Devices (RSDs) for Measurement of Motor Vehicle Exhaust Emissions</a> (526 kB)  <a href="#">Farringdon Data</a> (180 kB)  <a href="#">Maastunnel Data</a> (72,5 kB)

The environmental performance of road vehicles deteriorates after they have been in operation for a while, without many drivers becoming aware of this. Regular inspection may be take place only years later, and it only measures exhaust emissions at idle-running of the engine.

With a view to reduce pollution, the REVEAL project will therefore develop, install and validate a fully engineered prototype of a low cost instrument to measure, at the roadside, gaseous and/particulate emissions from individual vehicles in motion under normal driving conditions.

The instrument will be coupled to existing automatic number plate readers to allow information on vehicle type, age, and engine size and type to be correlated with the emission measurements. The low cost of the system combined with its flexibility in terms which pollutants it can measure will enable its use in long-term installations and multiple locations to provide continuously updated data on real-world emissions. This data is also needed to model the impact of policy or legislation changes more precisely then presently possible.

The system will be installed initially in three European cities to compare the effects of climate, street geometry, driver behaviour and fleet differences on emissions inventories.

### Coordinator

- [SIRA Ltd](#) (UK)

### Partners

- [Centro Ricerche Euron settore AgipPetroli](#) (IT)
- [Bundesprüfanstalt für Kraftfahrzeuge](#) (AT)
- Farside Technology plc (UK)
- [Golden River Traffic](#) (UK)
- [National Center of Scientific Research "Demokritos"](#) (GR)
- [RWTÜV Fahrzeug GmbH](#) (DE)
- [TNO mep - Organisation for Applied Scientific Research](#) (NL)
- [University of Hertfordshire](#) (UK)
- [VTT - Technical Research Centre of Finland](#) (FI)