Project Summary:
The project “UNIETD” (Understanding New and Improving Existing Traffic Data) addresses “Innovative traffic management measures” stated in the Traffic Management DoRN of the CEDR 2013 call. The end goal is to improve the efficiency of road travel by providing better information to drivers and road operators. The UNIETD project supports that goal by addressing several of the innovations identified in the DoRN within a single coherent project.

The quantity, quality and potential of traffic data and information services based on mobile devices has increased, and road administrations are now facing the question whether to build and operate their own detection infrastructure, to buy external traffic data or information, or both. However there are no standard methodologies or software tools available to allow the road administrations to efficiently check for themselves the quality of the traffic data and information based on mobile devices.

The primary objective of UNIETD is to guide the national road administrations’ use of third party data such as crowd sourced / social media and floating vehicle data in place of traditional infrastructure-based techniques. The more detailed objectives of the project are:

- to develop, implement and test methods for quality assessment of traffic data and services based on mobile devices;
- to understand the potential of social media analysis for traffic management, through assessing relevance, penetration rates, and business models;
- to understand the implications of these new data sources and quality results for established techniques for data fusion and short-term traffic prediction, to support traffic management decision-making.

The UNIETD methodology has been designed to address multiple objectives which have synergy through combination in a single coherent project. A review of the state-of-the-art of traffic data and traffic management requirements will support research on both quality assessment of traffic data services and social media. Building on recent work of the partners, the project team will develop methodologies for quality assessment of floating vehicle data services, implement these in a software toolkit, and evaluate these through on-road tests in multiple European countries. Also building on current research we will assess the traffic management potential of information that can be harvested from social media, looking at relevance, penetration rate and business models. The findings of these two major research packages will then be used to update the state-of-the-art in data fusion and short-term prediction. Finally the recommendations from each activity will be grouped, refined and disseminated thoroughly amongst road administrations and their suppliers.

The project partners have the necessary range of experience as researchers and implementers in multiple countries to be able to understand and address issues and risks and deliver valuable transnational research results. Mott MacDonald and nast consulting have brought together a team with members at the forefront of recent developments – TRANSVER for quality assessment of mobile-derived traffic data, University of Leeds for harvesting social media, Mott MacDonald for short-term prediction and fusion. The wider experience of the team in traffic management in multiple European countries will help ensure the research remains focussed on traffic management needs and delivery of transnational benefits.