Big data visions: towards the development of low-carbon road transport policies

Abstract:
In Europe over 70% of citizens live in urban areas, and projections forecast an increase to nearly 80% by 2030. Densely populated cities increase strains on energy, transportation, resources, housing and public spaces needs, thus calling for new solutions. Such ‘smart” solutions have to be efficient and sustainable as well as capable of generating economic prosperity and social wellbeing. It is estimated that road transport contributes to about one fifth of the total carbon dioxide emissions in Europe, growing by nearly 23% between 1990 and 2010. This calls for major changes for future mobility, as outlined by EC White Paper 2011, resulting in a significant de-carbonisation of transport to reach the 60% greenhouse gas emissions reduction set for 2050. In this context, big data has the potential of supporting and driving the process of re-definition of the current transport policies towards more effective and wiser implementation of the actions that need to be undertaken to meet the long-term goals of the Union. This paper presents the Transport Technology and Mobility Assessment (TEMA) platform, developed to harness the potential of big data in transport policy support. The presented applications provide the reader with an overview of the potential of the platform, aiming at stimulating discussions and collaborations between scientists, data owners and policy makers for the development of smart, sustainable and inclusive transport policies.

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